

TINKER TOYS OR LIGHT SABRES?

The Place of Computer Assisted Legal Retrieval in Legal Education

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INTRODUCTION

The University of Otago is the first of the New Zealand law schools to have integrated into its Bachelor of Laws programme a structured course introducing the theoretical concepts and practical techniques of computer assisted legal retrieval. Conventionally referred to as CALR, the acronym is shorthand for the process of locating legal material (judgments, statutes and legal literature) stored in electronic form in a database and searched by use of a computer.

Part I of this article offers one perspective upon the objectives of formally teaching this legal research method. Part II details the structure of the course and provides some observations upon the effect of exposing students to the presence of a computer within the traditionally manual process of finding the law. Part III provides guidelines for the use of CALR in the academic legal environment.

The methods and observations discussed are not intended to serve as a prescriptive approach to the introduction of CALR. They are descriptive only and are distilled from the experience of introducing the concept to practitioners, to academic lawyers, and to students who undertake the course. The approach taken may vary, depending upon the needs and expectations of each of these sectors of the legal community. The task does not vary: to attempt to provide an environment in which seeking the assistance of a computerised system to retrieve law is seen as a valuable objective, and one which can reside as an integral part of the array of skills which define the legal personality.

I OBJECTIVES OF TEACHING CALR — THE WHY

As the title to this article attempts to suggest, there exists among the legal community at large a considerable hidden agenda surrounding the concept of computer assisted legal retrieval.¹

Lawyers are active consumers of computer generated information. The use of computers to support trust accounting, time costing, fee budgets, client information systems, and the production of legal documents is no

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1 For an introduction to this method of legal research in relation to publicly available databases, see John Miller, "A New Zealand CLIRS" [1983] NZLJ 279; Donna Buckingham, "Byting the Bullet: An introduction to computer assisted legal retrieval (CALR)" [1987] NZLJ 47; "Computer Assisted Legal Retrieval, How to do it without terminal pain" [1987] NZLJ 154; "CALR: A necessary part of the lawyer's future arsenal?" [1987] NZLJ 288.

longer regarded as the novel application of technology to professional legal practice management. Yet such developments have not brought computer literacy to lawyers, for the processes and skills by which such information is generated are not perceived as a necessary element of the legal identity. They are seen as ancillary, barely inhabiting the penumbra of the core description of a lawyer as one who finds, analyses, argues, applies or manipulates legal rules and doctrines. Consequently, when faced with the prospect of making the acquaintance of a computer to assist in precisely these quintessentially “legal” intellectual processes, a wide range of anxieties or expectations is demonstrated.

Reactions to CALR can range across the entire spectrum. At the extreme of the positive end is the “magical whizz-wang” school of thought – push a few keys and the answer to specific legal problem is automatically disgorged. Its antithesis is represented at the extreme of the negative end of the scale – the view that using computer assistance to find law (as opposed to generating practice management information) is a sophisticated form of cheating, derogating from the legal identity.

Given that these are the parameters, a number of equally pronounced attitudes fall at various points on the curve of CALR resistance-acceptance. They tend towards the negative and might be summarised as the “neophyte’s creed to CALR”:

I can’t type – I’ve no time to learn a technical skill – I’m intimidated by ‘computerese’
– I can’t programme a computer – There’s too much law out there in my library already – I can’t afford any more expensive toys.

Some parts of the creed relate to admissions, grudging or otherwise, of lack of computer literacy. Others are founded on basic misconceptions about the process of CALR and its place in legal research.

These differing received beliefs, conveyed by the profession when their traditional view of legal research is challenged by the onslaught of computer technology, influenced the development of the course. In particular the aim was to steadily erode both the unrealistic expectations of what CALR can achieve and the reluctance at making the intimate acquaintance of a computer. Students thus equipped with a grasp of the principles and techniques of successful CALR use might, as they entered practice, disseminate more accurately to the wider profession the concept of computer assistance in the substantive pursuit and practice of the law.² While this objective (the stone in the still pool effect) might seem somewhat high-flown, the writer felt it to be allied to the more immediate onus which needed to be discharged in the teaching of the principles and techniques of CALR in a law school setting.

Research had indicated both the positive and the negative flow-on effects of student CALR participants leaving academic institutions for the world of professional practice. On a positive note, reference to the summer

2 One participant in the 1987 course has advised the writer that his law-school introduction enabled him both to assist his firm in the decision to subscribe to a CALR system, and to participate in its installation and operation.

employment by law firms in the United States of CALR-trained law students, to instruct in and monitor attorney use of commercial database systems, gave the writer encouragement in teaching the techniques as a valid skills-based educational enterprise.³ In terms of negative effect, the writer had discovered reference to the dangers of indiscriminate use of CALR facilities by graduates upon entering practice, if availability of the law school facility is largely unmonitored.⁴

As a consequence, the course was geared to achieve a positive foray into this technological aid to lawyers, while simultaneously integrating CALR within the legal research process as a complement to manual retrieval. This integration process, it was hoped, would release into the practice market students who would be discriminating in the use of CALR in commercial terms, yet have a sufficient overview to be fully aware of the potential⁵ of such systems to make law available, irrespective of geographical, time and hard copy restraints which frequently plague practitioners.⁶

The course therefore contained a hidden agenda of its own – to proselytise students and simultaneously encourage them to be judicious users of CALR systems. For never before have legal research techniques, taught in an academic environment, had a directly referable commercial cost when they are employed by law graduates in professional practice. CALR by its very nature does that; access to commercially available services incurs both database connect charges and telecommunications costs.

Clearly the flow-on effect to be avoided was the “fishing expedition” result – CALR graduates using such systems for researching of primary materials at the outset to approaching a legal problem, materials which could be located as efficiently and cost effectively by conventional means. The writer’s view was that such a trend would not serve the concept of CALR well or wisely, nor would it enhance disciplined legal research and analytical techniques of graduates of this faculty. The course was therefore designed to communicate not only the “how”, but also the “why” and therefore the “when” of using CALR, insofar as that was possible in general terms.

II STRUCTURE AND EFFECT OF THE CALR COURSE

I Development of the CALR course

Computer assisted legal retrieval had its first modest beginning at the University of Otago in July of 1986, with the installation of a personal

3 Eg, McGonigal, “Implementation and Cost Effectiveness of Computerised Legal Research” (1978) 1 *Computer/Law Journal* 359, 370-371.

4 Greguras and Carlile, “Report of the Public Terminal Study” (1978) 1 *Computer/Law Journal* 255; 347; Dee & Kessler, “Computerised Methods” (1976) 69 *Law Lib J* 164, 175.

5 The writer uses the word “potential” advisedly, since at the time the course was constructed in 1987, coverage of New Zealand legal materials was confined to that contained in the official NZLR series, beginning in 1970, mounted by LEXIS, a database service located in Dayton, Ohio, USA. In 1988 an indigenous service, KIWINET, was launched. This service is hosted by the National Library of New Zealand and both statutory and case law databases are being mounted and enhanced.

6 See *Turnwald v Ministry of Agriculture and Fisheries* unreported, Court of Appeal, 20 April 1988, CA 229/87 for comment by Cooke P on the delays inherent in the present law reporting system which can result in counsel’s unawareness of authoritative decisions.

computer, located in the law library, and the appointment of the writer to run the facility as programme director.

Subscriptions to two commercially available search systems (LEXIS⁷ and QUIC/LAW⁸) were established. Substantial research projects were then executed for faculty members, to assist with academic publishing and to keep teaching content current. LEXIS in particular was accessed constantly, since it offered the largest full text⁹ legal database available and had coverage of both Commonwealth and American jurisdictions.

No formal teaching of the mechanics of either search system was undertaken, although introductory one hour sessions were offered to the senior student body and to members of the faculty, giving a basic “hands off” introduction to the general concepts and dynamics of CALR. These seminars generated a level of interest which prompted the establishment, in 1987, of short intensive courses, catering for 10 to 15 students at a time. The course was offered on a voluntary basis and no credit was received for completion. Those who participated did so with a view to increasing their marketable legal skills. An added incentive was the option of undertaking, in a co-operative fashion with the director, some on-line research for any one of their substantive law subjects.

Based on the experience of the inaugural year, the course has been lengthened to four hours of formal instruction. The completion of a take-home exercise is then required. A practice session manual has been written to guide students through a first time “hands on” exposure to the search system of LEXIS. Once these requirements have been completed, students may then undertake independent searching. While the course is still voluntary,¹⁰ those who complete the requirements are given a certificate stating their experience of CALR, which they may append to a curriculum vitae.

2 Content of the course – group participation

Since CALR formed such a novel part of legal training in New Zealand, there was no indigenous material upon which to base teaching methodology for accessing commercially available CALR services.¹¹ Literature on the approaches taken in US schools proved interesting but was of limited substantive assistance in creating a course. CALR teaching approaches appeared to be largely determined by whether single or multiple terminals

7 LEXIS offers access to legal materials from the United States, England, Scotland, Ireland, France, the European Community, Australia (headnotes only) and New Zealand.

8 QUIC/LAW offer access to Canadian legal and news data bases, and is based in Kingston, Ontario.

9 ‘Full text’ means that the legal materials in the database are there in their entirety rather than in summary or abstract form.

10 Honours candidates are strongly encouraged to register for the course to enhance their research opportunities.

11 Under the leadership of John Miller, the Victoria University of Wellington had mounted a computer legal retrieval project for some New Zealand case law. However it was accessible in-house, not being commercially available on-line for remote access. This database forms the basis of the KIWINET case law service, and is now publicly available.

were available, and by access to video tapes, simulator programmes or self-teach diskettes.¹²

Since the facility at Otago was restricted to a single terminal, and interest would be primarily in common law Commonwealth jurisdictions, the course had to be created in something of a vacuum. The most important aspect of CALR in which to instruct students was the potential of this new research tool, emphasising the flexible nature of full-text free search capability, and attempting to integrate its existence with manual researching techniques. The purpose of the four one-hour group sessions was to demystify the process of CALR, to encourage acceptance of the assistance of a computer, to demonstrate the skills required to successfully retrieve material, and to provide guides for management of the information retrieved.

(a) Demystifying the process of CALR

The LEXIS system, offering as it does a spread of coverage from several jurisdictions, including New Zealand, was chosen as the specific retrieval system by which to introduce the concept of CALR.

The basic principle which underpinned the course was that a user of a CALR system consumes an end product (a set of legal materials published in electronic form) in the same way as a manual researcher is a consumer of the printed legal materials ("hard copy") which constitute the conventional law library. Thus pre-existing skills already residing (theoretically) within each student's legal repertoire were the essential pre-requisites to successful use: the intimate knowledge of the way in which legal ideas are expressed and the ability to analyse and assess the worth of the legal material retrieved.

The "neophyte's creed" referred to in Part I of this article was not articulated to the students, for the very reason that their voluntary participation gave the lie to a high level of resistance to the introduction of this new skill. Nevertheless it was expected that students would harbour hidden agendas about the process of CALR which reside at the positive end of the scale of responses – the "magical whizz-wang" school of thought. The realisation that the computer would not deliver the answer to an opinion or research project by some process of osmosis, or necessarily guarantee any better performance grades in their substantive subjects, discouraged only a very small number of students from completing the course.

The invitation to participate in the course stressed that previous computer exposure or programming skills were *not* necessary or desirable pre-requisites to successful use of CALR. In terms of non-legal skills, the only necessary attributes emphasised were basic eye-hand co-ordination (the ability to type with one finger and check the outcome on the terminal) and the ability to spell correctly, or recognise and correct typographical errors.

12 See "Report of the Public Terminal Study", supra n 4, for a review of American law school arrangements for CALR, now largely useful for historical purposes.

(b) Encouraging acceptance of CALR as an integral part of the research process

The first of the four group sessions was devoted to placing students in a legal practice situation, presenting a summary of a client interview. The scenario was posited on the material facts of a doctor-patient relationship, a breach of the duty of confidentiality by the medical practitioner and a subsequent loss suffered by the patient as a result of the unauthorised disclosure of medical information gained during the course of the relationship. Student participants were requested to indicate their proposed research plan using *orthodox manual techniques*, in order to assist their "client" in obtaining redress. The ultimate purpose of the exercise was to encourage appreciation by students of some of the practical difficulties inherent in manual researching, to juxtapose CALR options and to stress integration of the two techniques.

It was intended that students inherit the belief that the assembly of primary legal material, whether manually or with computer assistance, requires the same basic analytical and interpretive skills: the approximation of the language which will represent and therefore retrieve a legal idea. The fundamental difference between manual and computer assisted retrieval was presented in terms of the familiar technique of working an index. Where manual retrieval is employed, a searcher generally matches his or her analysis to the conventions of an index created by a third party, whether it is a textbook, law report index, digest, or current awareness service which is being searched. With computer assisted retrieval the searcher must choose vocabulary which mirrors the actual language of a court or legislature, since in a full text CALR system, such as LEXIS or KIWINET, each searchable term bears an indexation value.¹³

As a corollary of that perception of the fundamental difference, the integration of CALR concepts and the appropriate decisions as to their cost-efficient and substantively satisfying use within the research process would, it was envisaged, become more comfortably resident within students' legal personalities.

A substantive answer to the doctor-patient scenario was not required, merely the naming of possible avenues which might be pursued to locate both primary and secondary legal material in order to approach the problem: for example, how to locate cases (through texts, digests and other secondary sources), check their appellate history, their persuasive or binding effect, and their subsequent treatment. In other words, how to use a conventional law library. The outcome of presentation of this legal problem, requiring the nomination of traditional avenues of orthodox research, was unexpected but clearly observable. Participants had difficulty in constructing a manual research plan.

13 Where the material in the database is stored in full text, the retrieval of relevant documents electronically stored in the system is not determined by a conventional index. Each searchable word in the document is itself an index reference. The searcher is free to select any word or combination of words which he or she feels appropriate in order to locate relevant material.

The phenomenon occurred to varying degrees in each of the first sessions, yet students were of a senior level and would have had basic conceptual familiarity with the broader legal issues (whether this was potentially a contractual, tortious or equitable problem). There are a range of explanations for the difficulty:

- participants were confronted too quickly with the concept that CALR is not a genus severable from orthodox techniques of research and analysis;
- participants had, by virtue of the novelty of the course, not expected to participate — envisaging the ‘sponge soak up’ approach to their attendance;
- the ability to illustrate an appreciation of the dynamics of legal research had been inhibited by the use of case-books in many of their substantive units;
- participants were psychologically unprepared to transpose their skills to a practical setting and to confront the possibility that clients may present problems they are ill-equipped to deal with at the time of the first interview.

Whatever the reason, some prompting was necessary to draw from each group the manual avenues of retrieval.¹⁴

Students were then introduced to CALR as an adjunct to the manual research process, via the doctor-patient scenario. The flexibility of free-text searching was explored with the group. The ability to extract from the database any legal idea nominated, without being constrained by an index, was the principal message of the session, together with the ability to condense research time substantially and to locate and reproduce in full previously unavailable information.

Options discussed included the following potential uses of CALR:

- nomination of cases to check their subsequent judicial treatment for the purpose of determining their authoritative status;
- searching for fact patterns or analogous situations, for example, breach of the solicitor-client confidential relationship;
- location, within cases, of judicial references to texts or other secondary sources (such as leading articles or reform reports) to which counsel might choose to refer in the course of argument;
- exploration of the attitude of a particular court or judge to amorphous concepts, unlocatable by conventional means, eg public policy;
- retrieval, in full, of unreported and very recent judicial decisions;
- the facility offered by some CALR systems to update research automatically at specified intervals.

The introductory session was largely successful in its aim of capturing student interest. The novelty of the speed of retrieval which CALR possesses

¹⁴ The writer was encouraged in her aim of encouraging students to accept CALR as an adjunct to manual research rather than an isolated process by a number of comments in course assessment questionnaires that the course had a dual value: the introduction of a new skill and an awareness of the need to consolidate manual research techniques.

was the primary fascination, for obvious reasons.¹⁵ The creative ability inherent in free text searching was a source of anxiety for some participants. Reluctance at moving aside from the intellectual reliance on indexation appeared to decrease as participants moved deeper into the course, the concept of free-text searching becoming less threatening once the techniques by which it was achieved were demonstrated. Only then were students prepared to accept fully the allied freedom and responsibility imposed by CALR use — that their individual abilities in approaching legal problems would largely determine their choice of search terms and strategies and, consequently, their successful use of the system.

(c) Demonstrating the skills required

The middle sessions of the course were occupied with the techniques necessary to retrieve the kinds of information outlined in the first session. Since LEXIS was the service ultimately to be accessed for hands-on experience, its particular logic and commands were worked through. The course was structured to avoid as much as possible any “computerese”. Some jargon was inevitable, however, in that students would meet it while on line to the database. However, LEXIS concepts of “searching”, “key words”, “modifying” etc are used for their natural meaning and appeared to present few problems.

A return to the doctor-patient scenario of the first session seemed a useful way to guide participants through the selection of the key words (or “search terms”) which could set the parameters of a search. Students were invited to co-operatively construct a list of relevant words. “Doctor” enabled the introduction of the need to consider synonyms such as “medical practitioner” and “physician”, “confidentiality” dictated a discussion of the varied ways in which judges might express the idea of a confidential relationship, and “loss” invoked the related concepts of “quantum”, “award” or “damages”.

Once this list of possible terms was prepared, the next step was to introduce the concept of search logic: the relationship between the selected terms which the searcher demands of full-text free search system. Students immediately appreciated that simple enumeration of the list of concepts would not be practicable, in that numerous cases would be retrieved, containing the desired terms, which would be totally irrelevant to the scenario being explored. However, the phrase “search logic” sent a *frisson* of apprehension through each group, despite the easy receipt of the obvious need to tell the system that the nominated words should bear some relationship to each other, in order to set the “net” that would fish up the desired legal idea.

Invariably this section of the course taxed student resources the most, not because of its inherent degree of difficulty, but because it brought participants hard up against the absence of an index. The introductory session had been planned to prepare them for this, yet the word “logic” appeared to have highly intimidating connotations. It was at this point

¹⁵ Ie, that within 15-30 seconds of entering a search request the result is displayed, and “browsing” of the material to determine its relevance may then begin.

that participants began to demonstrate anxieties that the non-essential nature any of prior computer skills had been a misrepresentation.

There appeared to be no way to allay this anxiety other than proceeding to instruct in the dynamics of the logic. The course materials distributed had reproduced the majority of the lecture session content, incorporating numerous examples of how the logic operated. Students were therefore encouraged to take minimal notes during this awkward phase and simply concentrate on the oral and visual presentation.

The most frequently-used logical operators (both Boolean and positional) were then introduced, using the doctor-patient scenario and the co-operative list of key terms already isolated. Students appeared relieved to find that much of what was called "logic" had its foundations in basic grammatical operations (eg OR, AND, AND NOT) and that the positional connectors were simple nominations that one term appear/not appear within certain proximity to another in the text (eg W/n, Pre/n, W/seg, Not W/Seg, Not W/n). Nevertheless avoidance of the use of the word "logic", because of its powerful sub-text, and the substitution of the less technologically redolent "relationships" is a strategy now adhered to.

After the introduction of the available operators which enable the system to build ideas and retrieve relevant material, overhead transparencies were used to demonstrate the manner in which the system responded to such instructions in order to eliminate or select particular documents for retrieval. Using the inverted triangle as an image, students were shown how key words joined by logical operators could reduce data available from literally thousands of retrievable documents to a manageable number of potentially relevant decisions, which complied with the presence of nominated key terms and possessed the chosen logical relationships.

(d) On line management

Once students had been shown how a search was constructed in order to obtain a result from the system, the next task was to guide students in decisions concerning the fate of that information. Therefore the balance of the group sessions was occupied by management of the results of a search, in order to counter the effect of a popular "urban myth" concerning CALR. It went something like this (albeit with minor alterations):

A lawyer dials up a database (usually LEXIS) and puts in a legal idea he/she (usually he) wants to find. The computer whirrs away and then begins pouring out information in an unstoppable fashion. The lawyer, aghast, can do nothing to impede the remorseless flow of data and is eventually faced with a bill of several hundred/thousand dollars.

The fear of or cynicism towards technology which underpins this story is a more advanced example of the legal hidden agenda to CALR.¹⁶

¹⁶ The anecdote may have stemmed from early forays into CALR, when systems were not fully developed. The writer has found one empirical reference, relating to a query producing 800 of 1300 available pages of loaded material in relation to the US Internal Revenue Code. See *Automated Law Research* (American Bar Association 1973) (which contains collected presentations delivered at the First National Conference in Automated Law Research), 153.

Therefore, while the first part of the course was geared to helping participants accept that the parameters of information retrieval are determined by them as individuals, in terms of the numbers of documents which complied with their chosen search structure, the latter part was aimed at conveying the flexibility CALR provided to monitor and manipulate the flow of information retrieved. That consumers of CALR information systems were completely in control of the result was the primary message.

Options canvassed included:

- expanding or contracting the search to increase/reduce the numbers of documents to a level searchers felt was satisfactory to their needs, including strategies where a search shows an unexpected skew from the substantive legal idea being “trawled” for;
- analysing the worth of the documents retrieved.

(i) Expanding/contracting search results

Ability to alter the initial result by the addition of further words representing other legal ideas is an essential part of the flexible nature of CALR. It enables students to grasp the principle that it is their individual research need which dictates the result.

For example, the degree of specificity of a search will largely be determined by the amount of prior manual research on any particular legal problem. If a searcher had chosen to use CALR after substantial prior manual research, he or she might expect to be able to approximate the number of documents likely to be located and recognise a proportion of the documents ultimately retrieved by the system. This would serve as some confirmation that search terms chosen were apposite or otherwise. If the cases retrieved were unexpected or irrelevant, the searcher would then need to tackle alternative approaches to the question by incorporating or excluding further legal ideas.

The inherently flexible nature of free-text search was difficult to convey in formal sessions without the computer. Nevertheless the “management” session did appear to serve as valuable preparation for students in coping with their eventual on-line experience, particularly at the initial stage of preparing a search request and selecting alternative strategies if an initial search did not reap the desired substantive result.

(ii) Analysing the worth of material retrieved

It has been palpably clear from the 1987 course format that, when undertaking an on-line search in co-operation with the writer, students had difficulty in juggling the demands for response made by the system (the keyboard commands) and simultaneously reviewing the substantive content of their chosen search displayed on the computer screen. As a consequence, student-searchers became quite quickly fatigued. This phenomenon was predictable, but its cause appeared to stem from a combination of factors:

- the not unnatural anxiety at what was, for some, the first physical contact with any “computer” (except for leisure experiences provided by video games);
- a lack of familiarity with a keyboard (the eye-hand co-ordination aspect);

- an awareness of the on-line costs inherent in accessing a CALR system;
- the prospect of making basic analytical decisions concerning the relevance of retrieved documents presented in an electronically published format;
- a self-consciousness engendered by the presence of a member of the faculty, giving rise to perceptions that a student-searcher's competence and decision-making was being monitored;
- the vested interest in a substantively satisfying result, which for some inhibited approaching the session as practice of a newly acquired skill;
- the realisation that manual research preparation prior to the on-line session had been inadequate, rendering on-line decision-making concerning relevance of retrieved material a difficult task.

The co-operative search was an experimental exercise which had valuable flow-on effects for structuring of the present course. It was considered that the transition from formal group sessions to the individual on-line experience was too ambitious, incorporating as it did both hands-on practice *and* a substantive search.

Some student searchers were unable to resist the temptation to attempt to abdicate control of the session in order to make substantive gains in their research. Other participants seemed to find the co-operative exercise invasive, since it provided a rather uncomfortable experience of discussing legal problems with a member of the staff during the course of preparation of a written opinion or research paper, when student ideas or approaches had not been fully consolidated.

Several students had clearly not been prepared to abandon their "magical whizz-wang" hidden agenda, and expressed frustration with search results which reflected their insufficient manual research in preparation for accessing a CALR system. The converse was also evident — having completed what they saw as extensive manual research, some searchers conveyed frustration at finding more relevant material than they expected. These students exhibited an "input-overload" reaction.

These observations should not be taken to suggest that the co-operative search exercise was, as a whole, unsuccessful. Many student-searchers indicated at the end of the session that they felt the exercise had been both technically and substantively valuable. These comments were spontaneous and had been reflected in such students' increasingly relaxed approach as the session had progressed, their willingness to persist and their confidence at managing the flow of data. (Interestingly, the variable nature of responses has been mirrored in experiences with practitioner-searchers.¹⁷)

It might be legitimate to conclude that legal research and analysis is a highly individuated process, whether it is manual or computer assisted, bearing a unique profile for each legal personality. Consequently no general objectives can be set for exposure to CALR because any two legal minds may approach a single legal issue in quite different ways. Thus different sets of material may be considered relevant by each.

Bearing this in mind, an attempt was made to restructure the course by

17 Seminar conducted on behalf of the Auckland District Law Society, May, 1988.

enhancing the essentially private nature of the practical on-line contact with a CALR system for the following reasons:

- (a) To encourage the drive to independent practice and searching by reducing the potential for reliance on the “expert”.
- (b) To promote the principle that the success of a computer assisted research undertaking, where a full-text system is accessed, is grounded in the searcher, not the system.
- (c) To assist students in weighing the benefits or burdens of delegated research when they face, as practitioners, accessible CALR systems.

The strategy adopted was to lengthen the period of group participation to four hours and to separate practice of the technical CALR skills from any substantive searching, by the introduction of a totally structured on-line practice session which each participant could elect to complete individually.

The extra group session was devoted to guiding students through the on-line search process. Because of the restriction inherent in single-computer access, the experience had to be produced off-line by the use of a series of overhead projections. These stimulated in exact detail and format the screens of information which would face an on-line searcher. With the permission of the LEXIS system management, the identical screens were also reproduced as part of the course materials. The objective was to convey to participants the flavour of on-line exposure without the very real stress which accompanies a first “hands on” attempt.

This session was not simply a slide-show trip through a computerised search system from initial entry to the data base, selection of the most appropriate area of available material for searching, nomination of a set of terms and the logical relationships between them, review of the results and sign-off. It simultaneously enabled consolidation of keyboard commands which would galvanise the system into activity and served, quite literally, as a graphic introduction both to the format and content of information retrievable from the system and to the sequence of the search process.

As successive overheads were displayed, students were encouraged to air any difficulties they encountered. The predominating feature of this final session appeared to be an increasing sense of confidence that what the system ultimately produced was familiar territory, albeit by virtue of the application of newly acquired skills. Several students expressed relief and surprise to find that what appeared on the reproduced terminal screens “looked like law”: that cases, statutes or articles electronically produced bore more than a passing resemblance to the bread and butter material of their prior legal education — the printed “hard copy”.

It was perhaps only at this point that most were fully able to appreciate what a CALR “full text” system offered. The ability to move with freedom through the material, returning to a document for more intensive review, to by-pass known material and to display each retrieved document in a number of different ways (in full, in part, as a simple citation, or with key search terms highlighted) entranced participants. The session underscored yet again the principle that a searcher’s decisions directed the

flow of the material and enabled the final obliteration of the “urban myth” previously related, concerning control of the system.

Group participation was ended with the homily contained in the invitation to register for the course: that conscientious attendance at the formal sessions would not make seasoned CALR operators of participants. This may seem a somewhat negative note upon which to conclude, but the caveat served as the basis for the invitation to enter upon the informal individual part of the course.

3 *Content of the course – individual participation*

The voluntary nature of the course, with its division into group and individual participation, served as some form of quality control upon both the director’s communication abilities and upon student commitment.

That the majority of students elected to embark on individual learning served to encourage the director in drawing the inference that the group sessions had been of value. (Whether the majority persisted despite or as a result of the formal sessions was not considered a legitimate inquiry to be included in course assessment questionnaires, although comments were invited *inter alia* upon the pace and content of the sessions and upon the quality of the materials distributed.)

The first step in the individual learning curve was completion of a take home exercise.¹⁸ This assessment was directed toward isolating areas of the course in which students demonstrated individual weakness, so that these could be remedied prior to unsupervised searching. Questions canvassed the “why”, “when” and “how” of CALR, embracing the general principles of free-text searching, the relationship of CALR to manual research, necessary jargon, rules of logic, search planning, on-line management of results and emergency bail-out techniques. A suitable standard of effort demonstrated was the necessary pre-requisite to the next stage – on-line practice. It was envisaged that a structured first foray into a CALR system would reduce the stress observed in previous course participants during their first “hands-on” exposure.¹⁹

A practice manual was written, enabling a student, *unsupervised*, to access LEXIS, execute a search, modify the result and record the relevant parts of documents retrieved for printing after termination of the session.²⁰ The manual was of necessity detailed, describing the meaning of screens, dictating the next appropriate command and predicting what the subsequent screen would produce. The ability to round off a session by

18 See Appendix A. The author is indebted to the writer of the following article for some guide to “quiz” format: Edwards, “LEXIS and Westlaw Instruction in the Law School: University of Oklahoma” (1983) 76 Law Library Journal 605 (Appendices).

19 It was also a most efficient way to manage the financial resources available for CALR, since the part of the LEXIS service accessed was available at no cost other than tele-communications charges.

20 The practice manual is unable to be reproduced due to its length and layout. It is written in simple conversational style (for possible conversion to audio tape). The style (though not its substantive format) adopted was the result of discovery of an article on LEXIS teaching, to which the author is again indebted: Laurence, “Introducing Students to LEXIS: a Model Self-Teaching Exercise” (1978) 71 Law Lib J 467.

production of a printout, as a tangible badge of endeavour, was particularly welcomed by students.

The practice session was a most successful strategy. Few students came to grief. Those who did had admitted to attempting to depart from the sequence of instructions and were somewhat chastened by their inability to retrieve the situation, having to resort to the “bail-out” procedure which gave the student the ability to terminate the session at any time. A subsequent optional unstructured practice time was then made available to participants, to consolidate their on-line experience, prior to any planning and execution of independent substantive searches.

III GUIDELINES FOR INDEPENDENT USE

For those who chose to continue and undertake independent searching, the following guidelines, which form the subject of this part, have been developed. They are not articulated in written form to students, nor are they applied in an intransigent fashion. They do, however, seek to reinforce the avoidance of “fishing expeditions” via CALR — that is, the indiscriminate accessing of a system without sufficient preparation.

Prospective searchers are required to demonstrate that they have undertaken prior manual research. This is not done in a formal way, but is inherent in the requirement that they plan their own searches, selecting appropriate terms and logical operators, before arranging time for an on-line session. This consultative process with a student searcher is now the only point at which the director interposes her presence during the individual stage of the course.

In terms of the substantive aspects of the research plan, a policy of minimal intervention is employed. The logical relationships employed in relation to the nominated search terms are assessed, advice is given on the need to consider alternative search strategies (if the initial search plan is substantially or fatally flawed), and help is offered in the selection of the most appropriate part of the database for searching. This minimalist approach deters searchers from attempting to abdicate the outcome to the analytical efforts of the director, and encourages them to accept responsibility for the success or otherwise of their computer assisted research. It also avoids the difficulty, where the research component of a written paper or opinion is part of the evaluation process, that CALR students’ research efforts are being illegitimately assisted by reliance on the legal skills of another.

While the requirement for consultation may be seen as unduly authoritarian, it is an attempt to monitor and balance two objectives:

- (a) The wise use of the CALR funding resources within the faculty.
- (b) The reinforcement of a disciplined approach to CALR which may be transposed to the world of professional legal practice.

Guidance of a student in this manner during the preparatory stages to on-line searching has appeared to meet both these needs. It assists the student to enhance the possibility of a satisfying search by enabling analysis, prior to the on-line session, of factors in a search plan which might cause retrieval “failure”. The consultative process has sometimes resulted in a

student's appreciation, when outlining a proposed search, that terms or strategies are inappropriate or insufficiently planned. Usually such a searcher will retreat in order to rethink the search plan, or engage in further manual research to build more efficient strategies.

Independent student searchers have generally shown themselves adept at formulating coherent research plans and have demonstrated care in selecting the vocabulary and the logical relationships which build the desired legal ideas. Having undertaken substantial manual research, searchers usually elect to set themselves a highly specific computer assisted exploration of their chosen area. Some choose to access the system simply to confirm and/or supplement the breadth and depth of their manual exploration (eg, a case name search to check the subsequent treatment of a leading authority). Others elect to utilise the flexibility offered by full text free searching to approach a legal issue in a highly creative manner (eg, searching for subsequent references to some judicial or academic quotation or "number crunching", in relation to judicial use or rejection of a legal idea or device).

The success of independent searching is not formally monitored, although many students do report, either orally or via their course assessment questionnaire, on their findings and level of satisfaction with the result.

IV FUTURE DIRECTION OF THE COURSE

It is envisaged that CALR will be more fully integrated into the LLB programme by introducing the concept to students as part of the research component of one of the mandatory core units. This will ensure that all graduates have *some* appreciation of CALR, whether or not they choose to undertake the course proper.

As a child of technology, the field is subject to expansion and constant change over an abbreviated period. Therefore the structure of the course will necessarily be affected by future availability of self-teach diskettes for commercially available search systems²¹ and by any eventual increase in computer facilities within the faculty, available for student use.²²

It is submitted that formal group teaching of CALR, as a prerequisite to and supported by an individual programme, is a powerful method of ensuring a disciplined and cost-efficient research perspective amongst its acolytes. The foundation of the course will therefore continue to be the arming of students with an appropriate hidden agenda: an appreciation of the potential of computer assisted legal retrieval, a respect for its power and speed, and the acceptance of the responsibility a free-search full text system imposes on individual searchers in order to enjoy its benefits, in both substantive and cost-efficient terms.

21 Eg, LEXIS self-teach diskettes have been beta-tested in 1988 in a number of US law schools. The writer is grateful to Mead Data Central for the opportunity to test these prototypes on a portion of CALR participants at the University of Otago.

22 Some introduction to KIWINET will obviously become necessary, once its coverage and commercial use increases. In addition, the introduction of the concept of litigation support systems, and other legal computer applications will also need to be addressed.

Appendix A LEXIS QUIZ

GENERAL:

- 1) *Why is some manual research necessary prior to using CALR?*
- 2) *Name the divisions of material on LEXIS in their correct descending order: segments, library, document, file.*
- 3) *What is the 'address' of a word? Why is it important in a free text search system?*
- 4) *Describe in plain English the following jargon terms: 'stacking'; 'modifying'; 'key word in context'; 'noise words'; 'universal symbols'; 'signing off'.*

WORDS:

- 5) *Delete all noise words from the following extract:*
 "The judge had the power to impose a cumulative sentence. If the judge has imposed such a cumulative sentence for a cannabis charge, it would have commenced on the date it was passed."
- 6) *To find the following terms 'bankrupt', 'bankrupting', 'bankrupted' and 'bankruptcy', which of the following would you enter and why?*
 (a) bankrupt** (b) bankrupt!
- 7) *Which of the following can you not search and why?*
 (a) sterili*ation (b) constitutional** (c) **admissible
- 8) *'Create' will find (tick one):*
 (a) create, creates, created, creating (b) create, creates
- 9) *True or false? 'Post dated' will also find 'postdated' and 'post-dated'?*

CONNECTORS:

- 10) *What is a proximity connector? Give an example using a couple of terms and a connector and explain the effect.*
- 11) *Explain the difference in effect between the following search requests:*
 (a) A and B (b) A or B
- 12) *Why should the connector 'and not' be used with caution?*
- 13) *Which connector is most useful for the retrieval of all references to a particular case?*
 (a) W/N (b) W/SEG (c) PRE/N
- 14) *When adding a level to your search, which of the following connectors 'and', 'or':*
 (a) Broadens the field of capture?
 (b) Narrows further the field of capture?

CHOOSING TERMS & CONNECTORS:

- 15) *What alternative terms should be included in a search in respect of the following italicised words?*
 (a) Cases on the *definition* of a word
 (b) Cases on the *mens rea* required in respect of the offence of possession of narcotics.
- 16) *List the following connectors in their correct order of priority:*
 PRE/N; OR; AND NOT
- 17) *The order of priority of connectors can be altered by the use of what?*
- 18) *Explain the difference in effect between the following searches:*
 (a) ADMISSIB! W/10 CONFESS! OR FAIRNESS
 (b) (ADMISSIB! W/10 CONFESS!) OR FAIRNESS
- 19) *Plan a search locating all cases decided by the Privy Council on the question of proprietary estoppel:*
 (a) Before 1979
 (b) Between 1980 and 1987
- 20) *Plan a search to build a profile on Lord Denning MR with respect to his judicial attitudes on promissory estoppel.*

ON LINE STRATEGIES:

- 21) *What is back modification?*
- 22) *Explain each of the following commands:*
.FU; .ND3; CL; .CI; .VK75; .SE; .NS.
- 23) *Interpret, in ordinary English, the following 'stack' of commands:*
.CL; COMCAS;ALL;CONTRACT!W/5 FRUSTRAT!;.FD;.KW.
- 24) *You are scanning 20 cases in KWIC. You are presently on case 12 and would like to view the last case, you enter:*
- 25) *True or false? It does not matter where the 'cursor' is when you transmit your search.*
- 26) *When viewing results, in what chronological order are cases presented to you?*
- 27) *What keyboard command achieves the same function as:*
(a) F1? (b) F3?
- 28) *You would like to know how much time has elapsed since you signed on. You enter:*
- 29) *You are on page 16 of a document which is 22 pages in length. You wish to move to the:*
(a) First page. You transmit:
(b) Last page. You transmit:
- 30) *You are browsing a document in the KWIC format. You wish to expand the 'window' further to 75 words. You transmit:*
- 31) *You find an unreported case you might want to retrieve in full. Having changed to 'full', you need to find out the length of the case. You transmit:*
- 32) *You are in the middle of scanning results and would like to recall the language of the search terms you used on a previous level and the number of cases retrieved. You type:*
- 33) *You would like to see a list of segments in a file. You type (select one):*
(a) .SE (b) .SS (c) .CF
- 34) *What is the difference between a segment search and a segment display?*
- 35) *To initiate recording which keys do you depress?*
- 36) *You have got yourself into a quandary in your search, or are simply tired and wish to stop but not lose your search. What commands do you give? Choose one.*
(a) .OFF;Y (b) .SS;.SO (c) .END