

AN ANALYSIS OF COMPUTER-RELATED CURRICULA IN
SCHOOLS OF LAW ACCREDITED BY THE
AMERICAN BAR ASSOCIATION

By

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Computers have been used by government, business, and industry for about 25 years. During this time, they have been used to solve many problems and perform many laborious actions. However, the computer has also brought about a new type of crime, security, and privacy problem (Cook, Eure, Johnston, and Mattford, 1982).

Zalud (1983) reports that computer crime in the United States averages a loss of \$621,000 per incident. He quotes David McGuire, a former U.S. Attorney, as saying that basically there are no holes in our statutes. McGuire feels that the

laws are in place to successfully prosecute, although most laws don't address the use of a computer; [they] were written when criminals were using paper checks, telephones and wire transfers to steal funds. The problem in this area is a lack of understanding of computer systems by the investigator and prosecutors (Zalud, 1983, p. 45).

In 1960, The Practical Lawyer discussed an article written by Roy Freed entitled "A Lawyer's Guide Through the Computer Maze." This was perhaps the first published article to state that lawyers should be knowledgeable about computers if they were going to represent their clients properly and effectively (Father of Computer Law, 1984).

Freed was quoted in Popular Computing as saying:

Today, computer law is really an extension of old-fashioned corporate law. It includes all the subject matters that make

up that field as it relates to computer technology: contracting for computer systems and software programs; protection of proprietary software programs and databases; taxation related to computer-related activities, transactions, and properties; record-keeping requirements; liability exposures of suppliers and users of software programs and equipment; antitrust aspects of the industry (Father of Computer Law, 1984, p. 34).

Freed states that a lawyer's present ability to understand computer technology is low and that lawyers are not comfortable in handling legal questions that involve this technology. He feels that we must form a body of modern interpretations of legal rules that allow us to make computer technology work for society. "The rules are in place. We [lawyers] just have to learn how to apply them wisely to this new technology" (Father of Computer Law, 1984).

However, it has been stated that federal prosecutors have had great difficulty in combating computer-related crimes because of the inadequacy of existing laws. For example:

In one attempted prosecution, the government lost the case because of definitional difficulties in establishing whether checks issued by computer on the basis of fraudulent or manipulated data were forgeries.

In another case, an indictment was dismissed because electromagnetic impulses which transmitted valuable data were determined not to be 'property' as defined in the interstate transportation of stolen property statute (Senate Bill Would Help Federal Attorneys Fight Computer Crime, 1979, p. 76).

Hollman, whose specialty is computer-related cases, reports that you have to understand computer technology in order to defend it properly. He feels that law schools are not facing computer issues, except for some law review articles. He contends that law students should take courses dealing with computers and the law at the advanced level so that they will have a better understanding of computer technology issues and how to represent computer-related cases (Benoit, 1983).

This study was designed to determine the number of computer-related courses that schools of law accredited by the American Bar Association (ABA) are presently offering in their curricula and their future plans for implementing computer-related courses. This study was also developed to determine if lawyers feel computer-related curricula should be offered in schools of law and, if so, the type of computer-related curricula that should be offered.

Statement of the Problem

The problem of this study was to determine the extent to which ABA accredited law schools offer curricula in the computer-related area.

In the investigation of computer-related curricula offerings in the ABA accredited law schools, a number of pertinent questions arise. Such questions, which may be regarded as subproblems, include the following:

1. Are computer-related courses required by ABA accredited law schools for entrance?
2. What courses are offered by ABA accredited law schools in the computer-related area?
3. What is the consensus of lawyers concerning the role of law schools in the development of computer-related curricula?
4. Do lawyers feel that the computer curricula offered in law schools, when related to computer crime or when using a computer system for law-related reasons, is valid?
5. What is the type of computer curricula that lawyers feel should be offered in law schools?
6. Has there been a necessity for lawyers to take computer-related

legal education since completing law school in order to gain knowledge in this area?

Purpose of the Study

The purpose of this study was to provide information which could be used by law schools to aid in assessing the adequacy of their computer-related prerequisites and course offerings.

By learning the extent and number of computer-related courses offered in ABA accredited law schools and the consensus of lawyers concerning computer-related curricula offerings and their need for computer-related curricula, the individuals responsible for curriculum and course content development may more accurately decide whether to include, revise, and/or retain the present emphases in courses where the instruction of computer-related education is deemed vital.

Need for the Study

Although computers have been used commercially since 1954, they are becoming more commonplace in small businesses, schools, and homes. The advances in computer technology have resulted in computers becoming more user-friendly and more available because of size and cost reduction.

With the increased use of computers, there has also been an increase in computer-related crime. But, unlike the technological advances of the computer, our federal and state laws have not kept pace. Nycum, a partner in the national law firm of Gaston Snow and Ely Bartlett, states that we are sadly behind the times when it comes to controlling computer crime. Problems arise after apprehending people

involved in computer crime because of the lack of adequate federal or local statutes (Hunter, 1984).

Although no fewer than 21 states already have specific laws to fight computer crime, Nycum feels a more uniform approach for all 50 states is needed (Hunter, 1984).

But even with the laws being put into effect, Scott Rosenberg (1983) reports that only an estimated 600 of the more than 400,000 lawyers in the United States belong to the Computer Law Association and approximately two dozen firms specialize in computer-related work.

Peter Vogel, a Dallas attorney who limits his practice to computer-related matters, stresses that general-practice attorneys recognize the fact that they do not know enough about this technological area. Most law firms simply don't accept computer law as a valid specialty (Rosenberg, 1983).

Rosenberg (1983) contends that since business people are learning the facts about computerization the hard way, they are more eager for legal safeguards, and the demand for specialty computer-law work is on the rise.

Only when knowledge is made available of the current status and trends in the computer-related area can recommendations be made. This study gives an analysis, interpretation, and summary of the present status and trends of computer-related curricula in ABA accredited law schools.

Delimitations of the Study

The following delimitations were imposed in this study.

1. This study is delimited to a survey of ABA accredited law

schools. There are 172 law schools approved by the ABA that confer the first degree in law.

2. The study is further delimited to a survey of the 250 largest law firms in the United States, as indicated in the September 19, 1983 issue of The National Law Journal.

Limitations of the Study

The following limitations existed for the purposes of this study.

1. The ABA accredited law schools may not be representative of all law schools.

2. The population of the 250 largest law firms may not be representative of all law firms.

3. The accuracy of the responses are completely dependent upon the respondent's interpretation of the items on the questionnaire.

Definition of Terms

To clarify the interpretation of data, the following terms are defined as used in this study.

The American Bar Association (ABA) - A professional association for lawyers that establishes accreditation standards for law schools. Since the adoption of the first law school accreditation standards by the American Bar Association in 1921, state supreme courts and other bar admitting authorities have encouraged the ABA's accreditation efforts, and the vast majority of states rely upon ABA accreditation to determine whether an applicant meets the educational requirements for admission to the bar. Graduation from an ABA-approved law school satisfied the legal

education requirements for admission to the bar in all jurisdictions in the United States.

Introductory Course - The computer-related course which often satisfied the core course requirements set by the American Assembly of Collegiate Schools of Business (AACSB).

Computer-related Course - Any course that meets one or more of the following criteria:

1. Teaches the components of a computer system and their functions
2. Offers instruction in one or more programming languages
3. Demonstrates how to use a computer and data base to do research
4. Stresses computer literacy
5. Teaches computer law-related matters such as: contractual or copyright agreements, and/or software development
6. Shows how purchased applications packages can be utilized on a computer system
7. Teaches management of an information system
8. Discusses computers and the law

CHAPTER II

REVIEW OF RELATED LITERATURE

The Computer Crime Problem

August Bequai (1983) reveals that while the news media and businesses turn their attention to the increasing problem of computer-connected crimes and abuse, white-collar crime continues to grow. With annual losses exceeding \$40 billion, computer-connected crimes constitute between \$100 million to \$3 billion of this amount.

The impact of white-collar crime is felt by everyone in our economy; no business or organization is immune. Bequai (1983) explains that the computer has made it easier to commit more traditional forms of white-collar crime, and although people, not computers, steal, it can also be said that computers have opened up new avenues for the dishonest.

According to Steve Huntley (1982/1983) the computer terminal is used so often in crimes against business, government, and the public that some people call computer robbery the primary activity in white-collar crime today.

Even though most computer crime can be classified under one of these groups: financial, property, information theft, theft of services, and vandalism of equipment and destruction of records or files, not every computer crime falls into just one group, nor is computer crime limited to these groupings.

The following is a summary of how E. J. Criscuoli, Jr. (1981) categorizes computer crime:

Financial crimes may take several forms; usually these types of crimes are found in a business environment where the computer is used for financial processing and the storage and maintenance of financial data files or records.

In crimes involving property, the criminal usually employs the computer to steal merchandise or other goods for the purpose of resale.

Information theft involving a computer takes the form of unauthorized access to the system. In most instances, this type of crime occurs when system services and physical facilities are left available to employees during nonworking hours; or computer programs and files are insufficiently protected.

Computers are also open to crimes involving thefts of services. This occurs when personnel use the computer to process personal information. Thefts of services are very prevalent, but few firms prosecute these dishonest employees, because they are afraid of hurting their public image.

Lastly, vandalism has become a serious threat to all computers. These outbreaks of vandalism involve the destruction, in part or entirely, of a company's computer(s). The objective of this crime is to destroy or damage the company's recordkeeping capabilities.

The Extent of Computer Crime

John H. Sheridan (1979) stated that not only are companies beginning to realize that computers have wonderful technological

advantages, but these technological blessings have also brought a new kind of vulnerability.

Computers are being used to steal money and information and to sabotage. With annual losses ranging from \$100 million to \$3 billion, it should be noted that only one in 100 computer crimes is detected.

Huntley (1982/1983) reports that the average bank robber steals \$8,000; the average computer criminal receives \$500,000.

The rapid increase of computer terminals has greatly expanded the number of people with access to data processing facilities; in some instances, little skill is needed to gain access to a computer, thus making the computer extremely susceptible.

There are many cases of computer crime; the following are just limited examples of computer crime:

A computer was used in the nation's largest bank embezzlement (Huntley, 1982).

Approximately \$10 million in fraudulent medicaid billing each year may be made through computers (Huntley, 1982).

Seven workers at a state welfare office in Miami were convicted of stealing at least \$300,000 worth of food stamps by falsifying data fed into the agency's computers (Huntley, 1982).

Penn Central Railroad computers were tampered with in a scheme to dispatch 217 boxcars to a deserted stretch of tracks. By the time the boxcars were located, they had been emptied of their contents (Sheridan, 1979).

In New Jersey, a computer operator diverted \$20 million worth of oil from an Exxon Corporation refinery to a barge docked nearby (Sheridan, 1979).

A programmer for one firm "kidnapped" a series of programs he had developed and attempted to extort \$100,000 in ransom from his employer for their safe return (Sheridan, 1979).

Sheridan (1979) points out that assaults on computers are not limited to attempts to divert financial assets. An employee could seek revenge against his employer by altering personnel or payroll records or by vandalizing computer hardware or software. The company's confidential information can fall into the wrong hands by just pushing a few buttons, in some cases. Sabotage or even accidental damage caused by a careless employee can bring a company that relies extensively on its computer system to a complete standstill.

The Victims of Computer Crime

Edith Meyers (1979) believes that businesses, out of embarrassment or fear of public panic, are not reporting or making public most computer crimes.

Joseph T. Woodall, a special agent of the Federal Bureau of Investigation, reveals that the probability of a computer-related crime being detected is about one percent. But of this one percent, only 15 percent are being reported to law enforcement agencies (Meyers, 1979).

Angeline Pantages (1979) states that few reported computer crimes are brought to just conclusions. Pantages points out two problems, the applicability of existent law and the difficulties in finding and presenting the evidence.

There are many problems with prosecution; one is the simple lack of data processing knowledge on the part of law enforcers and their difficult job of gathering evidence. The computer crime evidence does

not come in the traditional form of fingerprints, signatures, or a blunt instrument.

Lydia Dotto (1979) contends that approximately \$300 million is lost worldwide each year due to computer crime, but Dotto points out that no one knows how much the careful criminal is getting away with that has not been discovered.

"Many companies, fearing embarrassment and a loss of reputation, prefer to deal with computer crime quietly." Due to the inadequacy of laws dealing with this technology, convictions are extremely rare (Dotto, 1979).

Who are the victims of computer crime? Anyone who has business activities in a computerized system (banks, movie studios, record firms, insurance corporations, hospitals, colleges, universities, and government plus many more) is susceptible to computer crime.

Charles L. Howe (1982) reinforces these thoughts by stating that every computer installation is vulnerable to criminal activity.

White collar thieves have misused computers to embezzle funds, pilfer timesharing services and programs, eavesdrop on the bids of business competitors, divert inventory, disclose tax and banking records, snatch valuable mailing lists, monitor private medical and pharmaceutical records, print payroll checks and other documents that can be converted to ready cash, reduce or eliminate premiums on insurance and other installment type payments, and alter transcripts at colleges and universities (p. 119).

Even though the victims of computer crime may not be protected sufficiently by the law, Criscuoli (1981), indicates that computer crime could decrease if management would become aware that computers are very vulnerable in each stage (programming, central processing unit, input, output, and transmission) of operation. They should become aware of the fraud indicators which take little or no technical background. Most

important is computer security. It is the first and best defense against computer crime.

Characteristics of Computer Criminals

According to David Bumke (1980), the generation of bold sophisticated computerizing pilferers or hackers are now at large in the world. These white-collar criminals are so sophisticated that it is impossible to estimate how many there are, to say nothing of who they are, or where or why. Bumke states that "these criminals are smarter than the average crook, in fact, they are smarter than the average anything."

Many computer criminals are just enthusiastic teenagers, as discovered by the FBI in July, 1983. The FBI uncovered groups of teenage computer enthusiasts that had accessed more than 60 business and government computers. These hackers were armed with no more than a personal computer, a modem and some home-grown knowledge of computer entry routines (Rogers, 1983).

Who are the criminals? Most computer criminals range in age from 18 to 30. The white-collar criminals appear to be very loyal to their company and prior to this time have never been in trouble. Most of these criminals are extremely bright and are challenged by the prospect of beating a computer system; they tend to fear detection more than they fear punishment (Huntley, 1983).

Mandell (1984) reports that most computer criminals receive light sentences because they often have no prior history of criminal behavior, tend to be upper-middle-class citizens, and in most cases, are well-respected people within their community.

Hackers see computer crime only as a game. They only want to access someone's computer system, not steal information. A true hacker, as stated by Michael Rogers (1983), can't learn enough about computers; it is an addiction. The more security measures taken by a company to protect its computer system, the more tempting it seems to be to the hacker.

Computer criminals feel that they can get away with breaking into a computer system and will never be caught. Most white-collar criminals feel that they are only stealing a small amount from a large company and that this amount won't be noticed. Since most white-collar criminals are caught by accident rather than by audit or design, fear of being caught is not a deterrent to theft (Howe, 1982).

To date, only a few computer-related crimes have been traced to "organized Mafia-type criminals," but there appears to be indication of a growing mob interest in computers, explains Sheridan (1979).

Trends in Computer Laws

Many lawyers feel that it is necessary to reevaluate our legal system because of advancing computer technology and the growth rate of computer crime.

Rosenberg (1983) feels that people who make or buy computers have found they fail to protect themselves against legal dangers. During this time, lawyers have found that they have failed to stay knowledgeable about computers and, as a result are unable to properly advise or represent clients in this area.

Esther Schachter, chairwoman of the Special Committee on Computer Law of the Association of the Bar, stressed that through education about

the computer industry and increased awareness, first-time users will consider getting computer law specialists to help them draw up contracts (Paul, 1982).

Consequently, law schools have awakened only slowly to the idea of teaching computer law, reports Rosenberg (1983). Today, computer law is given little more than minor elective status at the law schools that offer it. Because faculty members feel that it is too much of a specialty area, they show great resistance to the teaching of computer law. However, many lawyers show great interest in this area and are taking continuing-education classes in computer law.

Criscuoli (1981) believes that law enforcement, in many cases, is not prepared nor properly equipped to investigate and prosecute computer offenses. Prosecutors face problems involved in the introduction of evidence, judges are often reluctant to hand out meaningful sentences to convicted computer criminals, and juries are not prepared to understand the complexities of computer crime.

According to Nellis (1982), even though many problems have been plaguing technicians and managers for some time, United States legislators are just now beginning to give their attention to issues surrounding the protection of computer science and technology.

Nellis (1982) goes further to say that the Justice Department feels that statutes have been found to prosecute all cases of computer-related crime. But the laws were not written with high technology crime in mind and in some cases prosecution has been difficult and obtuse.

Since most of the existing statutes were enacted before the advent of the computer, states Nellis (1982), the complexity of applying the language of current Federal statutes to computer fraud has convinced

the Data Processing Management Association (DPMA) and the computer industry that a separate statute dealing with computer crime should be considered by Congress.

Bequai (1983) feels that our criminal justice system has long been ill-prepared to meet the more traditional forms of white-collar crime. Now our criminal justice system is facing an area with which it is unfamiliar and ill-prepared to contend; that is, white-collar crime assisted by computer technology.

Many businesses feel that the criminal justice system can't cope properly with computer crime, so why should they bother to report this type of crime.

Robert Bigelow (1982) indicates that some people feel we have computer crime law that will help stop computer criminals. He states that we should not count on it, that while there are such statutes in 17 states, neither federal government nor the other 33 states have specific computer crime laws. Also, because computer crime is difficult to prove, prosecutors are more interested in catching robbers, rapists and murderers.

Most statutes deal with breaking or entering a home, dwelling or premise with the intention of depriving an owner of his possessions. There is not federal law specifically prohibiting unauthorized accessing of a computer.

August (1983), an attorney professor, reports that with respect to computer-related crimes committed there is a definite need for new criminal legislation. But there seems to be no need for any such laws in the area of computer-assisted crime and computer fraud.

Kennedy (1983) contends that there is very little law written to

deal expressly with the growing problem of computer crime, and few reported cases. Investigators, prosecutors, and courts have to deal with computer crime as best they can. Their lack of success shows the need for appropriate legislation.

As stated by Mandell (1984):

Surprisingly few computer crime cases ever reach the trial stage. This may be due to the generally light sentences that result in this form of white-collar crime, as well as the uncertainty over the legal issues, making out-of-court plea bargaining more attractive. For those cases that do get to trial, considerable time must be spent by attorneys in self-education to make the complex issues understandable to both the judge and jury. Several evidentiary problems arise when computer data is introduced into evidence (p. 155).

Computer crime is a problem we can no longer allow to go unchecked, stresses Kennedy (1983). For some time we have let our awe of the computer prevent us from taking action. "The Law Enforcement Assistance Administration recently awarded \$400,000 for the training of prosecutors and investigators in computer crime." It seems that we are finally recognizing computer crime for what it is: a spreading major threat to law abiding people, not a game. Kennedy believes that the state of Oklahoma and the Federal Government need computer crime statutes.

A boatload of litigation is often just what is needed to bring order and organization to a field of legal study. Carlson (1982) reveals that lawyers may not believe that a machine is capable of duplicating the human brain, but nonetheless, they should learn to deal with the consequences of a world that does accept that idea.

Computers and Lawyers

Guy Bennett, a legal administrator for Boise Cascade Corporation,

stated that computers have been around since 1946, but lawyers didn't start using them until 1971 (Quade, 1982).

Quade (1982) reported that computers will become a common part of a lawyer's life within the next 10 years. At a seminar held in New York, lawyers were told not to fear the computer and that before buying a computer they should know exactly what they need.

It was explained to lawyers in New York that computers could handle billings, contain a list of clients, and store standard documents that can be repeatedly used for contracts, estate plans, and other legal matters. Computing usage can also be expanded to include legal research, retrieve case reports, case digests, published statutes, and annotated statutes (Quade, 1982).

Goodwin, who sits on the U.S. Court of Appeals for the Ninth Circuit, says "Books are becoming expensive and space to store them is expensive. With a computer you can retrieve information faster than you can manually and you can have a printout of what you want in a matter of minutes" (Quade, 1982, p. 254).

C. Rudy Engholm, chairman of the Computers Committee of the ABA Section of Economics of Law Practice, stated that by 1990 the use of computers in nearly every phase of life will be common. "The resistance to change in the legal field is a well-known fact, but lawyers will realize that computers will help them in their work if they learn how to use them" (Quade, 1982, p. 254).

Carlson (1982) reports that lawyers should not only learn vendor's contracting techniques, but how to draft contracts as well as conduct litigation. Carlson felt that they should also become familiar with computer technology and computer languages.

Carlson (1982) quoted one lawyer as saying that he had not spent three years and many thousands of dollars learning a language only he and other lawyers could understand, only to have to turn around and learn another. The lawyer also stated that if God had wanted lawyers to understand computers, paralegals would not have been created.

However, Robert Bigelow (1980) reports that only lawyers who make use of this technology will prosper, those who avoid the advance technology will founder.

Zammit, an attorney in a New York law firm, states that in the face of this prospective eruption of litigation, the bar has a responsibility to become knowledgeable about the technology so that lawyers can effectively represent their clients in this area (Paul, 1982). Zammit was quoted as saying, "Lawyers will have to overcome what seems like their innate distrust and aversion for technical matters."

Harrington (1981) contends that a computer can make a lawyer more efficient, it can make his work more thorough, and it can free him from drudgery. This allows the lawyer to devote a greater proportion of his time to the intellectual and judgmental aspects of his profession. By using a computer, a lawyer's work can be less costly to his clients also.

According to Ehrlich (1973), even though one can expect a sizable number of law faculty to become familiar with computer data-retrieval services in their fields and probably they will even take a basic course or two of computer science, one cannot expect them to do much more. Ehrlich feels that one can talk about the issues of tort liability involved in computer use without knowing very much about computers. But

he states that more knowledge would be needed if the lawyer wishes to use the computer as a tool in research.

However, Nyhart and Jones (1983) reported ten years later that the high-technology society in the United States requires a large number of people knowledgeable about both technology and law; at present there are very few. Because of the difference in lawyers' and engineers' training and work patterns, they may find productive discussion impossible. Our nation is becoming technologically oriented, but we depend on law to solve our problems. "Society will be the loser unless the gap between law and technology is bridged."

Summary and Critique

A thorough review of related literature reveals a need for changes--changes in computer-related curricula offered by law schools and changes in our federal and state laws to include the crimes that involve a computer.

As Greene (1983) contends:

The jargon of computers may be familiar to most 12-year-olds these days, but it's beyond any number of high-priced Wall Street lawyers. When you talk about stealing software, an old-time, precomputer attorney may picture someone sneaking into the night with a spool of computer tape. Actually, stealing software may simply involve making a phone call to the computer and giving it the proper access code (p. 51).

Belden Menkus, a computer consultant, states that "the intricacies of computer crime complicate prosecution. Try to explain to a jury how someone got into a computer system and you've already put half of them to sleep" (Huntley, 1982/1983).

"Computer crime, an insidious and difficult to prosecute form of white collar crime has the potential to be more costly than simple

embezzlement, shoplifting or employee sabotage" (Zalud, 1983).

Ignorance of the importance of the computer resource, coupled with a lack of prevention programs, untested laws dealing with this crime, and attorneys with little computer knowledge, has caused an unsettling effect on society and especially business people.

The complexity and newness of computer systems is causing some problems to the legal system in developing thorough cases for conviction. Dr. R. L. Price, a trouble shooter for computer security problems, stresses that until the law is tested in court, its weak points will stay uncovered (Chavez, 1984).

Professional people seem to agree that computer crime and the technology involved in computers is having an impact on our society. Without laws written and lawyers educated in the area of computers, the impact could be astounding.

Additional inquiry is needed to increase available knowledge of the status and trends of computer-related curricula in ABA accredited law schools; particularly, the number and content of courses offered that deal with computer technology and future plans for implementing computer-related courses.

CHAPTER III

RESEARCH DESIGN AND PROCEDURES

The following steps were used in researching the problem, planning the study, conducting the survey of American Bar Association (ABA) accredited law schools and the 250 largest law firms in the United States, and presenting the results of the study on computer-related curricula in ABA accredited law schools:

1. Review of related literature
2. Development of the research questionnaires
3. Preparation of the cover letters and the follow-up letters
4. Selection of the population
5. Collection of the data
6. Analysis and interpretation of data
7. Presentation of conclusions and recommendations

This study was designed to obtain data regarding computer-related curricula in law schools accredited by ABA. Data were obtained from ABA accredited law school respondents regarding the computer-related requirements for entrance, computer-related courses offered, and computer-related courses being planned for future implementation.

Data were also obtained from selected lawyer respondents concerning computer-related course requirements for entrance into ABA accredited law schools, their opinions about the type of computer-related curricula offered and the sufficiency of the curricula when preparing for computer

crime cases or other computer-related legal matters. Lawyers also supplied data recommending the type of computer-related courses that should be included in the law school curricula, and the number and type of computer-related courses that they have taken since completing law school.

The obtaining of descriptive data makes it possible to show the percentage of ABA accredited law schools requiring computer-related courses for entrance, the percentage offering computer-related curricula, and the percentage planning future computer-related courses. The descriptive data also allows the reporting of the percentage of lawyers that have taken computer-related courses previous to and/or during law school, the percentage that feel computer-related courses are necessary, the percentage that have taken computer-related courses since completing law school, and the percentage that think the computer-related courses offered in ABA accredited law schools are sufficient.

This chapter describes the research design by elaborating on each of the steps employed in completing the study.

Survey of Related Literature

The available professional publications and literature relating to computer-related curricula in schools of law, computer crime cases, and computer-related legal matters were examined to determine if similar studies had been made and to review the literature concerning computer-related curricula. Sources used were the Business Education Index, Readers Guide to Periodical Literature, Business Periodical Index, Educational Resources Information Center (ERIC), an on-line

search of a legal data base by the Oklahoma State University Library, and numerous professional journals and computer magazines.

The researcher examined the literature from the early 1970's to the present (1984), but was primarily interested in the literature published since 1975 which was the year the first microcomputer was manufactured, interest increased in computer-related educational programs, and computer crime began to occur more often.

The review of literature was helpful and informative, even though there were no studies found, published at this time, which dealt with computer-related curricula in schools of law.

Development of the Research Questionnaires

The research instruments formulated to gather data for this study were questionnaires developed from a study of related literature, other research questionnaires concerned with computer-related curricula, and through interviews and consultation with Oklahoma State University faculty members.

The questionnaires were revised and refined as a result of consultation with statisticians at Oklahoma State University, discussions with and suggestions from faculty members in the information systems area and the business law area at Oklahoma State University, and thorough review and evaluation by the researcher's doctoral committee. This consultation and evaluation procedure resulted in clarifications of specific items on both questionnaires. Every effort was made to develop questionnaires that were easy to follow and complete, and had questions that were clearly stated and not ambiguous.

The ABA Law Schools' Questionnaire

The final ABA accredited law school questionnaire was printed on 11 by 17 paper and was folded in half to make the final size of 8 1/2 by 11 inches. The questionnaire was printed on the front and inside area, making a three-page instrument. It was printed on light yellow bond paper so that it would not be put aside and forgotten by the person receiving it, hopefully resulting in a better response rate (See Appendix A). The questionnaire did not require a signature or name of the ABA accredited law school in order to protect the anonymity of the respondents. However, an identification number was used only for the purposes of the researcher in order to facilitate a follow-up mailing. The questionnaire provided a space for the respondent to write a name and address to indicate an interest in receiving an abstract of the findings.

The questionnaire encompassed four sections including the following:

- I. Computer-Related Admission Requirements
- II. Computer-Related Course Work
- III. Law-Related Research
- IV. Computer-Related Course Plans

Section I of the questionnaire contained a question designed to obtain a profile of the ABA accredited law school admission requirements and the courses required. Section I was to be completed by all respondents, whereas Sections II and III were to be completed by ABA accredited law schools that offered computer-related courses or schools that placed an emphasis on law-related research using a computer system. Section IV was to be completed by ABA accredited law schools that were planning

computer-related course changes or additions within the next two years (1984-1986).

The Lawyer Questionnaire

The final lawyer questionnaire was printed on both sides of 11 by 17 paper and folded in half to make the final size of 8 1/2 by 11 inches. An 8 1/2 by 11 insert, with questions printed on one side, was included. The questionnaire contained five pages and was printed on bright blue paper so that it also would not be put aside and therefore, may result in a better lawyer response rate (See Appendix B). For purposes of follow-up, the same procedure was used with this questionnaire, as was used in the ABA accredited law school questionnaire. The questionnaire was divided into the following three sections:

- I. Personal Information
- II. Law Firm Information
- III. Computer Education in Law Schools

Each section was to be completed by all respondents. Section I regarding personal information sought data with respect to the lawyer's computer-related course work, the computer cases with which he/she had been involved, and the amount of continuing legal education the lawyer had taken in the computer-related area.

Section II concerning the law firm gathered data with regard to whether a computer was used in the law firm and for what purposes. Section III included questions concerning the types of computer-related courses that should be offered and if computer-related courses should be required.

The researcher made every attempt to design both questionnaires in a straightforward, easy-to-answer format, thereby facilitating ease of completion and encouraging response. The questions were formulated to be as clear, specific, and concise as possible. In developing both questionnaires for reliability and attractiveness, clear and complete directions were included with a title reflecting the purpose of the study, type style and size were varied for headings, and professional quality reproduction was utilized to give a business-like appearance.

Preparation of the Cover Letters and Follow-up Letters

The cover letters were carefully constructed in order to encourage the ABA accredited law schools and the lawyers to participate in the study by completing and returning the questionnaire. The cover letters were written in the form and style of a business letter, and were concise but explanatory. Both cover letters were reproduced on College of Business Administration, Oklahoma State University stationery, and were co-signed by the dissertation adviser, Dr. Richard A. Aukerman (See Appendix C).

The ABA accredited law school cover letter was addressed to the dean of the law school with a request that the contents of the envelope be forwarded to the appropriate person, encouraging that individual to complete and return the questionnaire.

The lawyer's cover letter had an attached two by three index card which was reproduced on the same quality and color of paper as that of the lawyer's questionnaire. The index card requested the person opening the envelope to route the contents to the newest member of the law firm

(See Appendix C). The cover letter was addressed to the lawyer with an encouraging request to complete and return the questionnaire.

The follow-up letters were also written to be explanatory, to-the-point, and in a business format. They contained much encouragement for the ABA accredited law school and lawyer to complete and return the questionnaire as soon as possible, and was written to be appealing to even the most disinterested person in order to solicit a response. The follow-up letters were also reproduced on College of Business Administration, Oklahoma State University stationery and were co-signed by Dr. Richard A. Aukerman, dissertation adviser (See Appendix C).

The index card was also attached to the lawyer's follow-up letters.

Selection of the Population

The ABA Law School Population

In the early planning stages of this study, it was decided to include all American Bar Association (ABA) accredited law schools which confer the first degree in law (the J.D. degree). The ABA accredited law schools and bar admission requirements directory was obtained which included a complete ABA membership profile. Total ABA membership consists of 173 law schools: 172 bestow the first degree in law; the other ABA approved school is the U.S. Army Judge Advocate General's School which offers an officers' residence graduate course, a specialized program beyond the first degree in law. ABA's accreditation process is conducted by the Council of the Section of Legal Education and Admissions to the Bar. Law schools are approved by the ABA upon application of a school and after finding that the school offers a

well-established program of legal education which complies with the Standards for Approval of Law Schools. The final step in the accreditation process is the approval of the House of Delegates of the Association.

The 250 Largest Law Firms' Population

During the early stages of this study, it was also decided to include the 250 largest law firms within the United States, which is published every five years by The National Law Journal (National 250, 1982). The National Law Journal completed its first survey of the nation's 200 largest law firms in 1978, however in 1983, it expanded the list to 250 because the biggest law firms keep getting bigger and there are more large law firms than ever before. On September 19, 1983, The National Law Journal reported the "NLJ 250." The "NLJ 250" report included the rank of each firm for 1983, 1982, and 1978; the firm name and principal office; the branches and number of lawyers at each branch; total lawyers for 1982, 1982, and 1978; the number of partners, associates, and paralegals; and finally, the starting salaries for 1983.

After obtaining the desired population, the law firm name and the principal office from the "NLJ 250," the Martindale-Hubbell Law Directory was referenced in order to find mailing addresses for each law firm (Martindale-Hubbell, Inc., 1982).

Both populations' addresses were entered and a word processing software package for a microcomputer was utilized so that each envelope could be individually addressed, thus giving a more personalized appearance.

Collection of Data

The ABA Accredited Law School Data

The original mailing was sent to 172 ABA accredited law schools and included a cover letter, a copy of the law school questionnaire, and a business-reply postage-paid return envelope.

Approximately five weeks after the original mailing was completed a follow-up letter, a copy of the law school questionnaire, and a business-reply postage-paid return envelope were sent to all nonrespondents.

The timetable for mailings of the original and follow-up materials was as follows:

1. Original mailing--August 15, 1984

Date requested for return--September 15, 1984

2. Follow-up mailing--September 20, 1984

Date requested for return--October 26, 1984

Returns on this study instrument amounted to 136 replies from 172 ABA accredited law schools contacted. This is a 79.1 percent response. The percentage of returns and nonreturns is reported in Table I.

The 250 Largest Law Firms' Data

The original mailing was sent to the 250 largest law firms in the United States and included a two by three index card attached to the cover letter, a copy of the lawyer questionnaire, and a business-reply postage-paid return envelope.

Five weeks after the original mailing was completed an index card, a follow-up letter, a copy of the lawyer questionnaire, and a business-reply postage-paid return envelope were sent to all nonrespondents.

TABLE I
 DISTRIBUTION OF THE POPULATION BY RETURNS AND NONRETURNS
 FROM THE 172 ABA ACCREDITED LAW SCHOOL QUESTIONNAIRE

Category	Number	Percent of Respondents (N = 172)
Total respondents from initial mailing	107	62.2
Total respondents from follow-up mailing	<u>29</u>	<u>16.9</u>
Total respondents	136	79.1
Total nonrespondents	36	20.9

Six weeks after the first follow-up had been sent a second follow-up was mailed to all nonrespondents. The procedures used with the second follow-up were parallel to that of the first follow-up.

The timetable for mailings of the original and follow-up materials was as follows:

1. Original mailing--August 15, 1984
Date requested for return--September 15, 1984
2. First follow-up mailing--September 20, 1984
Date requested for return--October 26, 1984
3. Second follow-up mailing--November 1, 1984
Date requested for return--November 30, 1984

There were 108 return replies on this study instrument from the 250

largest law firms contacted. This is a 43.2 percent response. The percentage of returns and nonreturns is reported in Table II.

TABLE II
DISTRIBUTION OF THE POPULATION BY RETURNS AND NONRETURNS
FROM THE 250 LARGEST LAW FIRMS QUESTIONNAIRE

Category	Number	Percent of Respondents (N = 250)
Total respondents from initial mailing	52	20.8
Total respondents from first follow-up mailing	38	15.2
Total respondents from second follow-up mailing	<u>18</u>	<u>7.2</u>
Total respondents	108	43.2
Total nonrespondents	142	56.8

Analysis and Interpretation of the Data

After the questionnaires were returned, the responses were coded and entered into a data set. A Statistical Analysis System (SAS) program was used to tabulate the responses from each questionnaire and to reveal the frequencies and percentages of each response for each question on both questionnaires. The tabulation of the data collected is shown in table form in Chapter IV. The interpretation of the

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tabulated data resulted in the findings which are also reported in Chapter IV.

Presentation of Conclusions and Recommendations

On the basis of the findings reported in Chapter IV, conclusions and recommendations were made which are included in Chapter V.

Summary

This chapter has described the steps used in researching the problem, planning the study, conducting the survey of ABA accredited law schools and the 250 largest law firms in the United States and presenting the results of the study. The questionnaires were administered through an original mailing to all ABA accredited law schools which confer the first degree in law and the 250 largest law firms, and follow-up mailings to all nonrespondents. Several steps were taken to increase the response rate: the formulation of good questionnaires, the selection of an appropriate population, the development of appealing cover letters, and the pursuit of nonrespondents. These steps have resulted in obtaining a high response rate thereby contributing to a more valid, reliable study.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

The American Bar Association (ABA) accredited law school questionnaire was mailed to the 172 ABA accredited law schools which confer the first degree in law. The law firm questionnaire was mailed to the 250 largest law firms in the United States. The data gathered from both questionnaires concerns the amount and type of computer-related curricula in schools of law. The findings resulted from a detailed analysis of the responses from both of the questionnaires.

Method of Analyzing the Data

Method of Analyzing ABA Accredited Law School Data

Section I of the ABA accredited law school questionnaire was planned to obtain a profile of the ABA accredited law school admission requirements concerning computer-related courses.

Sections II and III of the questionnaire were designed to give the researcher a more detailed picture of each ABA accredited law school's computer-related course work offerings and law-related research requirements. These sections were completed only by the ABA accredited law schools that offered computer-related courses or the ABA accredited law schools that placed an emphasis on law-related research using a computer system. Specifically, Section II contained questions

concerning computer-related curricula completion requirements, computer-related courses that are allowed to be taken as an elective, the law courses that include computer literacy or computer-related information, and graduate-level computer-related courses that could be taken at another institution and then transferred for credit. Specifically, Section III contained questions asking whether a law student was required to use a computer for law-related research or if a computer system was available to law students to do law-related research, and the name of the law data base used by the institution.

Section IV of the questionnaire was designed to elicit the future plans for developing or changing the computer-related curricula and was completed only by schools that were making such plans.

The clarification of "other" responses was allowed for in all sections of the questionnaire. The ABA accredited law school questionnaire is in Appendix A.

Method of Analyzing the Lawyer Data

Section I of the lawyer questionnaire was planned to obtain personal information from the lawyer concerning computer-related courses. Specifically, the questions concerned the required computer-related courses required prior to admission to law school; the completion of computer-related course work before entering law school; the year in which he/she graduated from law school; and if the required computer-related courses in law school were sufficient training when dealing with computer-related cases. This section of questions also asked if the lawyer had taken a computer-related course for personal reasons or as an elective while in law school; if continuing legal

education in the computer-related area has been necessary since graduation from law school; if the lawyer had been involved in a computer-related case and if so, how many and what type of cases; if the lawyer's background in the computer area would be adequate for modifying or describing computer laws; and finally, the state in which the lawyer is currently practicing law.

Section II of the questionnaire was designed to give the researcher a more detailed picture of each law firm's computer use. Specifically, Section II contained questions regarding whether a computer is used and for what purposes, what law related data bases are used, the number of lawyers within their firm that have completed computer-related course work, and the number of lawyers employed in their firm.

Section III of the questionnaire was designed to elicit the consensus of lawyers regarding whether they felt a computer-related course should be required in law school and if so, the type of computer-related course that should be required, and what would constitute a good computer-related course for lawyers.

The clarification of "other" responses was allowed for in all sections of the lawyer questionnaire. The lawyer questionnaire is in Appendix B.

A Statistical Analysis System (SAS) program was written to tabulate the responses of each item in both questionnaires. The results from each response to a question were tabulated according to frequency of occurrence, cumulative frequency, and percentage. The specific findings may be found in the various table in the following discussion.

Data Analysis

The ABA Accredited Law Schools' Data Analysis

Responses were received from 136 ABA accredited law schools throughout the United States. The analysis of data obtained from the ABA accredited law school questionnaires is divided into four sections: an analysis of computer-related admission requirements prior to entering an ABA accredited law school, an analysis of computer-related course work requirements in ABA accredited law schools, an analysis of law-related research, and an analysis of future computer-related course plans.

The first section of the analysis of the responses contains one area concerning the computer-related admission requirements prior to entering an ABA accredited law school. This area was analyzed using frequencies and percentages.

The second section (analysis of computer-related course work) is subdivided into four areas: required completion of computer-related courses, allowing a computer-related course as an elective, whether any law course includes computer literacy or computer-related information, and the receiving of credit for graduate-level computer-related courses that had been transferred from another institution. Each area was analyzed using frequencies and percentages.

The third section (analysis of law-related research) is subdivided into two areas: requiring students to do law-related research using a computer and allowing students to use a computer to do law-related research. Each area was analyzed using frequencies and percentages.

The fourth section (analysis of computer-related course plans)

contains one area concerning the plans to change or develop the curricula regarding computer-related courses and the extent of that change. This area was analyzed using frequencies and percentages.

The Lawyer Data Analysis

Responses were received from 108 of the largest law firms in the United States. The analysis of data obtained from the lawyer questionnaires received is divided into three sections: an analysis of personal information, an analysis of law firm information, and an analysis of computer education in law schools.

The first section (analysis of personal information) is subdivided into 10 areas: completion of a computer-related course before entering law school, year of graduation from law school, computer-related course admission requirements, the sufficiency of computer-related courses offered in law schools when dealing with computer-related cases, computer-related course requirements while in law school, computer-related courses taken as electives or for personal reasons during law school, continuing legal education in the computer-related area after graduation from law school, the involvement in computer-related cases (the number and type of case), sufficiency of the lawyer's background in the computer area when modifying or describing computer laws, and the state in which the lawyer is currently practicing law. Each area was analyzed using frequencies and percentages.

The second section (analysis of the law firm information) is subdivided into three areas: the use and purpose of a computer in the law firm, the number of lawyers in the law firm that have completed

computer-related course work, and the number of employed lawyers in the law firm. Each area was analyzed using frequencies and percentages.

The third section (analysis of computer education in law schools) is subdivided into two areas: the consensus of lawyers regarding computer-related course requirements in law schools and what would make a good computer-related course for lawyers. Each area was analyzed using frequencies and percentages.

Comparison Tests of Selected Items From Both Questionnaires

Various items from both questionnaires were compared utilizing two-way tables and the chi-square test for significance. The following questions were compared:

1. Question I. 1. from the law school questionnaire concerning computer-related course requirements prior to admission into law school was compared with Question I. 3. from the lawyer questionnaire which asked the lawyer if he/she had to take a computer-related course prior to being admitted to law school.

2. Question II. 1. from the law school questionnaire concerning an institution's computer-related course completion requirements was compared with Question I. 5. from the lawyer questionnaire which asked if the lawyer was required to take a computer-related course at law school.

3. Question II. 2. from the law school questionnaire concerning the allowance of a computer-related course as an elective was compared with Question I. 6. from the lawyer questionnaire which asked if the

lawyer had taken a computer-related course as an elective or for personal reasons during law school.

ABA Accredited Law School Analysis

Analysis of the ABA Accredited Law School Computer-Related Admission Requirements

The first section presents an analysis of the ABA accredited law school respondents that require computer-related courses for admission. Section I contained one question concerning computer-related admission requirements.

Respondents were asked to indicate whether a computer-related course was required prior to being admitted to an ABA accredited law school. One hundred thirty-six respondents (or 100.00 percent) answered "No."

Analysis of the ABA Accredited Law School Computer-Related Course Work

Section II presents an analysis of computer-related course work in ABA accredited law schools. The questionnaire contained one question for each of the following areas: computer-related course completion requirements, the allowance of a computer-related course as an elective, the inclusion of computer literacy or computer-related information in a law course, and whether a law student could receive credit for a graduate-level computer-related course transferred from another institution.

Respondents were asked if their institution required completion of

a computer-related course before graduating from law school. Thirty-one of the respondents (or 22.96 percent) answered "Yes" and 104 respondents (or 77.04 percent) answered "No." Table III contains an analysis of the computer-related course requirements in law schools.

TABLE III
ANALYSIS OF COMPUTER-RELATED COURSE COMPLETION REQUIREMENTS
PRIOR TO GRADUATION FROM ABA ACCREDITED LAW SCHOOLS

Completion Requirements of a Computer-Related Course	Frequency	Cumulative Frequency	Percent
Computer-related course required	31	31	22.96
Computer-related course not required	104	135	77.04
Did not respond	1	-	-

The respondents that replied "Yes" were then asked to list the required computer-related course(s) included as a part of the ABA accredited law school's curricula. Table IV contains the eight computer-related courses that are required and their frequency.

Respondents were asked if law students were allowed to take a computer-related course as an elective. An analysis of the responses is given in Table V. Eighty-two of the respondents (or 60.29 percent) answered "Yes" and 54 respondents (or 39.71 percent) answered "No."

TABLE IV
COMPUTER-RELATED COURSES THAT ARE REQUIRED
IN SOME ABA ACCREDITED LAW SCHOOLS

Course Title	Frequency
Legal Research and Writing	18
Legal Methods I and II	4
Westlaw and Lexis	4
Civil Procedures	3
Legal Bibliography	2
Legal Communication	1
Lexis	1
Westlaw	1

TABLE V
ANALYSIS OF ABA ACCREDITED LAW SCHOOLS THAT ALLOW COMPUTER-RELATED COURSES TO BE TAKEN AS ELECTIVES

Allowance of a Computer-Related Course as an Elective	Frequency	Cumulative Frequency	Percent
Allows computer-related courses as electives	82	82	60.29
Does not allow a compu- ter-related course as an elective	54	136	39.71

The respondents that answered "Yes," were then asked to indicate which courses could be taken as electives. The type of computer-related course indicated most often was Computers and the Law, with 51 respondents (or 37.50 percent) choosing this course. Table VI contains the analysis of the courses and programming languages that could be taken as electives.

Respondents were also asked to identify "other" programming languages or computer-related courses that could be taken as electives. Twenty-six of the respondents (or 19.12 percent) listed other courses that could be taken as an elective. There were 29 other course responses. The frequency of each course is listed in Table VII.

Table VIII contains the analysis of the ABA accredited law schools that included computer literacy or computer-related information in a law course. Seventy-two of the respondents (or 53.33 percent) reported that they offer computer literacy or computer-related information in a law course while 63 respondents (or 46.67 percent) reported that they did not offer such a course.

Respondents were then asked to list the course title, textbook, and author of each course that included computer literacy or computer-related information. Table IX contains the titles of the law courses which include computer literacy or computer-related information and the frequency and percentage of each course. Computers and the Law was the most frequently listed course with a response of 19 (or 14.07 percent) and Legal Research was indicated by 12 respondents (or 8.89 percent).

Table X contains the law course title, the textbook, and author which are used in the law courses that include computer literacy or computer-related information.

TABLE VI
 ANALYSIS OF COMPUTER COURSES AND PROGRAMMING LANGUAGES
 THAT CAN BE TAKEN AS ELECTIVES IN SOME
 ABA ACCREDITED LAW SCHOOLS

Computer-Related Courses or Programming Language	Frequency	Cumulative Frequency	Percent
<hr/>			
Computers and the Law			
Elective course	51	51	37.50
Not an elective course	85	136	62.50
<hr style="border-top: 1px dashed black;"/>			
Introduction to Computer- Based Systems			
Elective course	7	7	5.15
Not an elective course	129	136	94.85
<hr style="border-top: 1px dashed black;"/>			
Introduction to Information Processing			
Elective course	7	7	5.15
Not an elective course	129	136	94.85
<hr style="border-top: 1px dashed black;"/>			
Investigating Computer- Assisted Crime			
Elective course	4	4	2.94
Not an elective course	132	136	97.06
<hr style="border-top: 1px dashed black;"/>			
Managing the Data Security Function			
Elective course	4	4	2.94
Not an elective course	132	136	97.06
<hr style="border-top: 1px dashed black;"/>			
Overview of Computer Security			
Elective course	4	4	2.94
Not an elective course	132	136	97.06
<hr style="border-top: 1px dashed black;"/>			

TABLE VI (Continued)

BASIC

Elective course	3	3	2.21
Not an elective course	133	136	97.79

COBOL

Elective course	2	2	1.47
Not an elective course	134	136	98.53

FORTRAN

Elective course	2	2	1.47
Not an elective course	134	136	98.53

PL/1

Elective course	2	2	1.47
Not an elective course	134	136	98.53

RPG

Elective course	2	2	1.47
Not an elective course	134	136	98.53

TABLE VII
TITLES OF COMPUTER-RELATED COURSES NOT LISTED ON THE
QUESTIONNAIRE BUT SPECIFIED UNDER "OTHER"

"Other" Computer-Related Courses	Frequency
Advanced Legal Research	7
Law and Science	2
Artificial Intelligence Seminar	1
Computers and Privacy	1
Computer Applications to Law Practice	1
Computer Program Protection	1
Data Managers	1
Information Law and Policy	1
Intellectual Property	1
Jurimetrics	1
Legal Writing	1
Normalized Drafting	1
Patent Law and High Technology	1
Spreadsheet	1
Statistics and the Law	1
Trial Practice	1
Word Processing	1

TABLE VIII

ANALYSIS OF RESPONDENTS THAT INCLUDED COMPUTER LITERACY
OR COMPUTER-RELATED INFORMATION IN A LAW COURSE

Law Course with Computer Literacy or Computer- Related Information	Frequency	Cumulative Frequency	Percent
Includes computer liter- acy or computer-related information in a law course	72	72	53.33
Does not include computer literacy or computer- related information in a law course	63	135	46.67
Did not respond	1	-	-

TABLE IX
ANALYSIS OF LAW COURSES WHICH INCLUDE COMPUTER
LITERACY OR COMPUTER-RELATED INFORMATION

Course Title	Frequency	Cumulative Frequency	Percent
<hr/>			
Computers and the Law			
Offered	19	19	14.07
Not offered	116	135	85.93
Did not respond	1	-	-
<hr style="border-top: 1px dashed black;"/>			
Legal Research			
Offered	12	12	8.89
Not offered	123	135	91.11
Did not respond	1	-	-
<hr style="border-top: 1px dashed black;"/>			
Legal Methods I and II			
Offered	4	4	2.96
Not offered	131	135	97.04
Did not respond	1	-	-
<hr style="border-top: 1px dashed black;"/>			
Scientific Evidence			
Offered	3	3	2.22
Not offered	132	135	97.78
Did not respond	1	-	-
<hr style="border-top: 1px dashed black;"/>			
Estate Planning			
Offered	2	2	1.48
Not offered	133	135	98.52
Did not respond	1	-	-
<hr style="border-top: 1px dashed black;"/>			
Civil Procedures and Federal Court			
Offered	1	1	.74
Not offered	134	135	99.26
Did not respond	1	-	-
<hr style="border-top: 1px dashed black;"/>			

TABLE IX (Continued)

Copyright

Offered	1	1	.74
Not offered	134	135	99.26
Did not respond	1	-	-

Delivery of Legal Services

Offered	1	1	.74
Not offered	134	135	99.26
Did not respond	1	-	-

Law and Science

Offered	1	1	.74
Not offered	134	135	99.26
Did not respond	1	-	-

Law, Science, and Medicine

Offered	1	1	.74
Not offered	134	135	99.26
Did not respond	1	-	-

TABLE X
 TEXTBOOKS AND AUTHORS THAT ARE USED IN LAW COURSES
 WHICH INCLUDE COMPUTER LITERACY OR
 COMPUTER-RELATED INFORMATION

Course Title	Author	Textbook
Computers and the Law	Mandell	COMPUTER, DATA PROCESSING AND THE LAW
	Mason	AN INTRODUCTION TO USING COMPUTERS IN THE LAW
Estate Planning	Price	CONTEMPORARY ESTATE PLANNING
Legal Research	Mason	AN INTRODUCTION TO USING COMPUTERS IN THE LAW
	Park	COMPUTER-AIDED EXERCISE IN CIVIL PROCEDURES
	Tepley	PROGRAMMED INSTRUCTION IN LEGAL RESEARCH
Scientific Evidence	Park	CALI EXERCISE
Law Office Operation and Management	Altman and Weil	INTRODUCTION TO LAW OFFICE MANAGEMENT
Debitor-Creditor	La Pucki	DEBITOR AND CREDITOR COMPUTER GAME AND RELATED TEXT
Intellectual Property	Nimmer	CASES AND MATERIALS ON COPYRIGHT AND OTHER ASPECTS OF LAW PERTAINING TO LITERACY, MUSICAL, AND ARTISTIC WORKS
	Chisum	INTELLECTUAL PROPERTY: COPYRIGHT, PATENT, AND TRADEMARK
Legal Bibliography	Statsky and Battino	PROBLEMS IN LEGAL BIBLIOGRAPHY

Some respondents specified the titles of law courses which includes computer literacy or computer-related information but indicated that various readings were used instead of a particular textbook. Table XI gives a list of these courses and the types of material used.

TABLE XI
LAW COURSES THAT INCLUDE COMPUTER LITERACY OR COMPUTER-RELATED INFORMATION BY USING VARIOUS MATERIALS

Law Course Title	Materials Used
Law Office Management and Clinical Law	various readings
Computer Applications to Law Practice	miscellaneous readings by various authors
Procedure, Evidence, Trial Advocacy, Accounting, and Corporations and Property	CAI lessons
Contemporary Legal Drafting	special materials by Boyd
Communications Science and the Law	prepared materials
Debitor-Creditor Rights	professor's materials

Table XII contains the analysis of receiving credit for graduate-level computer-related courses transferred from another institution. Forty-one of the respondents (or 31.54 percent) answered "Yes, their law students could receive credit for a transferred graduate-level computer-related course," while 89 respondents (or 68.46 percent) answered "No."

TABLE XII
ANALYSIS OF RECEIVING CREDIT FOR A GRADUATE-LEVEL COMPUTER-RELATED COURSE TRANSFERRED FROM ANOTHER INSTITUTION

Receiving Credit	Frequency	Cumulative Frequency	Percent
May receive credit	41	41	31.54
May not receive credit	89	130	68.46
Did not respond	6	-	-

Analysis of Law-Related Research

In Section III respondents were asked if they required law students to use a computer for law-related research. Sixty-three of the respondents (or 47.01 percent) answered "Yes" and 71 respondents (or 52.99 percent) answered "No." Table XIII contains the analysis of required computer law-related research.

Table XIV contains the analysis of ABA accredited law schools which have a computer available to the students for use when doing law-related research. Sixty-seven of the respondents (or 98.53 percent) that answered "No, students were not required to use a computer for law-related research," answered "Yes, a computer was available to the students for use when doing law-related research." Only one respondent (or 1.47 percent) answered "No, a computer was not available to students for law-related research."

TABLE XIII
ANALYSIS OF REQUIRED COMPUTER USE IN LAW-RELATED RESEARCH

Required Computer Use	Frequency	Cumulative Frequency	Percent
Requires computer use for law-related research	63	63	47.01
Does not require computer use for law- related research	71	134	52.99
Did not respond	2	-	-

TABLE XIV
ANALYSIS OF AVAILABILITY OF A COMPUTER TO STUDENTS FOR
LAW-RELATED RESEARCH

Available Computer for Law-Related Research	Frequency	Cumulative Frequency	Percent
Computer is available	67	67	98.53
Computer is unavailable	1	68	1.47
No answer required	63	131	-
Did not respond	5	-	-

An analysis of data bases that are presently used and available for student use in ABA accredited law schools is contained in Table XV. One-hundred-fifteen of the respondents (or 85.19 percent) have Westlaw available for student use and one-hundred-thirteen respondents (or 83.70 percent) indicated that the Lexis data base was available.

TABLE XV
ANALYSIS OF DATA BASES THAT ARE AVAILABLE FOR STUDENT USE
IN ABA ACCREDITED LAW SCHOOLS

Data Base	Frequency	Cumulative Frequency	Percent
WESTLAW			
Available	115	115	85.19
Unavailable	20	135	14.81
Did not respond	1	-	-
LEXIS			
Available	113	113	83.70
Unavailable	22	135	16.30
Did not respond	1	-	-

Table XVI contains the frequencies of other data bases that were specified by the respondents.

Analysis of Computer-Related Course Plans

Section IV of the questionnaire asked respondents if they had plans

to change or develop the curricula so that it would include computer-related courses.

Forty-two of the respondents (or 32.31 percent) answered "Yes, they were reviewing the curricula in regard to computer-related courses," and 88 respondents (or 67.69 percent) answered "No." The following are comments from respondents who expect to make changes or developments in the computer-related area within the next two years:

"Investigating computer-assisted legal instruction software to be placed in law library."

"Recently, Computer Law has not been offered as usual due to problems of instructor availability."

"Hope to use CAI in existing courses: Evidence, Civil Procedures, Professional Responsibility."

"Micros being acquired for computer-assisted instruction in courses where software is available or can be developed by interested faculty."

"Still deciding."

"Studying the question."

"Faculty committee actively studying the question."

"Studying how to deal with computer literacy, computer law, computers in law practice and in legal education."

"Many courses under consideration."

"Uncertain--under review by faculty committee."

"Law committee reviewing presently."

"Make two courses that use computer-assisted instruction mandatory."

"Introduced computer literacy orientation for entering students, in fall, 1985, this will be a requirement for all students if our pilot study proves its usefulness."

TABLE XVI

NAMES OF DATA BASES AVAILABLE FOR STUDENT USE NOT LISTED
ON THE QUESTIONNAIRE BUT SPECIFIED UNDER "OTHER"

Data Bases Available to Students	Frequency
Dialog	10
Autocite	9
Nexis	4
Shephard's	4
ABA/Net	3
Electronic Legislative Search Service	3
OCLC	2
Dow Jones News Retrieval	1
CCHs	1
Focus	1
Kansas Legislature Information System	1
KATE	1
M. Bender	1
Pat-Law (BNA)	1
RLIN	1
Tine-Net (P-H)	1

"Plan to require competence in Westlaw and Lexis for graduation."

"Require training on both Lexis and Westlaw, will offer more computer-assisted instruction in law courses."

"All students will receive extensive orientation to Westlaw in third term (first year)."

"Plan to offer more law and technology courses."

"Will expand offerings."

"Our required Law Office Management course (two hours) will offer an elective one hour credit in a computer law where word processing, electronic spreadsheet, and structured data management systems will be taught."

"Elective course in Computers and the Law."

"At least one course in Computers and the Law will be offered in the next two years."

"Contemplating 'Computers in Law Office' course."

"Hope to offer a 'Computer Law or Technology' course in 1986-87."

"Will add computer hardware to use CAI materials in several courses. Also like to offer a course or two in computer aspects of law."

"Broaden scope of overview course."

"Will increase use of CAI lessons incorporated with interactive video lessons, also use of computer in legal services offices."

"Our approach is to borrow computer classroom from College of Business and 'pipe-in' several data bases, then assign exercises."

"Using CAI in courses; constant computer development."

"Beginning to use CAI in a number of courses."

"A computer law course is being planned and Lexis will soon be available."

"Plan to offer advanced course in Computers and the Law."

"Adding some computer-based instructional exercises and look to develop a skills center including computers."

"Increase use in CAI."

"Acquiring Lexis for Legal Bibliography course and incorporating course on computer law."

"Moving toward complete automation of law school."

Lawyer Analysis

Analysis of the Lawyers' Personal Information

Section I was designed to obtain personal information about the lawyer and his computer-related background. The questionnaire contained one question for each of the following areas: the completion of a computer-related course prior to entering law school, year of his/her law school graduation, computer-related course admission requirements, the sufficiency of computer-related courses offered in law school when dealing with computer-related cases or computer-related matters, the amount and type of computer-related course requirements in law school, the amount and type of computer-related courses that were taken either for personal reasons or as an elective during law school, the amount and type of computer-related courses that have been taken since law school graduation, the involvement in computer-related cases (the number and type), the sufficiency of the lawyer's background in the computer area when modifying or describing state computer laws, and finally, the state in which the lawyer is currently practicing law.

Respondents were asked if they had completed a computer-related course prior to entering law school. Fifty of the respondents (or 46.30

percent) answered "Yes" and 58 respondents (or 53.70 percent) answered "No." Table XVII contains an analysis of the completion of a computer-related course prior to entering law school.

TABLE XVII
ANALYSIS OF THE COMPLETION OF A COMPUTER-RELATED
COURSE PRIOR TO ENTERING LAW SCHOOL

Completion of a computer-related course prior to entering law school	Frequency	Cumulative Frequency	Percent
Completed a computer- related course prior to law school	50	50	46.30
Did not complete a computer-related course prior to law school	58	108	53.70

The respondents that replied "Yes" were then asked to indicate which computer-related course or programming language had been completed before entering law school. The type of computer-related course indicated most often was Introduction to Information Processing with 15 respondents (or 13.89 percent) while the programming language indicated most often was FORTRAN with 30 respondents (or 27.78 percent). Table XVIII contains the frequency and percent of the computer-related courses and programming languages that were completed prior to entering law school.

TABLE XVIII
 COMPUTER-RELATED COURSES AND PROGRAMMING LANGUAGES
 THAT WERE COMPLETED PRIOR TO ENTERING LAW SCHOOL

Computer-Related Courses or Programming Languages	Frequency	Percent
FORTRAN	30	27.78
BASIC	28	25.93
Introduction to Information Processing	15	13.89
Introduction to Computer-Based Systems	14	12.96
Systems Analysis and Design	9	8.33
COBOL	7	6.48
Management of Information and Decision Support Systems	4	3.70
PL/1	3	2.78
RPG	3	2.78

Respondents were also asked to identify "other" computer-related courses or programming languages that they had taken prior to entering law school. Nine of the respondents specified nine programming languages and eight respondents listed nine computer-related courses. Table XIX contains the frequency of each computer-related course and programming language that was not listed on the questionnaire but specified under "other."

Table XX contains an analysis of the lawyer's graduation year from

law school. Eighty-five of the respondents (or 78.04 percent) indicated that they graduated between the years 1980-1984.

Respondents were asked if the law school they attended required a computer-related course prior to admission. One-hundred-eight respondents (or 100.00 percent) answered "No."

Table XXI contains the analysis of the computer-related courses that were required within the lawyer's law school curricula. Eleven of the respondents (or 10.28 percent) answered "Yes, they were required to take a computer-related course," while 96 respondents (or 89.72 percent) answered "No."

The respondents that indicated "Yes" were then asked to indicate which computer-related courses were required. The most frequently listed required computer-related course was Lexis Training, specified by 10 respondents. Table XXII contains the three computer-related courses that were indicated as being required and their frequency.

An analysis of the respondents that took a computer-related course during law school for personal reasons or as an elective is given in Table XXIII. Ten of the respondents (or 9.43 percent) answered "Yes" and 96 respondents (or 90.57 percent) answered "No, they did not take a computer-related course during law school for personal reasons or as an elective."

The respondents that indicated "Yes, a computer-related course was taken as an elective or for personal reasons during law school," were then asked to specify which computer-related courses were taken. Table XXIV contains the four computer-related course titles and their frequency.

TABLE XIX

COMPUTER-RELATED COURSES AND PROGRAMMING LANGUAGES TAKEN
 PRIOR TO ENTERING LAW SCHOOL THAT WERE NOT LISTED ON
 THE QUESTIONNAIRE BUT SPECIFIED UNDER "OTHER"

"Other Computer-Related Courses or Programming Languages	Frequency
ALGOL W	2
APL	2
Assembler	2
Data Analysis	2
Accounting Management Information Systems	2
SPSS	1
Own language	1
PPL	1
Pascal	1
ALGOL 60	1
Logic - Philosophy	1
Econometrics	1
Broadcast Research	1
American Political Process	1
Undergraduate Math (computer utilization)	1
Political Science (computer statistical analysis)	1
General Computer Science	1

TABLE XX
ANALYSIS OF THE LAWYER RESPONDENTS' YEAR OF GRADUATION
FROM LAW SCHOOL

Year	Frequency	Cumulative Frequency	Percent
1980 - 1984	85	85	78.70
1975 - 1979	14	99	12.96
1970 - 1974	6	105	5.56
1965 - 1969	2	107	1.85
1950 - 1954	1	108	.93

TABLE XXI
ANALYSIS OF THE COMPUTER-RELATED COURSES THAT ARE
REQUIRED IN SOME LAW SCHOOL CURRICULA

Computer-Related Courses That Are Required	Frequency	Cumulative Frequency	Percent
Computer-related courses that are required	11	11	10.28
Computer-related courses that are not required	96	107	89.72
Did not respond	1	-	-

TABLE XXII
COMPUTER-RELATED COURSES THAT ARE REQUIRED
IN SOME LAW SCHOOLS

Course Title	Frequency
Lexis Training	10
Westlaw Training	2
Legal Methods	1

TABLE XXIII
ANALYSIS OF COMPUTER-RELATED COURSES TAKEN DURING LAW SCHOOL
FOR PERSONAL REASONS OR AS AN ELECTIVE

Computer-Related Courses Taken as Electives or for Personal Reasons	Frequency	Cumulative Frequency	Percent
Computer-related course was taken as an elective or for personal reasons	10	10	9.43
Computer-related course was not taken for personal reasons or as an elective	96	106	90.57
Did not respond	2	-	-

TABLE XXIV
 COMPUTER-RELATED COURSES TAKEN DURING LAW SCHOOL
 FOR PERSONAL REASONS OR AS AN ELECTIVE

Course Title	Frequency
BASIC	1
Computers and the Law	1
Introduction to Computer-Based Systems	1
Overview of Computer Security	1

Respondents were also asked to indicate "other" computer-related courses or programming languages that they had taken during law school for either personal reasons or as an elective. Three respondents listed Legal Research Training and two respondents indicated Lexis/Westlaw Training. Table XXV contains the computer-related courses and their frequency.

Respondents were asked if they had taken any continuing legal education in the computer-related area since graduation from law school. Twenty-four of the respondents (or 22.22 percent) answered "Yes" and 84 respondents (or 77.78 percent) answered "No." Table XXVI contains the analysis of the respondents concerning legal education in the computer-related area since graduation from law school.

The respondents that specified "Yes, they had taken continuing legal education in the computer-related area," were asked to list the courses. Lexis Legal Research was the most frequently listed course

with a response of 15 (or 13.89 percent). Table XXVII contains the listed computer-course titles and their frequency.

TABLE XXV

COMPUTER-RELATED COURSES THAT WERE TAKEN DURING LAW SCHOOL
FOR PERSONAL REASONS OR AS AN ELECTIVE NOT LISTED ON
THE QUESTIONNAIRE BUT SPECIFIED UNDER "OTHER"

Course Title	Frequency
Legal Research Training	3
Lexis/Westlaw Training	2
Legal Automation	1
Management of Information Systems	1

TABLE XXVI

ANALYSIS OF CONTINUING LEGAL EDUCATION IN THE COMPUTER-
RELATED AREA SINCE GRADUATION FROM LAW SCHOOL

Continuing Legal Education in the Computer-Related Area	Frequency	Cumulative Frequency	Percent
Continued legal education in the computer-related area	24	24	22.22
Have not continued legal education in the compu- ter-related area	84	108	77.78

TABLE XXVII

"OTHER" COMPUTER-RELATED COURSES THAT HAVE BEEN TAKEN
AS CONTINUING LEGAL EDUCATION

Course Titles	Frequency
Lexis Legal Research	15
Electronic Funds Transfer	3
Lexis/Westlaw Training	3
Various computer law institute and seminar courses (course titles not specified)	3
Introduction to BASIC	1
Introduction to Micros	1
Westlaw Training	1

Table XXVIII contains the analysis of the number of respondents that have been involved with a computer-related case. Nineteen of the respondents (or 17.59 percent) answered "Yes, they had been involved with a computer-related case," while 89 respondents (or 82.41 percent) answered "No."

The respondents that answered "Yes" were then asked to specify the number of computer-related cases which they had been involved. Fourteen of the respondents (or 73.68 percent) indicated that they had been involved in less than 10 cases. Table XXIX contains the number of computer-related cases and their frequency.

The respondents that indicated less than 10 computer-related cases were asked to specify the exact number. The following was specified:

four respondents have been involved in one case; two respondents have been involved in two cases; two respondents have been involved in three cases; and one respondent had been involved in six cases.

TABLE XXVIII

ANALYSIS OF THE NUMBER OF COMPUTER-RELATED CASES WHICH
THE LAWYER RESPONDENTS HAVE BEEN INVOLVED

Involved in Computer- Related Cases	Frequency	Cumulative Frequency	Percent
Has been involved in computer-related cases	19	19	17.59
Has not been involved in computer-related cases	89	108	82.41

The type and frequency of each computer-related case which the respondents have been involved with is given in Table XXX. Nine of the respondents indicated that they had been involved with a financial computer-related case and six respondents indicated computer-related property case involvement.

Respondents were also asked to identify "other" types of computer-related cases in which they had been involved. Eight respondents listed seven types of computer-related cases. Table XXXI contains the types of computer-related cases and their frequency that were listed by the lawyers.

TABLE XXIX

THE NUMBER OF COMPUTER-RELATED CASES IN WHICH
SOME LAWYERS HAVE BEEN INVOLVED

Number of Cases	Frequency	Cumulative Frequency	Percent
1 - 10	14	14	73.68
10 - 14	3	17	15.79
15 - 20	1	18	5.26
46 - 50	1	19	5.26
Did not specify	2	21	-
No answer required	87	-	-

TABLE XXX

TYPES OF COMPUTER-RELATED CASES IN WHICH SOME
LAWYERS HAVE BEEN INVOLVED

Types of Computer-Related Cases	Frequency
Financial	9
Property	6
Information Theft	4
Theft of Services	4
Destruction of Files	1
Vandalism of Equipment	1

TABLE XXXI

"OTHER" SPECIFIED TYPES OF COMPUTER-RELATED CASES
IN WHICH SOME LAWYERS HAVE BEEN INVOLVED

"Other" Types of Computer-Related Cases	Frequency
Contracting Computer/Software Development	3
Sales (Breach of Contract)	2
Assorted Contractual Disputes (specific case types not specified)	1
Copyright	1
Computer Design Contract	1
Development Agreement (software)	1
Distribution and License Agreement	1

Table XXXII contains an analysis of the lawyer respondents' opinion regarding the adequacy of their background when modifying or describing computer laws in their state. Only 15 of the respondents (or 14.71 percent) answered "Yes, their computer background would be adequate for modifying or describing their state's computer laws," while 87 respondents (or 85.29 percent) answered "No."

Respondents were asked to indicate the state in which they were presently practicing law. Seventeen of the respondents (or 15.74 percent) indicated New York as their practicing state while 15 respondents (or 13.89 percent) specified California. Table XXXIII contains the state names listed and their frequency.

TABLE XXXII

ANALYSIS OF SOME LAWYERS' COMPUTER BACKGROUND ADEQUACY WHEN
MODIFYING OR DESCRIBING THEIR STATE'S COMPUTER LAWS

Adequate Computer Background for Modifying or Describing State Computer Laws	Frequency	Cumulative Frequency	Percent
Adequate computer background	15	15	14.71
Inadequate computer background	87	102	85.29
Did not respond	6	-	-

Analysis of the Law Firm Information

Section II of the questionnaire was designed to give the researcher a more detailed picture of each law firm's computer use. It included questions concerning the purpose and use of a computer within the law firm, the number of lawyers that have taken computer-related course work, and the number of lawyers employed at their law firm.

Respondents were asked to indicate if a computer was used in their law firm. One-hundred-seven of the respondents (or 100.00 percent) answered "Yes."

The respondents that indicated "Yes, a computer was used in their law firm," were then asked to indicate the legal or office areas where the computer was used. One-hundred-four of the respondents (or 98.11 percent) indicated that their law firm's computer was used for research and 103 respondents (or 97.17 percent) specified word processing. Table XXXIV contains an analysis of the uses of the law firms' computer.

TABLE XXXIII

STATES THAT LAWYER RESPONDENTS ARE CURRENTLY PRACTICING LAW

State	Frequency
New York	17
California	15
Illinois	9
Ohio	8
Pennsylvania	7
Washington, DC	6
Georgia	5
Texas	5
Florida	4
Massachusetts	4
Washington	4
Arizona	3
Colorado	3
Indiana	3
Minnesota	3
Missouri	3
Maryland	2
Michigan	2
Oregon	2
Nebraska	1
Oklahoma	1
Wisconsin	1

TABLE XXXIV
ANALYSIS OF THE LAW FIRMS' COMPUTER USES

Area of Use	Frequency	Cumulative Frequency	Percent
RESEARCH			
Use computer	104	104	98.11
Do not use a computer	2	106	1.89
Did not respond	2	-	-
WORD PROCESSING			
Use computer	103	103	97.17
Do not use a computer	3	106	2.83
Did not respond	2	-	-
ACCOUNTING			
Use computer	100	100	94.34
Do not use a computer	6	106	5.66
Did not respond	2	-	-

Respondents were also asked to specify "other" areas where the computer was utilized. There were 11 "other" areas listed with Litigation Management being the most frequently listed by nine of the respondents. Table XXXV contains the areas listed and their frequency.

The 104 respondents which indicated that a computer was used for research, were then asked to indicate which data base was utilized. Ninety-nine of the respondents (or 92.52 percent) indicated the Lexis data base. Table XXXVI contains an analysis of the data bases that are used for research.

TABLE XXXV

AREAS OF COMPUTER USE IN LAW FIRMS NOT LISTED ON THE
QUESTIONNAIRE BUT SPECIFIED UNDER "OTHER"

Areas of computer use	Frequency
Litigation Management	9
Administration Record Keeping	8
Docket Control	5
Document Indexing	5
Conflict of Interest	4
Calendar	2
Document Drafting	2
Inter/Intra Communications	2
Billing	1
Modeling in the Tax and Real Estate Area	1
Personal Use	1

TABLE XXXVI

ANALYSIS OF DATA BASES USED IN SOME LAW FIRMS FOR RESEARCH

Data Bases Used for Research	Frequency	Cumulative Frequency	Percent
LEXIS			
Utilized	99	99	92.52
Not utilized	8	107	7.48
Did not respond	1	-	-
WESTLAW			
Utilized	40	40	37.38
Not utilized	67	107	62.62
Did not respond	1	-	-

Respondents were asked to indicate the data base used for research and a space was allowed to specify the response. Nexis was the most frequently listed data base, with seven respondents. There are 24 "other" responses and their frequency listed in Table XXXVII.

An analysis of the number of lawyers in each law firm that have completed computer-related course work is given in Table XXXVIII. Eight of the respondents (or 7.41 percent) indicated one to five lawyers had completed computer-related course work in their law firm. Also, eight respondents (or 7.41 percent) indicated that 16 to 20 of the lawyers in their law firm had taken computer-related course work.

Table XXXIX contains an analysis of the number of lawyers employed in each respondent's law firm. Forty-five of the respondents (or 42.06 percent) indicated that their law firm employed from 100 to 149 lawyers

and 25 respondents (or 23.36 percent) indicated that their law firm employed 150 to 199 lawyers.

Analysis of Computer Education in Law Schools

Section III of the lawyer questionnaire was designed to obtain the consensus of lawyers regarding computer education in law schools. The questionnaire contained one question for each of the following areas: the lawyer's opinion on requiring a computer-related course in law school and his/her consensus on what would constitute a good computer-related course for lawyers.

An analysis of the respondents concerning whether a computer-related course should be required in law school is given in Table XL. Forty-three of the respondents (or 40.57 percent) answered "Yes, a computer-related course should be required in law school," while 63 respondents (or 59.43 percent) indicated "No."

The 43 respondents that specified "Yes, a computer-related course should be required in law school," were then asked to indicate which computer-related course should be required. Computer Law and Computer Literacy were the two most frequently chosen courses. Twenty-three of the respondents (or 21.70 percent) indicated Computer Law and 21 respondents (or 19.81 percent) indicated Computer Literacy. Twelve of the 43 respondents (or 11.32 percent) indicated that a programming language should be required in law school. Table XLI contains an analysis of the computer-related courses that lawyers feel should be required in law schools. Because some of the lawyer respondents indicated more than one computer-related course, the cumulative frequency does not equal 43.

TABLE XXXVII

DATA BASES USED FOR RESEARCH IN SOME LAW FIRMS
THAT WERE SPECIFIED UNDER "OTHER"

"Other" Data Bases	Frequency
Nexis	7
Dialog	5
Dow Jones News Service	3
BRS	2
Dunn/Brad	2
Information Bank	2
PHINET	2
Recruitment	2
Advance Line	1
Autocrite	1
Banister	1
BNA	1
Control Data X/Market	1
Disclosures	1
Estate Planning Analysis	1
IBM Data Base (unspecified)	1
Information America	1
OMNI	1
Orbit	1
Personally constructed (research files)	1
SEL	1
Sheppards	1
VU/Text	1
Washington Aubrt	1

TABLE XXXVIII

ANALYSIS OF THE NUMBER OF LAWYERS IN EACH LAW FIRM THAT
HAVE COMPLETED COMPUTER-RELATED COURSE WORK

Number of lawyers in each law firm that have com- pleted computer-related course work	Frequency	Cumulative Frequency	Percent
0	46	46	46.47
1 - 5	8	54	8.08
6 - 10	5	59	5.05
11 - 15	5	64	5.05
16 - 20	8	72	8.08
21 - 25	7	79	7.07
26 - 30	4	83	4.04
36 - 40	2	85	2.02
46 - 50	4	89	4.04
51 - 55	1	90	1.01
56 - 60	1	91	1.01
71 - 75	2	93	2.02
96 - 100	1	94	1.01
116 - 120	1	95	1.01
146 - 150	1	96	1.01
200 - 249	3	99	3.03
Indicated "other" but did not specify number	9	-	-

TABLE XXXIX
ANALYSIS OF THE NUMBER OF LAWYERS EMPLOYED
IN EACH RESPONDENT'S LAW FIRM

Number of Lawyers Employed in Each Respondent's Law Firm	Frequency	Cumulative Frequency	Percent
0 - 49	1	1	.93
50 - 99	15	16	14.02
100 - 149	45	61	42.06
150 - 199	25	86	23.36
200 - 249	14	100	13.08
351 - 400	6	107	5.61
Did not respond	1	-	-

TABLE XL
ANALYSIS OF SOME LAWYERS' CONSENSUS ON REQUIRING
A COMPUTER-RELATED COURSE IN LAW SCHOOLS

Requiring a Computer-Related Course in Law Schools	Frequency	Cumulative Frequency	Percent
Should require a computer-related course	43	43	40.57
Should not require a computer-related course	63	106	59.43
Did not respond	2	-	-

TABLE XLI

ANALYSIS OF COMPUTER-RELATED COURSES THAT SOME LAWYERS
INDICATED SHOULD BE REQUIRED IN LAW SCHOOLS

Required Computer-Related Courses	Frequency	Cumulative Frequency	Percent
<hr/>			
COMPUTER LAW			
Should be required	23	23	21.70
Should not be required	83	106	78.30
Did not respond	2	-	-
<hr style="border-top: 1px dashed black;"/>			
COMPUTER LITERACY			
Should be required	21	21	19.81
Should not be required	85	106	80.19
Did not respond	2	-	-
<hr style="border-top: 1px dashed black;"/>			
PROGRAMMING LANGUAGES			
Should be required	12	12	11.32
Should not be required	94	106	88.68
Did not respond	2	-	-
<hr style="border-top: 1px dashed black;"/>			
COMPUTER CONTRACTS			
Should be required	10	10	9.43
Should not be required	96	106	90.57
Did not respond	2	-	-
<hr style="border-top: 1px dashed black;"/>			
COMPUTER SECURITY			
Should be required	8	8	7.55
Should not be required	98	106	92.45
Did not respond	2	-	-
<hr/>			

Respondents were asked to specify "other" computer-related courses that they felt should be required in law school. Four respondents indicated that Research Techniques should be a required computer-related course in law schools. Table XLII represents the analysis of the five computer-related courses that were listed.

TABLE XLII

"OTHER" COMPUTER-RELATED COURSES THAT SHOULD BE REQUIRED
IN LAW SCHOOLS AS INDICATED BY SOME LAWYERS

"Other" computer-related courses that should be required in law schools	Frequency
Research Techniques	4
Office Automation	2
Use of Computers in Litigation Management	2
Information Theft	1
Lexis/Westlaw Training	1

An analysis of the respondents consensus on the type of computer-related course that would be beneficial for lawyers is given in Table XLIII. A large majority, seventy-two respondents (or 76.60 percent) indicated that Computers and the Law would be a good computer-related course for lawyers to take.

Respondents were asked to indicate "other" computer-related courses

or programming languages that they felt would be beneficial for lawyers. Two of the respondents (or 2.13 percent) indicated that "other" programming languages should be taken, but failed to specify which programming languages. However, "other" computer-related courses were listed, with Computer Right to Privacy, Litigation Management, Research Techniques, and Word Processing being the most frequently listed. Table XLIV contains an analysis of the computer-related courses that the lawyers felt would be beneficial to them.

Comparison of Selected Items From Both Questionnaires

For various items in both questionnaires, two-way tables were utilized and the chi-square test for significance was computed. The .10 level of significance has been selected for this study. The relationships which were analyzed are presented in statistical tables in Appendix D. The following information for each cell in the two-way table has been given: observed frequency, expected frequency, percent, row percent, and column percent. Row and column totals and percentages are also given as well as the results of the chi-square test, the degrees of freedom, and the significance level.

Comparison of Computer-Related Course Admission Requirements

A comparison from both questionnaires was to be computed regarding computer-related course admission requirements prior to entering law school. However, since 100.00 percent of the respondents from both questionnaires answered "No" a chi-square test for significance was not computed.

TABLE XLIII
ANALYSIS OF COMPUTER-RELATED COURSES THAT
WOULD BE BENEFICIAL TO LAWYERS

Beneficial Computer-Related Courses for Lawyers	Frequency	Cumulative Frequency	Percent
<hr/>			
COMPUTERS AND THE LAW			
Beneficial course	72	72	76.60
Would not be a beneficial course	22	94	23.40
Did not respond	14	-	-
<hr style="border-top: 1px dashed black;"/>			
INFORMATION THEFT			
Beneficial course	33	33	35.11
Would not be a beneficial course	61	94	64.89
Did not respond	14	-	-
<hr style="border-top: 1px dashed black;"/>			
COMPUTER CONTRACTS			
Beneficial course	28	28	29.79
Would not be a beneficial course	66	94	70.21
Did not respond	14	-	-
<hr style="border-top: 1px dashed black;"/>			
BASIC			
Beneficial course	15	15	15.96
Would not be a beneficial course	79	94	84.04
Did not respond	14	-	-
<hr style="border-top: 1px dashed black;"/>			
COMPUTER VANDALISM			
Beneficial course	14	14	14.89
Would not be a beneficial course	80	94	85.11
Did not respond	14	-	-
<hr style="border-top: 1px dashed black;"/>			

TABLE XLIII (Continued)

COBOL

Beneficial course	2	2	2.13
Would not be a beneficial course	92	94	97.87
Did not respond	14	-	-

FORTRAN

Beneficial course	4	4	4.26
Would not be a beneficial course	90	90	95.74
Did not respond	14	-	-

TABLE XLIV
 COMPUTER-RELATED COURSES THAT WOULD BE USEFUL TO LAWYERS
 BUT WERE NOT LISTED ON THE QUESTIONNAIRE
 BUT SPECIFIED UNDER "OTHER"

"Other" Computer-Related Courses	Frequency
Computer Right to Privacy (Part of Patent, Copyright, and Protection of Ideas)	3
Litigation Management	3
Research Techniques	3
Word Processing	3
General Overview	2
Billing Procedures	1
Computer Fraud	1
Lexis/Westlaw Training	1
Microcomputers and Data Management	1
Office Automation	1
What Computers Do Better and More Efficiently Than Lawyers and Secretaries	1

Comparison of Computer-Related Course Requirements
in Law Schools

A comparison of the data from the questions concerning computer-related course requirements in law school, revealed that only 10 percent of the lawyers were required to complete a computer-related course in law school. The majority of the ABA accredited law schools

(77 percent) do not require completion of a computer-related course as part of their law school's curricula. A chi-square significance level of .01 indicated there was a significant difference at the .10 level between ABA accredited law schools computer-related course requirements and the required computer-related course work that lawyers have been required to take in law school. Table XLV in Appendix D gives a complete summary of the results.

Nine percent of the lawyers were required to take the computer-related course Lexis in law school. Only one percent of the ABA accredited law schools require Lexis as part of the law school's curricula. A chi-square significance level of .001 indicated there was a significant difference at the .10 level between the lawyers that were required to take Lexis and the number of ABA accredited law schools that require Lexis.

Of the lawyers that indicated that they were required to take a computer-related course, only two percent were required to take Westlaw Training. One percent of the ABA accredited law schools require Westlaw Training as part of the law school's curricula. A chi-square significance level of .43 indicated that there was not a significant difference at the .10 level between the lawyers that were required to take Westlaw Training and the number of ABA accredited law schools that required Westlaw Training.

Three percent of the ABA accredited law schools require their students to take Legal Methods as part of their computer-related course law curricula. Only one percent of the lawyers indicated that they were required to take Legal Methods during law school. A chi-square significance level of .27 indicated that there was not a significant

difference at the .10 level between the lawyers that were required to take Legal Methods and the number of ABA accredited law schools that require Legal Methods.

Table XLVI in Appendix D gives a complete summary of the results regarding computer-related courses that are required. It should be noted that when computing the two-way table for each course over 20 percent of the cells had expected counts that were less than five; therefore, because of this sparsity, the chi-square may not be a valid test.

Comparison of Computer-Related Courses as Electives

Sixty percent of the ABA accredited law school respondents allow their law students to take a computer-related course as an elective. Nine percent of the lawyers have either taken a computer-related course as an elective or for personal reasons during law school. A chi-square significance level of .0001 indicated there was a significant difference at the .10 level between the number of ABA accredited law schools that allow a computer-related course to be taken as an elective and the number of lawyers that take computer-related courses for either personal reasons or as an elective. Table XLVII in Appendix D gives a complete summary of the results.

When the computer-related courses that were allowed to be taken as electives in ABA accredited law schools were compared with the computer-related courses that lawyers had taken for personal reasons or as an elective the following was found:

1. Computers and the Law, Introduction to Computer-Based Systems, and BASIC are allowed to be taken as electives by thirty-eight, five,

and two percent of the ABA accredited law schools respectively. However, only one percent of the lawyers have taken these computer-related courses as either an elective or for personal reasons during law school.

The chi-square significant levels of .0001 and .07 (Computers and the Law and Introduction to Computer-Based Systems, respectively) indicated there was a significant difference at the .10 level between the ABA accredited law schools that allow Computers and the Law and Introduction to Computer-Based Systems as electives and the number of lawyers that take these computer-related courses for electives or for personal reasons during law school.

A chi-square significance level of .44 indicated there was not a significant difference at the .10 level between the ABA accredited law schools that offer BASIC and the number of lawyers that take this programming language as an elective or for personal reasons during law school. ✕

2. The percent of ABA accredited law schools that allow their law students to take Introduction to Information Processing, Managing the Data Security Function, and Investigating Computer-Assisted Crime as electives are five, three, and three respectively. However, 100 percent of the lawyers indicated that they had not taken any of these courses as an elective or for personal reasons during law school.

The chi-square significance levels for Introduction to Information Processing, Managing the Data Security Function, and Investigating Computer-Assisted Crime were .018, .08, and .08 respectively. These significant levels indicated that there was a significant difference at the .10 level between the ABA accredited law schools that allow these

courses as electives and the number of lawyers that take these courses as an elective or for personal reasons during law school.

3. Only one percent of the ARA accredited law schools allow their law students to take COBOL, FORTRAN, PL/1, or RPG as an elective. One-hundred percent of the lawyers indicated that they did not take any of these programming languages for an elective or for personal reasons during law school. A chi-square significance level of .21 indicated that there was not a significant difference at the .10 level.

When the chi-square was computed for each computer-related course (except Computers and the Law), and for the programming languages, over 20 percent of the cells had expected counts of less than five. Therefore, because of this sparsity, the chi-square may not be a valid test.

Table XLVII in Appendix D gives a complete summary of the results.

Summary

This chapter has presented an analysis of the responses received from both of the questionnaires. The responses were tabulated and reported using frequencies, cumulative frequencies, and percentages. Two-way tables and the chi-square test for significance were also utilized for comparing selected questions from both of the questionnaires. The results were summarized and presented through the discussion and tables within this chapter and in Appendix D. The conclusions and recommendations are presented in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Computers have become an integral part of our working and personal lives over a relatively short time span, mainly due to the technological advances during the past 25 years that have made these machines cost less, work faster, and take up less space. However, the expansion of computer use has also caused the expansion of a new type of crime--computer crime. Computer crime, like all crime, is people-oriented. Someone initiates it; someone benefits from it; someone is victimized by it. But computer crime seems to be one of the more difficult types of crime for lawyers to defend. Many lawyers say that this is because of their lack of knowledge and experience in the computer area.

Lawyers must be able to draft computer contracts as well as conduct litigation. In order to perform these services, lawyers must learn vendors' contracting techniques and also the computer technology and the computer terminology. Lawyers may not be able to believe that a machine is capable of duplicating the human brain; however, they must learn to deal with the consequences of a working world that does accept that idea (Carlson, 1982).

This study was designed to look at the extent of the computer-related curricula offered in the American Bar Association accredited law

schools and to determine the lawyers opinion concerning the amount and type of computer-related curricula needed. It has been said that lawyers feel that it is time to reevaluate our legal system because of the advancing computer technology and the growth rate of computer crime in the United States; however, lawyers feel that they do not have an adequate understanding of the computer field in order to help change or improve our legal system.

The purpose of this study was to obtain information concerning computer-related curricula in ABA accredited law schools and their plans to change or develop courses in this area to meet lawyer's needs. To obtain this information two questionnaires were developed and mailed to 172 ABA accredited law schools and to the 250 largest law firms in the United States. The data on the returned questionnaires were interpreted and analyzed to determine the amount and type of computer-related curricula offered in ABA accredited law schools and to determine the computer-related course needs of lawyers.

The results of the study are summarized in three sections according to 1) ABA accredited law schools' results, 2) lawyer results, and 3) the results of the comparison of selected items from both of the questionnaires.

The results of the ABA accredited law schools' data are subdivided into the following four areas: computer-related course admission requirements, required and elective computer-related course work, computer law-related research, and computer-related course plans.

The lawyer results are subdivided into the following three areas: lawyers' personal information concerning computer-related courses, law firm information, and computer education in law schools.

The results of the comparison of selected items from both of the questionnaires is subdivided into the following three areas: the comparison of computer-related course admission requirements, the comparison of computer-related course requirements in law school, and the comparison of computer-related courses as electives.

ABA Accredited Law Schools' Results

Computer-Related Course Admission Requirements

All ABA accredited law school respondents reported that there are no computer-related course requirements prior to being admitted to an ABA accredited law school.

Required and Elective Computer-Related Course

Work

Approximately 23 percent (31) of the respondents reported that their ABA accredited law school requires completion of a computer-related course prior to graduating from their institution. Legal Research and Writing was the most frequently indicated required computer-related course.

A majority of the participating institutions (82 of 136) reported that their institution allows computer-related courses to be taken as electives. Computers and the Law was chosen by nearly 38 percent of the respondents as being an effective computer-related course that could be taken as an elective. Seven institutions included in the survey listed Advanced Legal Research as being a computer-related course elective that could be taken at their ABA accredited law school.

Of those ABA accredited law schools that participated in the study,

there were approximately 53 percent that reported that they offered a law course within their institution that included either computer literacy or computer-related information. Approximately 14 percent of the respondents indicated that Computers and the Law was offered at their institution and that this course included either computer literacy or computer-related information. Legal Research was indicated by almost nine percent.

Respondents reported that the following textbooks were used in the computer-related course, Computers and the Law:

1. An Introduction to Using Computers in the Law by Mason, and
2. Computer, Data Processing and the Law by Mandell.

The textbooks that were listed by respondents as being used in Legal Research are:

1. An Introduction to Using Computers in the Law by Mason,
2. Computer-Aided Exercise in Civil Procedures by Park, and
3. Programmed Instruction in Legal Research by Tepley.

This study revealed that nearly one-third of the respondents would allow their law students to receive credit for graduate-level computer-related courses that had been taken and transferred from another institution.

Computer Law-Related Research

Respondents were asked to indicate if their law students were required to use a computer when doing law-related research. Forty-seven percent of the ABA accredited law school respondents reported that their law students were required to use a computer when doing law-related research.

Ninety-nine percent of the respondents that do not require computer law-related research have a computer available to students for law-related research.

The type of data base most utilized in ABA accredited law schools for law-related research was Westlaw with 115 respondents indicating this data base. However, the data base Lexis was also indicated as being utilized by a large majority (113 respondents).

Computer-Related Course Plans

Approximately 32 percent of the respondents indicated that they were reviewing their present curricula in regard to computer-related courses and plan to develop computer-related courses or make changes in their curricula to include computer-related education within the next two years (1984-1986). Seven respondents reported that they were actively studying the question concerning a computer-related information course or a computer literacy course.

Lawyer Results

Lawyers' Personal Information Concerning Computer-Related Courses

Respondents were asked to indicate if they had completed a computer-related course prior to entering law school. Nearly 47 percent of the 108 respondents reported that they had completed a computer-related course prior to entering law school. Thirty respondents indicated that they had taken the programming language FORTRAN and 15 respondents

reported that they had taken Introduction to Information Processing prior to entering law school.

Seventy-eight percent of the respondents reported that they had graduated from law school between the years 1980 to 1984. Nearly 13 percent, or 14 respondents, indicated the time span from 1975 to 1979 as being their year of graduation.

One-hundred percent of the respondents reported that they were not required to take computer-related course work prior to entering law school.

Of the 107 participating lawyers, only 11 indicated that while in law school they were required to take a computer-related course. Ten of the 11 respondents specified that the required computer-related course in their law school was Lexis Training.

Nearly 10 percent of the respondents reported that while they were attending law school they took a computer-related course either as an elective or for personal reasons. Of this 10 percent, three respondents indicated Legal Research Training and two respondents indicated Lexis/Westlaw Training as being the computer-related course they took during law school for personal reasons or as an elective.

Twenty-two percent of the respondents indicated that they had taken continuing legal education in the computer-related area since graduating from law school. Approximately 14 percent of the respondents had taken Lexis Legal Research, a computer-related course, since graduating from law school.

Approximately eighteen percent of the respondents reported that they have been involved with a computer-related case. Fourteen of the respondents specified that they had been involved with 10 or fewer

computer-related cases. The five types of computer-related cases specified most often were: 1) Financial, 2) Property, 3) Information Theft, 4) Theft of Services, and 5) Contracting Computer/Software Development.

Of the 102 respondents, only 15 felt that their background was adequate for modifying or describing computer laws in their state.

When the respondents were asked to list the state in which they were currently practicing law, it was not surprising to find the largest percent (16 percent) from New York. New York also had more of the 250 largest law firms than any other state.

Law Firm Information

One-hundred-eight respondents, 100 percent, reported that they utilized a computer within their law firm. The respondents were asked to indicate the types of functions or uses their computer performed. About 98 percent of the respondents specified research and word processing, and approximately 95 percent indicated accounting. The other five types of functions or uses receiving the most frequent usage besides those three listed above are: 1) litigation management, 2) administration recording keeping, 3) docket control, 4) document indexing, and 5) conflict of interest.

The respondents that indicated that their computer was used for law-related research were then asked to specify which data bases were utilized. Lexis was the most frequently specified data base indicated by 99 respondents. Only 40 respondents indicated that the data base Westlaw was utilized. However, in the ABA accredited law school respondents, the researcher found almost equal use of both Lexis and

Westlaw. Some respondents reported use of the following data bases: Nexis, Dialog, and Dow Jones News Service.

The respondents were asked to indicate how many lawyers within their law firm had taken computer-related course work. Nearly eight percent of the respondents indicated that from 1 to 5 lawyers have taken computer-related course work and another eight percent specified from 16 to 20 lawyers. Five respondents indicated from 6 to 10; 5 from 11 to 15; 8 from 16 to 20; and 7 from 21 to 25.

When the respondents were asked how many lawyers were employed in their law firm, 42 percent indicated from 100 to 149 lawyers and nearly 24 percent indicated 150 to 199 employed lawyers within their law firm.

Computer Education in Law Schools

Forty-one percent of the respondents felt that computer education should be required in law schools. These respondents indicated Computer Law and Computer Literacy as computer-related courses that should be required, with nearly 22 and 20 percent specifying Computer Law and Computer Literacy, respectively. Eleven percent of the 42 respondents indicated that some type of programming language should also be required in the law curricula. Some of the other computer-related courses that respondents indicated as computer-related courses that should be required are: Research Techniques, Office Automation, and Use of Computers in Litigation Management.

When respondents were asked what type of computer-related course would be beneficial to lawyers, nearly 77 percent specified Computers and the Law. Information Theft and Computer Contracts were also

indicated by 35 and 30 percent respectively, as being good computer-related courses for lawyers to take.

The Results of the Comparison of Selected Items

From Both Questionnaires

Computer-Related Course Admission Requirements

The comparison of computer-related course admission requirements between ABA accredited law schools and the lawyers' computer-related course admission requirements prior to entering law school were not computed because 100 percent of both groups indicated that no computer-related courses were required prior to being admitted.

Comparison of Computer-Related Course Requirements in Law Schools

Comparison of computer-related course requirements in ABA accredited law schools and the computer-related course requirements lawyers had taken in law school revealed that 10 percent of the lawyers were required to take a computer-related course and nearly 23 percent of the ABA accredited law schools require a computer-related course.

The computer-related course, Lexis, was required in nine percent of the lawyers' law schools; however, only one percent of the ABA accredited law schools required Lexis to be taken as part of their law curricula.

Westlaw, a computer-related course, was required by only one percent of the ABA accredited law schools and only two percent of the lawyers reported this to have been a required computer-related course at their law school.

Three percent of the ABA accredited law schools reported that they required Legal Methods, a computer-related course, as part of their law curricula. One percent of the lawyers specified that they had been required to take this computer-related course.

Comparison of Computer-Related Courses as Electives

Almost two-thirds of the ABA accredited law schools responding allow their law students to take a computer-related course as an elective; however, only nine percent of the lawyers had taken a computer-related course in law school as an elective or for personal reasons. The comparison showed that there was a significant difference between the amount of electives the lawyers had taken during law school and the number of ABA accredited law schools that would allow computer-related courses to be taken as electives.

When Computers and the Law, Introduction to Computer-Based Systems, and BASIC (computer-related courses that can be taken at an ABA accredited law school as an elective) were compared with the number of lawyers that had taken these computer-related courses as an elective in law school, the comparison indicated that there was not a significant difference.

Introduction to Information Processing may be taken as an elective in only five percent of the ABA accredited law schools. Only three percent allow the computer-related courses, Managing the Data Security Function and Investigating Computer-Assisted Crime, to be taken as electives. None of the lawyer respondents had taken any of these courses as electives or for personal reasons during law school.

The programming languages, COBOL, FORTRAN, PL/1, and RPG were reported by one percent of the ABA accredited law schools as being computer-related courses that could be taken as electives. However, when compared to the number of lawyers that had taken these programming languages, all respondents specified that they had not taken any of the above mentioned programming languages as electives or for personal reasons during law school. The comparison indicated that there was not a significant difference between the number of ABA accredited law schools that offer these programming languages as electives and the number of lawyers taking these programming languages as an elective or for personal reasons during law school.

Conclusions

The following conclusions are based on the results of the analysis of computer-related curricula in ABA accredited law schools and lawyers' consensus concerning computer-related course offerings in law schools as reported on the returned questionnaires and on the review of related literature.

1. ABA accredited law schools do not have computer-related course admission requirements.
2. The majority of ABA accredited law schools do not require completion of computer-related courses prior to graduation.
3. Most ABA accredited law schools allow their law students to take a computer-related course as an elective.
4. Computer literacy or computer-related information is being offered in some law courses taught at some ABA accredited law schools.

5. Computers and the Law is offered as an elective in some ABA accredited law schools and as a computer literacy or computer-related course in other institutions.

6. A computer is available in ABA accredited law schools for student use when doing law-related research.

7. The two data bases most frequently used in ABA accredited law schools are Westlaw and Lexis.

8. A large majority of the ABA accredited law schools are not making plans or changes in their curricula to include computer-related courses.

9. The majority of lawyers are not taking any computer-related courses as continuing legal education.

10. Only a small percentage of lawyers are involved with computer-related cases and the computer-related cases that deal with the Financial aspect are the most frequent cases prosecuted.

11. The majority of lawyers feel that their computer-related background is not adequate when modifying or describing computer laws in their state.

12. Computers are being utilized in law firms today, with most of the computer time used for either research, word processing, or accounting.

13. Most lawyers use the data base Lexis for law-related research.

14. In most law firms, few of their lawyers have actually taken computer-related course work.

15. Approximately one-half of the lawyers feel that a computer-related course should be required in law schools.

16. In the lawyers' opinion, Computers and the Law would be the most beneficial computer-related course for them to take.

17. Differences in the number of ABA accredited law schools that require a computer-related course were detected when data were compared with the number of lawyers that had been required to take a computer-related course in law school.

18. Although a large majority of ABA accredited law schools allow computer-related courses to be taken as an elective, there was a difference found when this data was compared to the number of lawyers that had actually taken a computer-related course as an elective.

Recommendations

Based on an analysis of the responses given by the ABA accredited law schools and the lawyers representing the 250 largest law firms in the United States, the researcher believes that certain recommendations can be offered. The researcher has formed the following recommendations as a result of studying the data collected.

1. It is recommended that ABA accredited law schools offer the computer-related course, Computers and the Law, as an elective for their law students.

2. It is recommended that ABA accredited law schools in each state develop a computer law course that will help lawyers when modifying or describing state computer laws.

3. It is recommended that ABA accredited law schools require a computer research class where the students are required to use a computer system for law-related research.

4. It is recommended that lawyers take continuing legal education

seminars or courses in the computer-related area in order to become more familiar with the computer technology and the benefits that this technology can offer to them.

5. Since this study was an investigation of the 250 largest law firms within the United States, it is recommended that a similar study be conducted with a sample from all sizes of law firms to compare results.

6. It is recommended that a similar study be conducted, to determine the type, size, and purposes of the computer systems being utilized by both ABA accredited law schools and the lawyers.

7. A follow-up study should be made on the ABA accredited law schools who are not making plans or changes in their curricula to add computer-related courses to obtain the status of their computer-related curricula changes.

8. Studies should be done in the future to obtain information concerning computer-related admission and course requirement changes in ABA accredited law schools.

9. Studies are needed to obtain the number of Information Systems graduates that are attending and graduating from law school with computer-related matters and cases being their area of concentration.

10. Studies should be made concerning the most frequent type of computer-related cases prosecuted, the amount of dollar damages incurred, and/or the number and type of computer-related cases that are dismissed and the reasons for dismissal.

BIBLIOGRAPHY

- August, Raymond S. "Technological Crime Could Directly Affect the Way You Practice Law." Barrister, Fall, 1983, pp. 13-15, and 53-54.
- Benoit, Ellen. "Computer Lawyer." Forbes, May 23, 1983, p. 82.
- Bequai, August. "The Impact of White-Collar Crime." Computerworld, December 12, 1983, p. 67.
- Bigelow, Robert P. "The Lawyer's Computer." Law Office and Economics and Management, Spring, 1980, pp. 62-71.
- Bigelow, Robert P. "Computer Security and the Law." Infosystems, December, 1982, p. 84.
- Bumke, David. "Computer Crime." The Saturday Evening Post, January-February, 1980, pp. 28-32, 100, and 127.
- Carlson, M. B. "Lawyers Welcomed to High Noon of Computer Age." Legal Times of Washington, February 1, 1982, pp. 39-40.
- Chavez, Tim. "New Computer Crime Law Aimed at System Crashers." The Sunday Oklahoman, April 8, 1984, pp. 1-B and 11-B.
- Cook, James R., Eure, Jack D., Johnston, Marvin A., and Mattord, Herbert J. "DPMA Chapters Speak Out on DP Security." Data Management, May, 1982, pp. 42-46.
- Criscuoli, E. J., Jr. "What Personnel Administrators Should Know About Computer Crime." Personnel Administrator, September, 1981, pp. 54-56.
- Dotto, Lydia. "The New Computer Criminals." Atlas World Press Review, August, 1979, pp. 25-26.
- Ehrlich, Thomas. "Computers and Legal Education." Jurimetrics Journal, Spring, 1973, pp. 158-165.
- "Father of Computer Law." Popular Computing, April, 1984, p. 34.
- Green, Richard. "Beep Beep--Call a Lawyer." Forbes, April 11, 1983, p. 51.
- Harrington, William G. "Lawyers and Computers: Research That Once Took Hours Takes Minutes." The Christian Science Monitor, April 1, 1981, p. 16.

- Howe, Charles L. "Coping With Computer Criminals." Datamation, January, 1982, pp. 118-123.
- Hunter, Bill. "Legal Input." American Way, February, 1984, pp. 41-43.
- Huntley, Steve. "Keyboard Bandits Who Steal Your Money." U.S. News and World Report, December 27, 1982/January 3, 1983, pp. 68-69.
- Kennedy, Neal R. "A Look at Computer Crime--Oklahoma and Federal Law." The Oklahoma Bar Journal, December 31, 1983, pp. 3263-3273.
- Mandell, Steven L. "Computer Crime and Privacy." Computers, Data Processing, and the Law, 1984, pp. 153-169.
- Martindale-Hubble, Inc. Martindale-Hubble Law Directory, Chicago: R. R. Donnelley and Sons Co., 1982.
- Meyers, Edith. "The Reluctant Rip-off Victim." Datamation, September, 1979, pp. 76 and 82.
- "National 250." The National Law Journal, September 19, 1982, pp. 1-21.
- Nellis, Joseph L. "Computer Law Lags Behind Technology." Data Management, August, 1982, pp. 14-15.
- Nyhart, J. D. and Thomas F. Jones. "What You Don't Know About Technology Can Hurt You." American Bar Association Journal, November, 1983, pp. 1667-1670.
- Pantages, Angeline. "Making It a Federal Case." Datamation, September, 1979, p. 82.
- Paul, Lois. "Legal Pros Told to Acquire DP Savvy." Computerworld, February 15, 1982, p. 24.
- Quade, Vicki. "Computers--Don't Fear Them, Lawyers Told." American Bar Association Journal, March, 1982, pp. 253-254.
- Rogers, Michael. "The Making of a Hacker." Newsweek, September 5, 1983, pp. 42-48.
- Rosenberg, Scott. "Computer Lawyers." Popular Computing, April, 1983, pp. 106-112.
- "Senate Bill Would Help Federal Attorneys Fight Computer Crime." The Office Magazine, March, 1979, pp. 76-88.
- Sheridan, John H. "Is There a Computer Criminal Working for You?" Industry Week, January 8, 1979, pp. 69-71.
- Zalud, Bill. "Computer Criminals Will Be Prosecuted: Adopting a 'Prevention First' Attitude." Data Management, April, 1983, pp. 30, 31, and 45.

APPENDIX A

ABA LAW SCHOOL QUESTIONNAIRE

 Identification Number

QUESTIONNAIRE ON COMPUTER-RELATED COURSES

This questionnaire is a survey of ABA-accredited law schools to determine status and trends of computer-related courses offered by schools of law. Please complete the questionnaire by checking the appropriate response.

I. COMPUTER-RELATED ADMISSION REQUIREMENTS

1. Does your institution require completion of any computer-related course(s) prior to admission to law school?

- (1) _____ Yes
 (2) _____ No

If yes, please indicate which course(s).

- (1) _____ Introduction to Information Processing
 (2) _____ Introduction to Computer-Based Systems
 (3) _____ Systems Analysis and Design
 (4) _____ Management Information and Decision Support Systems
 (5) _____ Programming Languages

- (1) _____ BASIC
 (2) _____ COBOL
 (3) _____ FORTRAN
 (4) _____ PL/I
 (5) _____ RPG
 (6) _____ Other language(s) (please specify)

- (1) _____
 (2) _____
 (3) _____

- (6) _____ Other course(s) (please specify)

- (1) _____
 (2) _____
 (3) _____

II. COMPUTER-RELATED COURSE WORK

1. Does your institution require completion of a computer-related course(s) as a part of the law school curricula?

- (1) _____ Yes
 (2) _____ No

If yes, please list each computer-related course that is required

- (1) _____
 (2) _____
 (3) _____
 (4) _____
 (5) _____

2. Are law students allowed to take a computer-related course(s) as an elective?

(1) _____ Yes

(2) _____ No

If yes, which course(s) may the students take as an elective(s)?

(1) _____ Overview of Computer Security

(2) _____ Computers and the Law

(3) _____ Managing the Data Security Function

(4) _____ Introduction to Information Processing

(5) _____ Investigating Computer-Assisted Crime

(6) _____ Introduction to Computer-Based Systems

(7) _____ Programming Languages

(1) _____ BASIC

(2) _____ COBOL

(3) _____ FORTRAN

(4) _____ PL/I

(5) _____ RPG

(6) _____ Other language(s) (please specify)

(1) _____

(2) _____

(3) _____

(8) _____ Other course(s) (please specify)

(1) _____

(2) _____

(3) _____

3. Is computer literacy or computer-related information included in any law course(s) within your curricula?

(1) _____ Yes

(2) _____ No

If yes, please list the course title, textbook(s), and author(s) used in each course which includes computer-related information?

(1) Title _____
Textbook _____
Author _____(2) Title _____
Textbook _____
Author _____(3) Title _____
Textbook _____
Author _____(4) Title _____
Textbook _____
Author _____(5) Title _____
Textbook _____
Author _____

4. Can law students receive credit for graduate-level computer-related courses that have been transferred from another institution?

(1) _____ Yes

(2) _____ No

III. LAW-RELATED RESEARCH

1. Do you require law students to use a computer to do law-related research?

(1) _____ Yes

(2) _____ No

If no, is a computer available for students to use for law-related research?

(1) _____ Yes

(2) _____ No

2. Which law data base, if any, is available at your institution for students to do research?

(1) _____ Westlaw

(2) _____ Lexis

(3) _____ Students do not have access to a law data base.

(4) _____ Other (please specify) _____

IV. COMPUTER-RELATED COURSE PLANS

1. Do you have plans to change curricula regarding computer-related courses within the next two years?

(1) _____ Yes

(2) _____ No

If yes, please indicate the extent of change.

If you would like an abstract of the findings, indicate by giving your name and address below.

RETURN TO:

Linda J. Risinger
Oklahoma State University
College of Business Administration
207 Xerox Room
Stillwater, OK 74078

APPENDIX B

LAWYER QUESTIONNAIRE

 Identification Number

QUESTIONNAIRE ON COMPUTER-RELATED COURSES

This questionnaire is a survey of selected law firms to determine status and trends of computer-related courses offered by schools of law. Please complete the questionnaire by checking the appropriate response.

I. PERSONAL INFORMATION

1. Did you complete a computer-related course(s) before entering law school?

(1) _____ Yes

(2) _____ No

If yes, please indicate which course(s).

(1) _____ Introduction to Information Processing

(2) _____ Introduction to Computer-Based Systems

(3) _____ Systems Analysis and Design

(4) _____ Management Information and Decision Support Systems

(5) _____ Programming Languages

(1) _____ BASIC

(2) _____ COBOL

(3) _____ FORTRAN

(4) _____ PL 1

(5) _____ RPG

(6) _____ Other language(s) (please specify)

(1) _____

(2) _____

(3) _____

(6) _____ Other course(s) (please specify)

(1) _____

(2) _____

(3) _____

2. Please indicate the year in which you graduated from law school.

(1) _____ 1980 - 1984

(2) _____ 1975 - 1979

(3) _____ 1970 - 1974

(4) _____ 1965 - 1969

(5) _____ 1960 - 1964

(6) _____ Prior to 1960 Please specify _____

3. Did the law school you attended require completion of a computer-related course(s) prior to admission?

- (1) _____ Yes
- (2) _____ No

If yes, please indicate which course(s) was required?

- (1) _____ Introduction to Information Processing
- (2) _____ Introduction to Computer-Based Systems
- (3) _____ Systems Analysis and Design
- (4) _____ Management Information and Decision Support Systems
- (5) _____ Programming Languages

- (1) _____ BASIC
- (2) _____ COBOL
- (3) _____ FORTRAN
- (4) _____ PL/I
- (5) _____ RPG
- (6) _____ Other language(s) (please specify)

- (1) _____
- (2) _____
- (3) _____

(6) _____ Other course(s) (please specify)

- (1) _____
- (2) _____
- (3) _____

4. If you answered yes to question 3, do you feel that the course(s) was sufficient training in order for you to deal with computer-related cases?

- (1) _____ Yes
- (2) _____ No

5. Were you required to take a computer-related course(s) within your law school curricula?

- (1) _____ Yes
- (2) _____ No

If yes, please list the course title(s) of each required course(s)?

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____

6. Did you take a computer-related course(s) as an elective(s) or for personal reasons in law school?

(1) _____ Yes

(2) _____ No

If yes, please indicate which course(s) was taken?

(1) _____ Overview of Computer Security

(2) _____ Computers and the Law

(3) _____ Managing the Data Security Function

(4) _____ Introduction to Information Processing

(5) _____ Investigating Computer-Assisted Crime

(6) _____ Introduction to Computer-Based Systems

(7) _____ Programming Languages

(1) _____ BASIC

(2) _____ COBOL

(3) _____ FORTRAN

(4) _____ PL/1

(5) _____ RPG

(6) _____ Other language(s) (please specify)

(1) _____

(2) _____

(3) _____

(8) _____ Other course(s) (please specify)

(1) _____

(2) _____

(3) _____

7. Have you taken any continuing legal education in the computer-related area since graduation from law school?

(1) _____ Yes

(2) _____ No

If yes, please list all computer-related courses that have been taken.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

8. Have you been involved with any computer-related cases?

(1) _____ Yes

(2) _____ No

If yes, please specify the number of cases.

(1) _____ Over 25 (please specify) _____

(2) _____ 21 - 25

(3) _____ 15 - 20

(4) _____ 10 - 14

(5) _____ Less than 10 cases (please specify) _____

If yes, with what types of computer cases were you involved?

(1) _____ Financial

(2) _____ Property

(3) _____ Information Theft

(4) _____ Theft of Services

(5) _____ Vandalism of Equipment

(6) _____ Destruction of Files

(7) _____ Other (please specify)

(1) _____

(2) _____

(3) _____

9. Do you feel that your background in the computer area would be adequate for modifying or describing needed computer laws in your state?
- (1) _____ Yes
 (2) _____ No

10. Please specify the state in which you are currently practicing law.
 (1) _____

II. LAW FIRM INFORMATION

1. Is a computer used in your law firm?
- (1) _____ Yes
 (2) _____ No

If yes, in which area(s) is the computer used.

- (1) _____ Accounting
 (2) _____ Word Processing
 (3) _____ Research
 (4) _____ Other (please specify)

(1) _____
 (2) _____
 (3) _____

If you use your computer for research, which of the following data bases are used.

- (1) _____ Westlaw
 (2) _____ Lexis
 (3) _____ Other (please specify)

(1) _____
 (2) _____
 (3) _____

2. Approximately how many lawyers within your law firm have completed computer-related course work?
- (1) _____ 1 - 5
 (2) _____ 6 - 10
 (3) _____ 11 - 15
 (4) _____ 16 - 20
 (5) _____ 21 - 25
 (6) _____ Other (please specify) _____

3. How many lawyers are employed in your law firm?
- (1) _____ 351 - 400
 (2) _____ 300 - 350
 (3) _____ 250 - 299
 (4) _____ 200 - 249
 (5) _____ 150 - 199
 (6) _____ Other (please specify) _____

III. COMPUTER EDUCATION IN LAW SCHOOLS

1. Do you feel a computer-related course(s) should be required in law school?

- (1) _____ Yes
- (2) _____ No

If yes, please indicate the type(s) of course(s) you feel should be required?

- (1) _____ Programming Languages
- (2) _____ Computer Security
- (3) _____ Computer Literacy
- (4) _____ Computer Law
- (5) _____ Computer Contracts
- (6) _____ Other (please specify)

- (1) _____
- (2) _____
- (3) _____

2. What would constitute a good computer-related course(s) for lawyers?

- (1) _____ Computers and the Law
- (2) _____ Computer Contracts
- (3) _____ Information Theft
- (4) _____ Computer Vandalism
- (5) _____ Programming Languages

- (1) _____ BASIC
- (2) _____ COBOL
- (3) _____ FORTRAN
- (4) _____ PL/1
- (5) _____ RPG
- (6) _____ Other language(s) (please specify)

- (1) _____
- (2) _____
- (3) _____

(6) _____ Other course(s) (please specify)

- (1) _____
- (2) _____
- (3) _____

RETURN TO:

Linda J. Risinger
 Oklahoma State University
 College of Business Administration
 207 Xerox Room
 Stillwater, OK 74078

APPENDIX C

COVER LETTERS, FOLLOW-UP LETTERS, AND

INDEX CARD



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078
(405) 624-5064

August 15, 1984

Dear Dean:

SUBJECT: COMPUTER-RELATED COURSE SURVEY OF ABA-ACCREDITED SCHOOLS OF LAW

Computer crime, computer law, and computer-related courses are areas of concern to both professional lawyers and educators. I am writing to request your assistance in a national survey of the ABA-accredited schools of law and the largest 250 law firms in the United States. It is the purpose of this study to collect data which will provide insight into important issues concerning computer laws and computer crimes, with a specific emphasis on computer-related courses offered in schools of law.

Would you, as dean of the law school, participate in this project by forwarding the enclosed questionnaire along with this letter to the appropriate professional, encouraging that individual to complete and return the questionnaire. If possible the questionnaire should be returned on or before September 15. An addressed, postage-paid envelope is enclosed for convenience in returning the questionnaire.

Research findings from this study should benefit law curriculum planners in their continuing effort toward more effective education. Please indicate if you wish to have an abstract of the completed research. I would like to express a sincere "thank you" for taking a few minutes from your schedule to provide your professional expertise, thereby contributing to this study.

Sincerely,

Linda J. Risinger

Linda J. Risinger
Graduate Teaching Associate

Richard Aukerman

Richard Aukerman
Doctoral Dissertation Adviser

Enclosures



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078
(405) 624-5064

August 15, 1984

Dear Lawyer:

SUBJECT: COMPUTER-RELATED COURSE SURVEY OF THE 250 LARGEST LAW FIRMS

Computer crime, computer law, and computer-related courses are areas of concern to both professional lawyers and educators. I am writing to request your assistance in a national survey of the largest 250 law firms in the United States and ABA-accredited schools of law. It is the purpose of this study to collect data which will provide insight into important issues concerning computer laws and computer crimes, with a specific emphasis on computer-related courses offered in schools of law.

Would you, as the newest member of your law firm, participate in this survey by completing and returning the enclosed questionnaire. If possible, the questionnaire should be returned on or before September 15. An addressed, postage-paid envelope is enclosed for convenience in returning the questionnaire.

Research findings from this study should benefit law curriculum planners in their continuing effort toward more effective education. Please indicate if you wish to have an abstract of the completed research. I would like to express a sincere "thank you" for taking a few minutes from your schedule to provide your professional expertise, thereby contributing to this study.

Sincerely,

Linda J. Kisinger

Linda J. Kisinger
Graduate Teaching Associate

Richard Aukerman

Richard Aukerman
Doctoral Dissertation Adviser

Enclosures



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078
(405) 624-3064

September 20, 1984

Dear Dean:

SUBJECT: FOLLOW-UP OF THE COMPUTER-RELATED COURSE SURVEY OF
ABA-ACCREDITED SCHOOLS OF LAW

Recently you received a questionnaire requesting responses concerning the computer-related courses offered in your school of law. This is a national survey of ABA-accredited schools of law and the 250 largest law firms in the United States. At the time this letter was mailed, a response had not been received from your school. If the questionnaire has since been completed and returned, I sincerely thank you.

Would you, as dean of the law school, participate in this project by forwarding the enclosed questionnaire along with this letter to the appropriate professional, encouraging that individual to complete and return the questionnaire. If possible, the questionnaire should be returned on or before October 26. An addressed, postage-paid envelope is enclosed for convenience in returning the questionnaire.

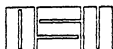
Your assistance in providing your professional expertise thereby contributing to this study is greatly appreciated.

Sincerely,

Linda J. Risinger
Graduate Teaching Associate

Richard Aukerman
Doctoral Dissertation Adviser

Enclosures



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078
(405) 624-5064

September 20, 1984

Dear Lawyer:

SUBJECT: FOLLOW-UP OF THE COMPUTER-RELATED COURSE SURVEY
OF THE 250 LARGEST LAW FIRMS

Recently you received a questionnaire requesting responses concerning the computer-related courses offered in schools of law. This is a national survey of the 250 largest law firms in the United States and ABA-accredited schools of law. At the time this letter was mailed, a response had not been received from your law firm. If the questionnaire has since been completed and returned, I sincerely thank you.

Would you, as the newest member of your law firm, participate in this project by completing and returning the enclosed questionnaire. If possible, the questionnaire should be returned on or before October 26. An addressed, postage-paid envelope is enclosed for convenience in returning the questionnaire.

Your assistance in providing your professional expertise thereby contributing to this study is greatly appreciated.

Sincerely,

Handwritten signature of Linda J. Risinger in cursive.

Linda J. Risinger
Graduate Teaching Associate

Handwritten signature of Richard Aukerman in cursive.

Richard Aukerman
Doctoral Dissertation Adviser

Enclosures



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

STILLWATER, OKLAHOMA 74078
(405) 624-5064

November 1, 1984

Dear Lawyer:

SUBJECT: FOLLOW-UP OF THE COMPUTER-RELATED COURSE SURVEY
OF THE 250 LARGEST LAW FIRMS

Last month you received a questionnaire requesting responses concerning the computer-related courses offered in schools of law. This is a national survey of the 250 largest law firms in the United States and ABA-accredited schools of law. At the time this letter was mailed, a response had not been received from your law firm.

Would you, as the newest member of your law firm, participate in this project by completing and returning the enclosed questionnaire. The questionnaire should be returned on or before November 30. An addressed, postage-paid envelope is enclosed for convenience in returning the questionnaire.

Your assistance in providing your professional expertise is greatly appreciated.

Sincerely,

Linda J. Risinger
Graduate Teaching Associate

Richard Aukerman
Doctoral Dissertation Adviser

Enclosures



Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION
(405) 624-5064, STILLWATER, OKLAHOMA 74078

Please route the attached material to the newest
member of your law firm.

APPENDIX D

RESULTS OF COMPARISON TESTS OF SELECTED ITEMS
FROM BOTH OF THE QUESTIONNAIRES

TABLE XLV
 COMPARISON OF COMPUTER-RELATED COURSE REQUIREMENTS
 BY ABA ACCREDITED LAW SCHOOLS AND LAWYERS

Population	Required Computer-Related Courses		Total	
	Yes	No		
Lawyers				
Observed Frequency	11	96	107	
Expected Frequency	18.60	88.40		
Percent	4.55	39.67	44.21	
Row Percent	10.28	89.72		
Column Percent	26.19	48.00		
<hr style="border-top: 1px dashed black;"/>				
Law Schools				
Observed Frequency	31	104	135	
Expected Frequency	23.40	111.60		
Percent	12.81	42.98	55.79	
Row Percent	22.96	77.04		
Column Percent	73.81	52.00		
<hr style="border-top: 1px dashed black;"/>				
	Total	42	200	242
Chi-square and Significance Level	17.36	82.64	100.00	
Degrees of Freedom = 1	Probability = .01			

TABLE XLVI
COMPARISON OF COMPUTER-RELATED COURSES THAT ARE REQUIRED

Course	Required Computer-Related Courses		Total
	Yes	No	
Lexis			
Lawyers			
Observed Frequency	10	97	107
Expected Frequency	4.90	102.10	
Percent	4.13	40.08	44.21
Row Percent	9.35	90.65	
Column Percent	90.91	41.99	

Law Schools			
Observed Frequency	1	134	135
Expected Frequency	6.10	128.90	
Percent	.41	55.37	55.79
Row Percent	.74	99.26	
Column Percent	9.09	58.01	

	Total	11	231
Chi-square and Significance Level	4.55	95.45	100.00
Degrees of Freedom = 1	Probability = .001		

Westlaw			
Lawyers			
Observed Frequency	2	105	107
Expected Frequency	1.30	105.70	
Percent	.83	43.39	44.21
Row Percent	1.87	98.13	
Column Percent	66.67	43.93	

Law Schools			
Observed Frequency	1	134	135
Expected Frequency	1.70	133.30	
Percent	.41	55.37	55.79
Row Percent	.74	99.26	
Column Percent	33.33	56.07	

TABLE XLVI (Continued)

	Total	3	239	242
Chi-square and Significance Level		1.24	98.76	100.00
Degrees of Freedom = 1		Probability = .43		
<hr/>				
Legal Methods				
Lawyers				
Observed Frequency		1	106	107
Expected Frequency		2.20	104.80	
Percent		.41	43.80	44.21
Row Percent		.93	99.07	
Column Percent		20.00	44.73	
<hr/>				
Law Schools				
Observed Frequency		4	131	135
Expected Frequency		2.80	132.20	
Percent		1.65	54.13	55.79
Row Percent		2.96	97.04	
Column Percent		80.00	55.27	
<hr/>				
	Total	5	237	242
Chi-square and Significance Level		2.07	97.93	100.00
Degrees of Freedom = 1		Probability = .27		
<hr/>				

TABLE XLVII
 COMPARISON OF COMPUTER-RELATED COURSES AS ELECTIVES

Population	Required Computer-Related Courses		Total
	Yes	No	
Lawyers			
Observed Frequency	10	96	106
Expected Frequency	40.30	65.70	
Percent	4.13	39.67	43.80
Row Percent	9.43	90.57	
Column Percent	10.87	64.00	
Law Schools			
Observed Frequency	82	54	136
Expected Frequency	51.70	84.30	
Percent	33.88	22.31	56.20
Row Percent	60.29	39.71	
Column Percent	89.13	36.00	
	Total	92	150
			242
Chi-square and Significance Level	38.02	61.98	
Degrees of Freedom = 1	Probability = .0001		

TABLE XLVIII
COMPARISON OF COMPUTER-RELATED COURSES THAT
MAY BE TAKEN AS ELECTIVES

Course Title	Required Computer-Related Courses		Total
	Yes	No	
Computers and the Law			
Lawyers			
Observed Frequency	1	105	106
Expected Frequency	22.80	83.20	
Percent	.41	43.39	43.80
Row Percent	.94	99.06	
Column Percent	1.92	55.26	
<hr/>			
Law Schools			
Observed Frequency	51	85	136
Expected Frequency	29.20	106.80	
Percent	21.07	35.12	55.20
Row Percent	37.50	62.50	
Column Percent	98.08	44.74	
<hr/>			
	Total	52	190
Chi-square and			242
Significance Level	21.49	78.51	100.00
Degrees of Freedom = 1	Probability = .0001		
<hr/>			
Managing the Data Security Function			
Lawyers			
Observed Frequency	0	106	106
Expected Frequency	1.80	104.20	
Percent	0.00	43.80	43.80
Row Percent	0.00	100.00	
Column Percent	0.00	44.54	
<hr/>			
Law Schools			
Observed Frequency	4	132	136
Expected Frequency	2.20	133.80	
Percent	1.65	54.55	56.20

TABLE XLVIII (Continued)

Row Percent		2.94	97.06	
Column Percent		100.00	55.46	
<hr/>				
	Total	4	238	242
Chi-square and Significance Level		1.65	98.35	100.00
Degrees of Freedom = 1		Probability = .08		

Introduction to Information Processing

Lawyers

Observed Frequency		0	106	106
Expected Frequency		3.10	102.90	
Percent		0.00	43.80	43.80
Row Percent		0.00	100.00	
Column Percent		0.00	45.11	

Law Schools

Observed Frequency		7	129	136
Expected Frequency		3.90	132.10	
Percent		2.89	53.31	56.20
Row Percent		5.15	94.85	
Column Percent		100.00	54.89	

	Total	7	235	242
Chi-square and Significance Level		2.89	97.11	100.00
Degrees of Freedom = 1		Probability = .018		

Investigating Computer-Assisted Crime

Lawyers

Observed Frequency		0	106	106
Expected Frequency		1.80	104.20	
Percent		0.00	43.80	43.80
Row Percent		0.00	100.00	
Column Percent		0.00	44.54	

Law Schools

Observed Frequency		4	132	136
Expected Frequency		2.20	133.80	
Percent		1.65	54.55	56.20

TABLE XLVIII (Continued)

Row Percent		2.94	97.06	
Column Percent		100.00	55.46	

	Total	4	238	242
Chi-square and Significance Level		1.65	98.35	100.00
Degrees of Freedom = 1		Probability = .08		

Introduction to Computer-Based Systems				
Lawyers				
Observed Frequency		1	105	106
Expected Frequency		3.50	102.50	
Percent		.41	43.39	43.80
Row Percent		.94	99.06	
Column Percent		12.50	44.87	

Law Schools				
Observed Frequency		7	129	136
Expected Frequency		4.50	131.50	
Percent		2.89	53.31	56.20
Row Percent		5.15	94.85	
Column Percent		87.50	55.13	

	Total	8	234	242
Chi-square and Significance Level		3.31	96.69	100.00
Degrees of Freedom = 1		Probability = .07		

BASIC				
Lawyers				
Observed Frequency		1	105	106
Expected Frequency		1.80	104.20	
Percent		.41	43.39	43.80
Row Percent		.94	99.06	
Column Percent		25.00	44.12	

Law Schools				
Observed Frequency		3	133	136
Expected Frequency		2.20	133.90	

TABLE XLVIII (Continued)

Percent	1.24	54.96	56.20
Row Percent	2.21	97.79	
Column Percent	75.00	55.88	

Total	4	238	242
Chi-square and Significance Level	1.65	98.35	100.00
Degrees of Freedom = 1	Probability = .4447		

COBOL

Lawyers

Observed Frequency	0	106	106
Expected Frequency	.90	105.10	
Percent	0.00	43.80	43.80
Row Percent	0.00	100.00	
Column Percent	0.00	44.17	

Law Schools

Observed Frequency	2	134	136
Expected Frequency	1.10	134.90	
Percent	.83	55.37	56.20
Row Percent	1.47	98.53	
Column Percent	100.00	55.83	

Total	2	240	242
Chi-square and Significance Level	.83	99.17	100.00
Degrees of Freedom = 1	Probability = .21		

FORTRAN

Lawyers

Observed Frequency	0	106	106
Expected Frequency	.90	105.10	
Percent	0.00	43.80	43.80
Row Percent	0.00	100.00	
Column Percent	0.00	44.17	

Law Schools

Observed Frequency	2	134	136
Expected Frequency	1.10	134.90	

TABLE XLVIII (Continued)

Percent	.83	55.37	56.20
Row Percent	1.47	98.53	
Column Percent	100.00	55.83	

Total	2	240	242
Chi-square and Significance Level	.83	99.17	100.00
Degrees of Freedom = 1	Probability = .21		

PL/1

Lawyers

Observed Frequency	0	106	106
Expected Frequency	.90	105.10	
Percent	0.00	43.80	43.80
Row Percent	0.00	100.00	
Column Percent	0.00	44.17	

Law Schools

Observed Frequency	2	134	136
Expected Frequency	1.10	134.90	
Percent	.83	55.37	56.20
Row Percent	1.47	98.53	
Column Percent	100.00	55.83	

Total	2	240	242
Chi-square and Significance Level	.83	99.17	100.00
Degrees of Freedom = 1	Probability = .21		

RPG

Lawyers

Observed Frequency	0	106	106
Expected Frequency	.90	105.10	
Percent	0.00	43.80	43.80
Row Percent	0.00	100.00	
Column Percent	0.00	44.17	

Law Schools

Observed Frequency	2	134	136
Expected Frequency	1.10	134.90	

TABLE XLVIII (Continued)

Percent	.83	55.37	56.20
Row Percent	1.47	98.53	
Column Percent	100.00	55.83	

	Total	2	240
Chi-square and Significance Level	.83	99.17	100.00
Degrees of Freedom = 1	Probability = .21		

VITA 2

Linda Jean Risinger

Candidate for the Degree of

Doctor of Education

Thesis: AN ANALYSIS OF COMPUTER-RELATED CURRICULA IN SCHOOLS OF LAW
ACCREDITED BY THE AMERICAN BAR ASSOCIATION

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