Software Piracy Among Teachers

Susan Elizabeth Fry

University of Nebraska at Omaha
SOFTWARE PIRACY AMONG TEACHERS

A Thesis

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Faculty of the Graduate College

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of the Requirements for the Degree

Secondary Education

University of Nebraska at Omaha

by

Susan Elizabeth Fry

April, 1987
THESS ACCEPTANCE

Acceptance for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Secondary Education, University of Nebraska at Omaha

Committee

[Signatures]

Name

[Signatures]

Name

[Signatures]

Chairman

Date
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Abstract

The purpose of this study was to examine the prevalence and personality correlates of software piracy among teachers, who were 97 inservice teachers enrolled in Education courses at UNO. Subjects completed the Computing Teacher Inventory (a questionnaire designed expressly for this study to measure teachers' experience with and attitudes toward microcomputer software), the Teacher Stress Inventory, and the Teacher Job Satisfaction Questionnaire. Participation was voluntary and anonymous. Results indicated that teachers procured more software from illegal sources than from legal sources. More than half of those teachers who owned software admitted to illegally copying software from school. The other crimes against impersonal victims that teachers committed most frequently were traffic and reprography violations. The pattern of correlations among variables suggested that teachers' tendency toward software piracy appeared to be related to the tendencies to be dissatisfied with their jobs, to be stressed, and to commit other impersonal crimes.
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Educators have welcomed computer technology as a method of enhancing the learning process for students, parents, and professional educators. As computers have proliferated across the United States in every type of educational environment, so too, have the opportunities for computer crime. The business community and criminologists have paid considerable attention to the definitions, abuses, losses, and perpetrators of computer crime (Altheide, et al., 1978; American Bar Association Task Force on Computer Crime [ABA Task Force], 1984; Coleman, 1985; Dansereau, 1978; Edelhertz and Overcast, 1982; Geis and Stotland, 1980; Parker, 1976; Sutherland, 1949).

Definitions

This researcher could not locate any empirical research investigating computer crime in education. This is partly due to the difficulty in defining computer crime (ABA Task Force, 1984; Mandell, 1984; Telem, 1984). In the business community, it has been categorized as white-collar crime because it can stifle free enterprise, promote unfair competition, create a breach of trust against an individual or an institution, cause a violation of an occupational code of conduct, or jeopardize consumers or clientele (Parker, 1976; Sutherland, 1949). Computer crime has also been legally classified as white-collar crime because it does not involve acts of physical violence (ABA Task Force, 1984;
Bigelow & Nyceum, 1976; Mandell, 1984; Parker, 1980; Soma, 1983, 1985). More specifically, computer crime includes criminal activities which are directed against computers and their components, those activities which use computers or their components as instruments to commit crime, and other activities involving computers which amount to abuse but may not be illegal. Computer crime can also be categorized as "impersonal crime". This includes all criminal activities perpetrated against impersonal victims, such as governmental institutions, corporations, private organizations, and individuals with whom one is not personally acquainted. "Two of the least publicized, yet most common types of computer crime that impact industry and government to the tune of millions of dollars annually are the theft and copying of software and data" (Van Duyn, 1985). This study refers to software piracy as an impersonal computer crime because the perpetrators use computers to violate copyright laws and to commit theft from public and private schools, computer companies, or software developers and authors.

Legal Background

Another factor which makes defining computer crime difficult is the vagueness and inconsistencies in federal law (Copyrights Act of 1976; Computer Software Copyright Act of 1980) and state law (Nebraska Revised Statute 28-1343, 1985). Changing forms of technology make it even more
difficult to interpret these laws (Mandell, 1984, Soma, 1985; Talab, 1985). Computer crime is only briefly addressed in the federal copyright statutes (Copyrights Act of 1976; Computer Software Copyright Act of 1980), and only recently in the federal criminal statutes (Counterfeit Access Device and Computer Fraud and Abuse Act of 1984). The widely accepted general legal definition introduced by the U.S. Department of Justice, 1979) encompasses "any illegal act for which knowledge of computer technology is essential for its perpetration, investigation or prosecution". Soma (1985) reported thirty-four states have specific criminal statutes dealing with computer crime and five states, including Nebraska (Nebraska Revised Statute 28-1343, 1985), have amended their current criminal statutes to include computer crime.

None of the legislation discussed above has addressed the problem of computer crime in education. However, Telem (1984) made a non-legal attempt to define five types of computer crime in education as: (a) hardware sabotage; (b) property theft; (c) services theft; (d) theft of information; and (e) embezzlement and fraud. Software piracy, as the focus of this study, encompasses all of these types of computer crime committed by teachers except hardware sabotage.
Effects

What are the financial, educational, and psychological effects of software piracy on students, teachers, administrators, and parents? The empirical research done by the ABA Task Force (1984) documents income losses by businesses from computer crime. Only rough estimates have been calculated because many of the largest organizations are unable or unwilling to quantify their losses. This may be due to a lack of monitoring systems or a hesitation to admit security leaks (Bequai, 1987, ABA Task Force, 1984; Schjolberg, 1983).

Bequai (1987) estimated that for every ten dollars a user spends on hardware, another three are spent on software. Software sales now exceed $2 billion annually and they are projected to exceed $12 billion by 1990. Industry sources estimate that annual losses due to software piracy are over $1 billion, and they fear that this figure could exceed $5 billion by 1988 (Bequai, 1987).

Educational losses are much more difficult to document: Are teachers setting bad examples for their students? Are students learning how to evade the law in the name of education? Is the lack of sufficient funding for computer software and hardware placing pressure on teachers and administrators to break the law? Further research beyond the scope of this study needs to be done to properly assess these kinds of effects.
Personality Traits and Attitudes

What personality traits and attitudes have been associated with software piracy in education? Most of the perpetrators of computer abuses in business were found to be individuals within the organization (ABA Task Force, 1984; Parker, 1976). Individuals in different educational roles are potential violators: the teacher, the student, the educational administrator, the programmer, the keyboard operator, or the outsider who has access, including janitorial personnel (Telem, 1984). Other individuals who have access to the school during non-school hours for community use can also become perpetrators of computer crime. This study concentrated on the teacher in the educational setting.

With respect to personality, empirical research has again concentrated only on the business community. The current popular view is that the computer criminal (including the software pirate) is young, ambitious, highly motivated, well-educated, technically competent, and comes from all levels of employees (Bequai, 1978; Parker, 1975, 1976; Mandell, 1984). Krauss & MacGahan (1979) considered a computer criminal to be a "regular sort of fellow" who works for an employer with lax supervision. However, empirical evidence is conflicting in either identifying or discounting specific personality factors (Clinard, 1969; Coleman, 1985; Geis, 1982). A particular personality orientation may be
associated with criminal activities in one situation but not in others. Therefore, one single set of characteristics has not been determined to be conducive to computer or white-collar crime in all situations (Coleman, 1985; Conklin, 1977).

Structural and cultural pressures to succeed and to maintain a good community reputation may work to neutralize the importance of psychological differences and provide a restraining influence on possible illegal behavior (Coleman, 1985; Geis, 1982). Emotionally, these criminals are often considered by society as "heroes" challenging an impersonal computer. Thus, one attitude found among computer criminals is that the crime is against an impersonal victim who is not sympathetic, and that the victim brings it upon "himself", thereby making the crime justifiable (Mandell, 1984). One of the most consistent findings is the essentially noncriminal self-concept of the offender, regardless of the occupational context in which his behavior takes place (Altheide, et al., 1978; Conklin, 1977; Geis, 1982; Spencer, 1965). Does a sense of justification and absence of guilt play a role in the relationship between teachers' tendency toward software piracy and their commission of other impersonal crimes?

What motivates educators to commit software piracy? Altheide, et al. (1978) found that lack of sufficient financial remuneration has long been a factor in
white-collar crime in business. Dalton (1959) asserted "the employer knowingly provides the conditions which entice (force) the employee to steal the unpaid value of his labor, but at the same time, he punishes him for theft if he catches him doing it." Krauss and MacGahan (1979) found attitudes which reflect dissatisfaction with one's job by feeling taken advantage of, feeling cheated in terms of compensation, or not being given a fair shake may result in justifiable revenge or an attempt to "get even".

In an early study of embezzlers subjected to medical and psychiatric examinations, Lottier (1942) concluded that their crime was due, in part, to "tensions arising from biological and interpersonal as well as cultural conditions". He argued that these tension-producing conflicts in the organismic (hunger, sex drive), psychic (ambition, competition), interpersonal (aggression), and cultural conditions (working surroundings, long hours, social expectations) of the businessman's job may cause him to seek relief through embezzlement (Lottier, 1942). These "tension-producing conflicts" are more recently identified by researchers as "stress", and concerns about financial remuneration have been related to "job satisfaction" (Fimian, 1984; Lester, 1984).

Educators have exhibited similar attitudes in research which studied sources of teacher stress (Santangelo & Lester, 1985). Additional studies (Lester, 1985; Litt &
Turk, 1985) found job dissatisfaction among high school teachers was due to common work problems such as inadequate salary, low status, and a poor relationship with administrators. These variables were found to be important in predicting job stress. Kyriacou & Sutcliffe (1985) cited stress as a major factor in teachers' decisions to leave teaching. Sylvia and Hutchison (1985) also reported a general dissatisfaction with pay and other benefits when studying teacher motivation.

Thus, it was hypothesized that teachers' tendencies to commit software piracy may be related to dissatisfaction with their jobs, stress attributed to their work situation, and other crimes against impersonal victims.

Information Dissemination

How well-informed are educators about the legal ramifications of software piracy? Twenty states have mandated or legislated computer-education programs (Talab, 1985). School boards and libraries are beginning to assume the responsibility for the prevention of software piracy in education by adopting policies and guidelines on software copyright which have been developed by the International Council on Computers in Education [ICCE] (1983, 1987b) and the International Reading Association Computer Technology and Reading Committee [IRACTRC] (1984). In addition, organizations of professional educators have developed codes
of ethical conduct for educators working with computer technology (ICCE, 1987a). Many of these efforts have been made to eliminate the risk of prosecution for violations of the law and to improve professional ethics (Lytle & Hall, 1985; Zakariya, 1985). School districts are also disseminating information about copyright law and fair use to staff members (Helm, 1986; The Official Fair-Use Guidelines, 1985;). Is a lack of knowledge about copyright law as it is applied to computer software reflected in teachers' tendency to justify software piracy?

Research Question

As more laws are enacted, and the numbers of computers in educational settings proliferate, the opportunities for, and incidences of, computer crime increase. The main purpose of this study was to examine the relationships between software piracy committed by educators, and each of the following variables: job satisfaction, stress, and crimes against impersonal victims. How do teachers' tendencies to commit this type of computer crime relate to each of these variables?

Method

Subjects

Subjects were 97 inservice teachers enrolled in Teacher
Education classes at the University of Nebraska at Omaha (UNO). These subjects included full-time, part-time, and substitute teachers from private and public schools in Nebraska and Iowa. All subjects and schools remained completely anonymous. The anonymity of subjects and school districts and the neutral university setting for this study attempted to overcome the inaccuracies which have plagued reporting of computer crime in business.

Demographic characteristics of the subjects were as follows: Elementary teachers = 55%, secondary teachers = 36%, both/other teachers = 9%; Teaching experience: 41% = 0-5 years, 25% = 6-10 years, 27% = 11-15 years; 6% = 16-20 years; 1% = 20 or more years; 32% owned microcomputers; 48% owned microcomputer software; 54% had microcomputers in their classrooms; 30% had microcomputers in their offices at school; and 46% used microcomputers in lab situations.

**Instruments**

Subjects completed a questionnaire (see Appendix B) which included the Computing Teacher Inventory designed for this study and two personality scales:

1. The Computing Teacher Inventory (CTI) was designed specifically for this study. This inventory measured (a) personal and professional ways educators use computers, (b)
their attitudes/habits toward obtaining, copying, and lending software, (c) the existence of school policies on computer use, and (d) educators' attitudes/habits toward committing impersonal crimes not related to computers (see Appendix B). The response formats of items were either frequency or Likert-type scales. Example: (1) Strongly Disagree to (5) Strongly Agree. Seventy-nine of the total 100 items on the test were divided into ten subscales reflecting teachers' experience with, and attitudes toward, microcomputers and software: Programming Uses, Personal Uses, Professional Uses, Illegal Procurement, Legal Procurement, Lending Policy with Full Restrictions, Lending Policy with Few Restrictions, Feelings of School Pressure, and a Disposition toward Copying Software (due to a lack of knowledge). Twenty-one additional items were combined in a separate subscale to reflect teachers' Other Impersonal Crimes (not involving computers).

2. The Teacher Stress Inventory (TSI) developed by Fimian (1984) measured work stress strength and frequency levels using 38 items in five factors or subscales: Lack of Administrative Support, Working With Students, Working With Teachers, Task Overload, and Financial Insecurity. Two Likert-type measures per item for strength and frequency were used. The stress strength scale was a subjective measure which allowed the teacher to rate the degree of
perceived impact which individual items (events) have upon their overall stress levels. The frequency scale indicated how often the items (events) were experienced by the teacher. Alpha coefficient ranged from .90 to .93, and the whole scale alpha reliability for the frequency dimension ranged from .90 to .92.

3. The Teacher Job Satisfaction Questionnaire (TJSQ) as developed by Lester (1985) assesses teacher job satisfaction in elementary, junior high (middle), and senior high schools. It identified the reasons people choose teaching as an occupation and the reasons people leave teaching. A factor analysis of the TJSB has determined nine underlying factors which affect both entering and leaving the teaching profession: Supervision, Colleagues, Working Conditions, Pay, Responsibility, Work Itself, Advancement, Security, and Recognition. The internal consistency of the TJSQ was estimated with coefficient alpha which ranged from .71 to .92 for the set of scales.

Procedure

This study was conducted during the spring semester, 1987, at UNO. Subjects completed each of the instruments described above during a regular class session and participation was voluntary. Each subject and his or her place of employment remained anonymous.
Data Analysis

The Pearson product moment correlation was computed to assess the intercorrelations among computer crime (software piracy) committed by educators and teacher job satisfaction, stress, and crimes against impersonal victims. In addition, individual items were combined to form a number of summative subscales. Correlations between those subscales and other variables were also evaluated.
Results

Of the 101 questionnaires distributed, 97 were completed. In addition to examining frequency distributions to individual items on the Computing Teacher Inventory, individual items were summed to form a number of additive indices: programming, personal, and professional uses of microcomputers; legal and illegal procurement of microcomputer software; attitudes or habits suggesting lending software with full or few restrictions; disposition toward copying software; and feelings of school pressure to copy software. Responses to each item concerning the frequency with which the respondents committed impersonal crimes other than software piracy were also summed to yield a total score and the following subscales: traffic violations, driving while under the influence of alcohol, videotape and reprography copyright violations, theft, and smoking violations. Specific items that were summed combined to yield each of the variables listed above have been annotated in Table I.

Uses of Microcomputers

Programming, personal, and professional uses of microcomputers by teachers at home were somewhat consistent with these same uses at school. Relatively few teachers used microcomputers for programming in Basic/Logo at home
Table I
Computing Teacher Inventory Subscales

<table>
<thead>
<tr>
<th>Subscale Title</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Programming Uses of Microcomputers</strong></td>
<td>Frequency of using a personal microcomputer for . . .</td>
</tr>
<tr>
<td></td>
<td>1. Writing programs in Basic or Logo</td>
</tr>
<tr>
<td></td>
<td>2. Writing programs in other languages</td>
</tr>
<tr>
<td></td>
<td>Frequency of using a school microcomputer for . . .</td>
</tr>
<tr>
<td></td>
<td>3. Writing programs in Basic or Logo</td>
</tr>
<tr>
<td></td>
<td>4. Writing programs in other languages</td>
</tr>
<tr>
<td><strong>Personal Uses of Microcomputers</strong></td>
<td>Frequency of using a personal microcomputer for . . .</td>
</tr>
<tr>
<td></td>
<td>1. Word processing personal correspondence</td>
</tr>
<tr>
<td></td>
<td>2. Playing games</td>
</tr>
<tr>
<td></td>
<td>3. Personal management (budget, taxes, etc.)</td>
</tr>
<tr>
<td></td>
<td>4. Participation in computer club activities</td>
</tr>
<tr>
<td></td>
<td>Frequency of using a school microcomputer for . . .</td>
</tr>
<tr>
<td></td>
<td>5. Word processing personal correspondence</td>
</tr>
<tr>
<td></td>
<td>6. Personal management (budget, taxes, etc.)</td>
</tr>
<tr>
<td><strong>Professional Uses of Microcomputers</strong></td>
<td>Frequency of using a personal microcomputer for . . .</td>
</tr>
<tr>
<td></td>
<td>1. Word processing school work (assignments, tests, etc.)</td>
</tr>
<tr>
<td></td>
<td>2. Professional management (attendance, grades, etc.)</td>
</tr>
<tr>
<td></td>
<td>3. Previewing software for classroom use</td>
</tr>
</tbody>
</table>
(Table I, continued)

<table>
<thead>
<tr>
<th>Subscale Title</th>
<th>Item</th>
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<tbody>
<tr>
<td><strong>Professional Uses of Microcomputers</strong> (continued)</td>
<td>Frequency of using a school microcomputer for . . .</td>
</tr>
<tr>
<td></td>
<td>4. Word processing school work (assignments, tests, etc.)</td>
</tr>
<tr>
<td></td>
<td>5. Instruction using drill and practice programs</td>
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<td></td>
<td>6. Instruction using tutorial programs</td>
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<td></td>
<td>7. Instruction using simulation programs</td>
</tr>
<tr>
<td></td>
<td>8. Professional management (attendance, grades, etc.)</td>
</tr>
<tr>
<td></td>
<td>9. Previewing software for classroom use</td>
</tr>
<tr>
<td><strong>Legal Procurement of Software</strong></td>
<td>Frequency of obtaining software by . . .</td>
</tr>
<tr>
<td></td>
<td>1. Purchasing an original program from a computer store</td>
</tr>
<tr>
<td></td>
<td>2. Purchasing an original program by mail order</td>
</tr>
<tr>
<td></td>
<td>3. Purchasing an original program from a colleague or friend</td>
</tr>
<tr>
<td></td>
<td>4. Trading one original program for another original program</td>
</tr>
<tr>
<td></td>
<td>5. Copying a public domain program from a magazine</td>
</tr>
<tr>
<td><strong>Illegal Procurement of Software</strong></td>
<td>Frequency of obtaining software by . . .</td>
</tr>
<tr>
<td></td>
<td>1. Copying a program from a colleague or friend</td>
</tr>
<tr>
<td></td>
<td>2. Copying a program from school</td>
</tr>
<tr>
<td></td>
<td>3. Receiving a free copy of a program from a colleague or friend</td>
</tr>
<tr>
<td></td>
<td>4. Receiving a free copy of a program from a student</td>
</tr>
<tr>
<td></td>
<td>5. Receiving a free copy of a program from a professor</td>
</tr>
<tr>
<td></td>
<td>6. Trading a copy of a program for a copy of another program</td>
</tr>
</tbody>
</table>

**Endorsement of . . .**

7. Lending personal software without restrictions when asked
(Table I, continued)

<table>
<thead>
<tr>
<th>Subscale Title</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitudes or Habits</strong></td>
<td><strong>Endorsement of lending personal software . . .</strong></td>
</tr>
<tr>
<td>Suggesting Lending</td>
<td>1. By only lending program disks without the documentation</td>
</tr>
<tr>
<td>Software with Full Restrictions</td>
<td>2. With the understanding that the borrower is not allowed to make a</td>
</tr>
<tr>
<td></td>
<td>copy</td>
</tr>
<tr>
<td></td>
<td>3. That is public domain software</td>
</tr>
<tr>
<td><strong>Endorsement of lending school software . . .</strong></td>
<td>4. By only lending program disks without the documentation</td>
</tr>
<tr>
<td></td>
<td>5. With the understanding that the borrower is not allowed to make a</td>
</tr>
<tr>
<td></td>
<td>copy</td>
</tr>
<tr>
<td></td>
<td>6. That is public domain software</td>
</tr>
<tr>
<td></td>
<td>7. That is cite licensed</td>
</tr>
<tr>
<td><strong>Endorsement of</strong></td>
<td>8. A school policy on software use and copyright</td>
</tr>
<tr>
<td><strong>. . .</strong></td>
<td>9. More training on the legal use of software</td>
</tr>
</tbody>
</table>

| **Attitudes or Habits**                             | **Endorsement of lending personal software . . .**                    |
| Suggesting Lending                                  | 1. And allowing the borrower to copy anything that was not purchased |
| Software with Few Restrictions                      | 2. To someone, if they lend equivalent software in return (even exchange) |

| **Endorsement of lending school software . . .**     | 3. To someone, if they lend equivalent software in return (even exchange) |

| **Disposition Toward Copying Software**              | **Endorsement of the following reasons for copying software:**       |
| (Due to a Lack of Knowledge)                        | 1. The owner of software can do what he or she wants with it.        |
|                                                    | 2. Educators have a special exception under the copyright law.       |
|                                                    | 3. I can legally copy any program which is not copy-protected.       |
(Table I, continued)

<table>
<thead>
<tr>
<th>Subscale Title</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disposition Toward Copying Software (Due to a Lack of Knowledge)</strong></td>
<td>4. I can make archival or back-up copies for my own use.</td>
</tr>
<tr>
<td></td>
<td>5. Copy programs are legal, so I can make copies of any program which is copyable by them.</td>
</tr>
<tr>
<td></td>
<td>6. The copyright laws are too vague and don't include computer software.</td>
</tr>
<tr>
<td></td>
<td>7. Licensing agreements vary too much from software to software.</td>
</tr>
<tr>
<td><strong>Feelings of School Pressure to Copy Software Illegally</strong></td>
<td>Endorsement of the following reasons for copying software:</td>
</tr>
<tr>
<td></td>
<td>1. Most commercial software is too expensive.</td>
</tr>
<tr>
<td></td>
<td>2. My school doesn't provide enough money for quality software.</td>
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<tr>
<td></td>
<td>3. I am expected to use computers with my students.</td>
</tr>
<tr>
<td></td>
<td>4. I want to provide computer experiences for my students.</td>
</tr>
<tr>
<td><strong>Other Impersonal Crimes Committed</strong></td>
<td>Frequency of . . .</td>
</tr>
<tr>
<td></td>
<td>1. Traffic violations:</td>
</tr>
<tr>
<td></td>
<td>a. Running a stop sign or light</td>
</tr>
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<td></td>
<td>b. Exceeding the speed limit</td>
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<tr>
<td></td>
<td>c. Making U-turns in a &quot;No U-turn&quot; zone</td>
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<tr>
<td></td>
<td>d. Passing in a &quot;No Passing&quot; zone</td>
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<tr>
<td></td>
<td>e. Not wearing a seatbelt in a state where it is required by law</td>
</tr>
<tr>
<td></td>
<td>f. Not making passengers wear seatbelts in a state where it is required by law</td>
</tr>
<tr>
<td></td>
<td>g. Speeding up across an intersection when the light turns yellow</td>
</tr>
<tr>
<td></td>
<td>h. Parking in a &quot;No Parking&quot; zone</td>
</tr>
<tr>
<td></td>
<td>i. Parking over the allowable time limit</td>
</tr>
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<td></td>
<td>j. Going the wrong way on a one-way street</td>
</tr>
<tr>
<td></td>
<td>k. Jaywalking</td>
</tr>
<tr>
<td></td>
<td>l. Crossing against a &quot;Don't Walk&quot; sign</td>
</tr>
</tbody>
</table>
(Table I, continued)

<table>
<thead>
<tr>
<th>Subscale Title</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Impersonal Crimes Committed</td>
<td>2. Driving while under the influence of alcohol</td>
</tr>
<tr>
<td>(continued)</td>
<td>3. Videotape or Copyright violations</td>
</tr>
<tr>
<td></td>
<td>4. Reprography or Copyright violations:</td>
</tr>
<tr>
<td></td>
<td>a. Reproducing copyrighted materials for use in the classroom without permission from the publisher</td>
</tr>
<tr>
<td></td>
<td>b. Using a school reprographic or duplicating machine for personal use</td>
</tr>
<tr>
<td></td>
<td>5. Theft:</td>
</tr>
<tr>
<td></td>
<td>a. Misfiling an income tax return</td>
</tr>
<tr>
<td></td>
<td>b. Shoplifting</td>
</tr>
<tr>
<td></td>
<td>c. Taking school supplies for personal use at home</td>
</tr>
<tr>
<td></td>
<td>d. Switching price tags on items in a store for purchase</td>
</tr>
<tr>
<td></td>
<td>6. Smoking violations in a &quot;No Smoking&quot; zone</td>
</tr>
</tbody>
</table>
or as part of their instruction in their classrooms (12%). Less than 7% did any programming in any other languages. Microcomputers were primarily used by teachers for word processing school work, such as tests or assignments, both at home (71%) and in their classrooms (35%). Games were played at home by 19% of the teachers, themselves. However, when used for instruction in the classroom, teachers' use of games increased dramatically: drill and practice = 53%, tutorials = 49%, and simulations = 33%. Teachers used microcomputers at home and at school for professional management (20%), such as keeping track of grades or attendance, or to copy software (12%). Computer club activities were limited to 10% of those who owned computers. 67% of those teachers who owned personal microcomputers had access to compatible microcomputers at school.

Sources of Microcomputer Software

More teachers owned microcomputer software (48%) than owned hardware (32%). Of those teachers that owned software, more software was procured from illegal sources than legal sources. For example, the most popular source was a friend: either by illegally making a copy of a friend's software (75%), or by receiving an illegally-produced free copy from a friend (63%). The next most popular method of procuring software was by legally
purchasing an original program from a computer store (59%). More than half (53%) of the teachers admitted that they obtained software by illegally copying a program from school. Other sources included: legally copying a program from a magazine (34%), receiving a legally-produced free copy from a professor (33%), trading one illegal copy for another illegal copy of a different program (23%), legally trading one original program for another original program (21%), receiving an illegally-produced free copy from a student (17%), and legally purchasing an original program by mail order (13%). More than two-thirds of the respondents (70%), worked in schools that had policies on software copyright. Site licensing agreements were reported in 70% of their schools. Most teachers (79%) wanted to provide computer experiences for their students. However, a significant few (10%) strongly disagreed with this idea.

Other Impersonal Crimes

The last section of the Computing Teacher Inventory measured the frequency with which teachers had committed impersonal crimes (other than software piracy). Teachers based their responses on their adult behaviors using a Likert scale (Never, Seldom, Sometimes, Often, Very Frequently). The following percentages represent those teachers who responded that they had participated in each of the behaviors listed at least once or "Seldom".
Traffic violations were the most common crimes committed by teachers. 98% admitted to both speeding and running a yellow light. Those teachers who used the school reprography machine for personal use (83%) and took home school supplies (81%) committed embezzlement or theft. Teachers who drove while intoxicated (57%) committed another type of traffic violation. Teachers who copied videotapes illegally (45%) committed copyright violations. Teachers who misfiled their income tax forms (25%) committed fraud against the federal government. Teachers who shoplifted (13%) also committed larceny or theft, depending upon the value of the stolen item.
Discussion

The following inferences and conclusions were made with an important limitation in mind: the small sample of teachers. However, it should be remembered, that this study may be the first attempt to examine the prevalence and personality correlates of software piracy among teachers.

One of the hypotheses tested in this study was that teachers' tendency to copy software was related to a tendency to be dissatisfied with the job and to be stressed. The correlations represented in Table II supported this assumption. Teachers' dissatisfaction with supervision (r. = -.44*) and working conditions (r. = -.34*) related to their tendency to procure software illegally either by making their own copies or accepting illegally-produced copies. Feeling unhappy about their advancement and recognition of their worth was also indicated among these teachers. Lack of administrative support (r. = .43**) was the most important stress factor related to copying software. Stress due to financial insecurity was also expressed by those teachers who procured software illegally. Teachers' dissatisfaction with their work itself and stress due to financial insecurity were the only variables related to their disposition toward copying software due to a lack of knowledge.
Table II
Correlates of Job Satisfaction, Stress, Illegal Procurement of Software, and Disposition Toward Copying Software

<table>
<thead>
<tr>
<th>Job Satisfaction:</th>
<th>Illegal Procurement of Software (N = 45)</th>
<th>Disposition Toward Copying Software (N = 85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision</td>
<td>-.44*</td>
<td>.09</td>
</tr>
<tr>
<td>Colleagues</td>
<td>-.17</td>
<td>.05</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>-.34*</td>
<td>-.09</td>
</tr>
<tr>
<td>Pay</td>
<td>-.20</td>
<td>-.06</td>
</tr>
<tr>
<td>Responsibility</td>
<td>-.13</td>
<td>.03</td>
</tr>
<tr>
<td>Work Itself</td>
<td>-.15</td>
<td>-.21*</td>
</tr>
<tr>
<td>Advancement</td>
<td>-.28*</td>
<td>-.07</td>
</tr>
<tr>
<td>Security</td>
<td>-.11</td>
<td>-.14</td>
</tr>
<tr>
<td>Recognition</td>
<td>-.25*</td>
<td>-.17</td>
</tr>
<tr>
<td>Stress due to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Administrative Support</td>
<td>.43**</td>
<td>.09</td>
</tr>
<tr>
<td>Working with Students</td>
<td>.22</td>
<td>.07</td>
</tr>
<tr>
<td>Working with Teachers</td>
<td>.06</td>
<td>.06</td>
</tr>
<tr>
<td>Task Overload</td>
<td>-.10</td>
<td>-.04</td>
</tr>
<tr>
<td>Financial Insecurity</td>
<td>.27*</td>
<td>.23*</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
Job dissatisfaction and stress were also related to teachers' policies on lending software (Table III). Dissatisfaction with supervision ($r = -.43^{**}$) and job security ($r = -.40^{**}$) were significantly related to teachers who lend software with little or no restrictions. Unhappiness with their colleagues, working conditions, level of responsibility, work itself, and advancement also related to these teachers' attitude of freely lending software. In business, job dissatisfaction among employees has been consistent with attitudes of disloyalty. These teachers may be no exception. Their lax software lending policies may reflect a lack of concern for school property, especially if they were not happy with their supervision, or feel secure in their position. In contrast, teachers who did express some dissatisfaction with their job security also indicated that they lend software with full restrictions. This may reflect the same teachers' tendency to conservatively conform to school policies and rules because they fear losing their jobs. However, teachers who felt very satisfied with their responsibility ($r = .53^{**}$) also tended to be very restrictive about lending software. This may indicate their loyalty and support for their employers' policies.

Stress due to lack of administrative support ($r = .32^{*}$) and working with students ($r = .36^{**}$) were indicated by teachers' tendency to lend software with few
Table III
Relationships Among Job Satisfaction, Stress, and Lending Policy

<table>
<thead>
<tr>
<th></th>
<th>Lends Software with Few Restrictions (N = 42)</th>
<th>Lends Software with Full Restrictions (N = 42)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Satisfaction:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervision</td>
<td>-.43**</td>
<td>-.04</td>
</tr>
<tr>
<td>Colleagues</td>
<td>-.34*</td>
<td>-.17</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>-.27*</td>
<td>-.24</td>
</tr>
<tr>
<td>Pay</td>
<td>-.05</td>
<td>.01</td>
</tr>
<tr>
<td>Responsibility</td>
<td>-.30*</td>
<td>.53**</td>
</tr>
<tr>
<td>Work Itself</td>
<td>-.29*</td>
<td>-.20</td>
</tr>
<tr>
<td>Advancement</td>
<td>-.30*</td>
<td>-.18</td>
</tr>
<tr>
<td>Security</td>
<td>-.40**</td>
<td>-.26*</td>
</tr>
<tr>
<td>Recognition</td>
<td>-.24</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Stress due to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Administrative Support</td>
<td>.32*</td>
<td>-.01</td>
</tr>
<tr>
<td>Working with Students</td>
<td>.36**</td>
<td>.07</td>
</tr>
<tr>
<td>Working with Teachers</td>
<td>.14</td>
<td>.01</td>
</tr>
<tr>
<td>Task Overload</td>
<td>.09</td>
<td>-.09</td>
</tr>
<tr>
<td>Financial Insecurity</td>
<td>.13</td>
<td>.08</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
restrictions. Although not measured directly in this study, this may be due in part to the pressure students may have placed on teachers to lend software easily, and the desire of teachers to alleviate the stress arising from such conflicts with students. Feelings of school or administrative pressure to copy software was only related to teachers' dissatisfaction with the amount of recognition they receive.

Another hypothesis of this study was that teachers' disposition toward copying software was related to their frequency of committing impersonal crimes. The correlations in Table IV support this hypothesis. Teachers' reprography violations (r = .27**, traffic violations (r = .28**), and driving while under the influence of alcohol (r = .24*) were related to their disposition toward making or using illegally copied software. In addition, their total criminal behavior against impersonal victims was, as a whole (r = .27**), related to this same attitude. This disposition, as represented by an endorsement of a rationale for copying software, also indicated a lack of knowledge about the legal use of software. This uninformed attitude is typically held by other white-collar computer criminals who consistently avoid considering whether their actions are legal or not. Without this consideration, these criminals do not feel guilty. Teachers may have similar attitudes if they feel completely justified in what they are doing,
Table IV
Associations between Impersonal Crimes, Lending Policy and Disposition Toward Copying Software

<table>
<thead>
<tr>
<th>Impersonal Crimes:</th>
<th>Lends Software with Few Restrictions (N = 42)</th>
<th>Disposition Toward Copying Software (N = 82)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Crimes</td>
<td>.10</td>
<td>.27**</td>
</tr>
<tr>
<td>Theft</td>
<td>.10</td>
<td>.16</td>
</tr>
<tr>
<td>Reprography Violations</td>
<td>.05</td>
<td>.27**</td>
</tr>
<tr>
<td>Videotaping Violations</td>
<td>.21</td>
<td>-.05</td>
</tr>
<tr>
<td>Traffic Violations</td>
<td>.05</td>
<td>.28**</td>
</tr>
<tr>
<td>Smoking Violations</td>
<td>-.37*</td>
<td>.11</td>
</tr>
<tr>
<td>Driving While Under the Influence of Alcohol</td>
<td>-.16</td>
<td>.24*</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
especially when they are not hurting anyone personally. Crimes against very impersonal and removed victims such as book publishers, software companies, and the federal, state, or local governments may be easier to commit when teachers are ignorant of the specific requirements of the law.

The only criminal behavior related to lending policy involved teachers who had smoked (N = 42), (Table IV). Those teachers who refrained from smoking in "No Smoking" areas (r. = -.37*) showed a tendency to lend software more easily. This may be due to their general reluctance to cause problems with those around them.

Additional correlations were computed between the frequency of other impersonal crimes and job satisfaction (Table V). Teachers who were dissatisfied with the recognition they received (r. = -.24**) tended to commit impersonal crimes, specifically, reprography violations and traffic violations. The perceived lack of recognition among these teachers might indicate a desire to be viewed by society or their peers as "Robin Hood-like heroes" as other white-collar computer criminals in the business world are viewed. Those teachers who smoked, and that were satisfied with their colleagues (r. = -.29*) and especially with their working conditions (r. = -.41**) committed fewer smoking violations. Again, this may reflect their earnest desire to cooperate with those around them, but for more positive reasons than those mentioned earlier.
Table V
Comparisons of Impersonal Crimes with Job Satisfaction

<table>
<thead>
<tr>
<th>Impersonal Crimes:</th>
<th>Colleagues (N = 81)</th>
<th>Work Conditions (N = 83)</th>
<th>Pay (N = 82)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Crimes</td>
<td>-.06</td>
<td>-.04</td>
<td>-.01</td>
</tr>
<tr>
<td>Theft</td>
<td>-.08</td>
<td>.04</td>
<td>.23*</td>
</tr>
<tr>
<td>Reprography Violations</td>
<td>-.07</td>
<td>-.05</td>
<td>-.03</td>
</tr>
<tr>
<td>Videotaping Violations</td>
<td>-.20*</td>
<td>-.03</td>
<td>.04</td>
</tr>
<tr>
<td>Traffic Violations</td>
<td>.01</td>
<td>.03</td>
<td>-.02</td>
</tr>
<tr>
<td>Smoking Violations</td>
<td>-.29*</td>
<td>-.41**</td>
<td>-.21</td>
</tr>
<tr>
<td>Driving While Under the Influence of Alcohol</td>
<td>.09</td>
<td>.06</td>
<td>-.15</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
Table V (continued)

<table>
<thead>
<tr>
<th></th>
<th>Responsibility (N = 83)</th>
<th>Work Itself (N = 81)</th>
<th>Advancement (N = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impersonal Crimes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Crimes</td>
<td>.03</td>
<td>-.12</td>
<td>-.01</td>
</tr>
<tr>
<td>Theft</td>
<td>-.05</td>
<td>-.11</td>
<td>.07</td>
</tr>
<tr>
<td>Reprography</td>
<td>-.10</td>
<td>-.21*</td>
<td>-.09</td>
</tr>
<tr>
<td>Violations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videotaping</td>
<td>-.03</td>
<td>-.09</td>
<td>.02</td>
</tr>
<tr>
<td>Violations</td>
<td>.11</td>
<td>-.03</td>
<td>-.03</td>
</tr>
<tr>
<td>Traffic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violations</td>
<td>-.03</td>
<td>-.01</td>
<td>-.07</td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violations</td>
<td>.09</td>
<td>-.04</td>
<td>-.10</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
Table V (continued)

<table>
<thead>
<tr>
<th></th>
<th>Security (N = 87)</th>
<th>Recognition (N = 86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impersonal Crimes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Crimes</td>
<td>-.12</td>
<td>-.24**</td>
</tr>
<tr>
<td>Theft</td>
<td>.03</td>
<td>-.06</td>
</tr>
<tr>
<td>Reprography Violations</td>
<td>-.27**</td>
<td>-.19*</td>
</tr>
<tr>
<td>Videotaping Violations</td>
<td>.02</td>
<td>-.10</td>
</tr>
<tr>
<td>Traffic Violations</td>
<td>-.08</td>
<td>-.23*</td>
</tr>
<tr>
<td>Smoking Violations</td>
<td>-.14</td>
<td>-.19</td>
</tr>
<tr>
<td>Driving While Under the Influence of Alcohol</td>
<td>-.01</td>
<td>-.09</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
The frequency of other impersonal crimes was also computed with teacher stress (Table VI). Teachers who were stressed by working with students (r. = .28**), task overload (r. = .24*) and financial insecurity (r. = .24*) tended to commit more impersonal crimes in total. Theft was significantly related to working with students (r. = .45**), working with other teachers (r. = .24*) and task overload (r. = .35**). Reprography and traffic violations were also indicated by teachers stressed by working with students, other teachers, task overload, and financial insecurity. These teachers may have a tendency to hand out more readings or written worksheets in order to avoid dealing with these types of stress. Teachers who are concerned about money or their relationships with others may be overly preoccupied. Therefore they may exhibit inattention to traffic signals and the task of driving. When these teachers feel that they have too much to do and insufficient time to do it in, they may be tempted to "steal time" by speeding.

Summary

In conclusion, the tendency toward software piracy among teachers appeared to be related to the tendencies to be dissatisfied with their jobs, to be stressed, and to commit other impersonal crimes. Teachers who are unhappy and feel pressured may have cavalier attitudes toward
### Table VI
Correspondence of Impersonal Crimes to Stress

<table>
<thead>
<tr>
<th>Impersonal Crimes:</th>
<th>Lack of Administrative Support (N = 90)</th>
<th>Working w/Students (N = 90)</th>
<th>Working w/Teachers (N = 90)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Crimes</td>
<td>.06</td>
<td>.28**</td>
<td>.06</td>
</tr>
<tr>
<td>Theft</td>
<td>.05</td>
<td>.45**</td>
<td>.24*</td>
</tr>
<tr>
<td>Reprography Violations</td>
<td>.04</td>
<td>.18*</td>
<td>.02</td>
</tr>
<tr>
<td>Videotaping Violations</td>
<td>.04</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>Traffic Violations</td>
<td>.09</td>
<td>.25**</td>
<td>.07</td>
</tr>
<tr>
<td>Smoking Violations</td>
<td>.14</td>
<td>-.10</td>
<td>.17</td>
</tr>
<tr>
<td>Driving While Under the Influence of Alcohol</td>
<td>.01</td>
<td>.15</td>
<td>.03</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
Table VI (continued)

<table>
<thead>
<tr>
<th>Task Overload (N = 90)</th>
<th>Financial Insecurity (N = 90)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impersonal Crimes:</strong></td>
<td></td>
</tr>
<tr>
<td>Total Crimes</td>
<td>.24*</td>
</tr>
<tr>
<td>Theft</td>
<td>.35**</td>
</tr>
<tr>
<td>Reprography Violations</td>
<td>.21*</td>
</tr>
<tr>
<td>Videotaping Violations</td>
<td>.12</td>
</tr>
<tr>
<td>Traffic Violations</td>
<td>.20*</td>
</tr>
<tr>
<td>Smoking Violations</td>
<td>-.13</td>
</tr>
<tr>
<td>Driving While Under the Influence of Alcohol</td>
<td>.05</td>
</tr>
</tbody>
</table>

*p. < .05

**p. < .01
software copyright infringement. In particular, teachers' dissatisfaction with their supervision, working conditions, advancement, colleagues, responsibility, and job security seemed to be associated with a tendency to illegally procure software. Stress attributed to lack of administrative support, working with students, and financial insecurity appeared to correspond to tendencies to copy software and lend software easily. Teachers' disposition to copy software illegally due to a lack of knowledge seemed to be associated with traffic and reprography violations.

It is significant that there was no correlation between the frequency of illegal procurement of software and the total of other impersonal crimes. This may be due to the lack of guilt associated with white-collar computer crime, in general. Teachers' lack of guilt may stem from a perception that they are not participating in any criminal behavior, because they are neither aware of, nor do they understand the law. This misunderstanding is compounded by vague legal interpretations being challenged in the courts, and the "impersonal" and "removed" nature of the victims. How can a crime be committed, if there is no victim who is "up close and personal"? Who are the real victims?

As microcomputers become more and more an integral part of education, software piracy may increase. Future studies might examine the extent of these losses and how they affect all those involved in the educational process with respect
to funding for computer technology, development of new educational software, expanding site licensing agreements, salaries for teachers, and legal questions.
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Appendix A: Extended Review of Literature

Introduction

The increasing availability of computers to the general public and the complexity of computer technology have produced overwhelming opportunities for crime. John C. Keeney, a former Deputy Assistant Attorney General in the Criminal Division of the United State Department of Justice, stated that:

Our political, economic and social institutions have grown increasingly dependent upon computers to the point that their illicit manipulation or malicious destruction can potentially wreak havoc on society. . . . Computers have become a part of everyone's life and are being integrated into virtually every facet of human activity at an ever increasing rate. The very existence at the present time of a broad base of computer usage and computer knowledge, and its projected increase in the years to come suggest that we will experience an increase in the opportunities for computer-related abuses in the years ahead. (Hearings, 1978.)

Definitions

This researcher could not locate any empirical research investigating computer crime in education. This is partly due to the difficulty in defining computer crime (ABA Task Force, 1984; Mandell, 1984; Telem, 1984). In the business
community, it has been categorized as white-collar crime because it can stifle free enterprise, promote unfair competition, create a breach of trust against an individual or an institution, cause a violation of occupational conduct, or jeopardize consumers or clientele (Bequai, 1978; Parker, 1976; Sutherland, 1949). Computer crime has also been legally classified as white-collar crime because it does not involve acts of physical violence (ABA Task Force, 1984; Bigelow & Nyceum, 1976; Mandell, 1984; Parker, 1980; Soma, 1983, 1985).

The most widely accepted legal definition of computer crime encompasses "any illegal act for which knowledge of computer technology is essential for its perpetration, investigation, or prosecution (U.S. Department of Justice, 1979). This legal definition has been interpreted to include several types of criminal activities: (a) use of computers to steal tangible or intangible assets; (b) destruction or alteration of data; (c) use of computers to embezzle funds; (d) destruction or alteration of software; (e) use of computers to defraud consumers, investors or users; and (f) theft of computer software (ABA Task Force, 1984; Parker, 1976; Parker & Nyceum, 1983). Mandell (1984) divided computer crime into two other types: (a) the use of a computer to perpetrate acts of deceit, theft, or concealment; and (b) threats to computer hardware or software, sabotage, and demands for ransom. Software piracy
occurs when a computer is used to make illegal copies of copyrighted software.

Computer crime can also be categorized as "impersonal crime" which includes all private criminal activities perpetrated against impersonal victims, such as governmental institutions, corporations, private organizations, and individuals with whom one is not personally acquainted. Software piracy is an "impersonal" computer crime because the perpetrators use computers to violate copyright laws and to commit theft from public and private schools, computer companies, or software developers and authors.

Legal Background

Another factor which complicates the problem of defining computer crime is the vagueness and inconsistencies in federal and state law. Software piracy is only briefly addressed in the copyright statutes (Copyrights Act of 1976; Computer Software Copyright Act of 1980).

A copyright does not protect ideas. It only protects the expression of those ideas. For example, the "idea" of a gradebook program for teachers is not new and has been used and marketed by many developers, such as APPLE GRADEBOOK, SCHOOLHOUSE GRADER, and REPORT CARD. However, the means by which each program expresses that idea are unique and therefore protected under a copyright. A copyright lasts for 28 years and is renewable to extend for the life of the
author plus 50 years. It gives the copyright owner exclusive rights to either do or authorize reproduction, preparation of derivative works, distribution, performance, or display of a copyrighted work (Copyrights Act, 1909).

In the Copyrights Act of 1976, the copyright laws were revised, for the first time since 1909. The technological changes which needed to be included were reprography (photocopying), videotaping, and musical tape reproductions. The definitions of intellectual property and the mechanisms by which it is controlled had changed. There were specific guidelines created for classroom reprography for non-profit educational institutions with respect to books, periodicals, and music (Copyrights Act of 1976).

Inherent in the interpretation of copyright law is the concept of "fair use". Section 107 of the Copyrights Act of 1976 states that, "...the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section (Section 106) for purposes such as criticism, comment, news reporting, teaching, scholarship, or research is not an infringement of copyright."

Fair use is intended to balance the interests of copyright owners with the needs of others for access to copyrighted materials. Four criteria for evaluating the
fair use of copyrighted materials in an educational setting are also specified in Section 107 (Copyrights Act of 1976):

1. The purpose and character of the use, including whether the copied material will be for nonprofit, educational, or commercial use.

2. The nature of the copyrighted work, with special consideration given to the distinction between a creative work and an informational work.

3. The amount and substantiability, or portion used in relation to the copyrighted work as a whole.

4. The effect of the use on the potential market of the copyrighted work.

Several recent court decisions regarding copyright infringement have also impacted the legal interpretation of fair use. In Sony Corp. of America v. Universal City Studios, Inc. (1984), the Supreme Court upheld the right of individuals to make off-air videotapings of television programs. The rationale behind the ruling was significant to software copyright infringement because it shifted the burden of proof of fair use from the user/defender to the copyright owner/plaintiff, and stressed the importance of dissemination and public access.

Although the Williams & Wilkins Co. v. U.S. (1975) decision was made before the Copyrights Act of 1976, the Supreme Court emphasized the nonprofit, private use by
researchers of the reproduced material and the lack of demonstrated economic harm suffered by the plaintiff. They also determined that fair use may sometimes permit reproduction of a copyrighted work in its entirety (Helm, 1986). These interpretations have yet to be applied to a case involving software piracy. The Computer Software Copyright Act of 1980 amended the 1976 law to specify copyright protection for all software marketed in the United States. The law is short, sweet, and to the point. However, its brevity in no way lessens its importance because federal law supercedes all other law. The law specifies the following in Section 117:

LIMITATIONS ON EXCLUSIVE RIGHTS WITH RESPECT TO COMPUTER PROGRAMS

Notwithstanding the provisions of section 106, it is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided:

(1) that such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or

(2) that such new copy or adaptation is for archival purposes only and that all archival copies are
destroyed in the event that continued possession of the computer program should cease to be rightful.

Any exact copies prepared in accordance with the provision of this section may be leased, sold, or otherwise transferred, along with the copy from which such copies were prepared, only as part of the lease, sale, or other transfer of all rights in the program. Adaptations so prepared may be transferred only with the authorization of the copyright owner. (Computer Software Copyright Act of 1980)

This section of the copyright law states that copies of computer programs can only be made for the purposes described above. Without permission from the copyright owner, it is illegal to make duplicate copies of a computer program for distribution to and use by anyone other than the owner of that master copy. However, Section 117 does not address the complexities of computer use in education (Helm, 1986; Remer, 1984). In addition, a software company may grant to its customer, a license to use the software subject to special terms and conditions. This "licensing agreement" may either completely prohibit or allow the customer to make back-up (legally referred to as "archival") copies and specify how the disks are to be used. Even newer "site licensing agreements" are being negotiated by school districts and corporations with software producers for
permission to duplicate software based on their needs and budgets. These "sites" are being given special licenses to use and reproduce the software for independently negotiated amounts.

The software industry distinguished between business software piracy defined as copying software by an employee for personal use at home; and, educational "softlifting" which occurs when students or teachers copy software for school use, or give it to friends (ADAPSO, 1984). Williams (1985) pointed out that there is no consistent licensing agreement in the industry. Because of the additional complication of no industry standards, it is difficult to specify what is against the law and what is not.

Helm (1986) specified five sources or tests for educators, other than the Computer Software Copyright Act of 1980, to assess the legality of making and using duplicate copies of software as follows:

1. The Market Effect Test - Making copies and distributing them, booting up a dozen microcomputers with one master copy, and/or using one master copy on a network of computers fail this test because each of these situations deprives the owner of profits that would otherwise be earned from an equivalent number of original copies sold.

2. The Intended Use Test - This depends upon the intended use of the design of the program and its designer. If a program is designed to be used by a single user at a
single microcomputer, and it is used in a network, it fails this test.

3. The Simultaneous/Sequential Users Test - A teacher may allow more than one student to use a program as long as they are accessing the program one at a time and not simultaneously. This is based on the right of the owner to do with that program what he/she wishes as long as no duplicate copies are made other than the archival one. However, allowing more than one student access to the master copy simultaneously through a network or by sequentially booting up their computers fails this test.

4. Fair Use Test - Applying this test is difficult because according to the first criterion of fair use, copies of software can be used for educational, nonprofit purposes. However, software by nature is a creative piece of work and easily accessible. Thirdly, it is virtually impossible for a program to work if only a portion of the master disk is copied. Fourthly, the effect of duplicate copies is to reduce potential markets and sales. Because duplication of software fails three out of the four criteria, it fails this test.

5. Licensing Agreements - This test involves the license referred to earlier which accompanies a piece of software in the manual. It usually becomes effective when a user opens the package, referred to as "shrink-wrap licensing". These agreements are usually more restrictive
than the copyright law itself and take precedence over the law, so if the software is used in contradiction to the specific license, it fails this test.

The Association of Data Processing Service Organizations (1984) is working with Congress to strengthen copyright protection of software and is encouraging serious law enforcement under civil law. Many businesses support a federal criminal statute directed specifically to computer crime (ABA Task Force, 1984). The current federal criminal statute covers only situations in which someone knowingly accesses a computer being used by the U.S. Government, by its contractors, or by financial institutions under jurisdiction of the privacy act (Counterfeit Access Device and Computer Fraud and Abuse Act of 1984). It does not cover computers which operate under interstate commerce. Others advocate prosecuting computer crime under traditional state criminal law (Mandell, 1984; Talab, 1985). To date, thirty-four states have specific criminal statutes dealing with computer crime and five states (including Nebraska) have amended their current criminal statutes to include computer crime (Soma, 1985; Nebraska Revised Statute 28-1343, 1985). None of the legislation discussed above addresses the problem of computer crime, or more specifically, software piracy in education.
Effects

What are the effects of software piracy in education? The empirical research which documents income losses is from business. According to a study by the ABA Task Force (1984), 20% of the incidents of all types of computer crime were never reported, and it was difficult to conclude from their results with any certainty, the number of incidents occurring on a nationwide basis. Only rough estimates have been calculated because many of the largest organizations are unable or unwilling to quantify their losses due to a lack of monitoring systems or admissions of security leaks.

An earlier study done by the Stanford Research Institute (1973) found that the average loss per crime was $450,000. However, there were only 100,000 computers in use in the United States at that time. Another study done by the Government Accounting Office, GAO (1976) reported that the average dollar loss per crime was $44,110. This conflicting empirical evidence reflects the fundamental problem for estimating and reporting computer crimes, even in 1976. Today, ten years later, the number of computers has risen exponentially, and so has the number of computer crimes.

Great attention has been paid to computer crime in the business world, but schools, by virtue of their organization, invite computer crime, especially software piracy (Telem, 1984). The hierarchy is uncomplicated and
educators are expected to perform professionally according to school board requirements, without continual direct administrative supervision. Educators are expected to develop their courses according to school district guidelines using many of their own resources. Slesnick (1984) argued that the rationale of providing better education for students justifies many incidences of software piracy, especially in the wake of budgetary cutbacks and restrictions. Generally, there are no well-protected computer sites and the loose coupling between the administrative and instructional systems creates two separate authorities using computers (Telem, 1985).

Research in education has been even more difficult. In one case, a private investigator was hired by the International Communications Industries Association to collect unspecified data from an Ohio school system (Pattie, 1985). The results of this study were inconclusive and only served to further alienate educators from the computer industry. Publishers are aware that schools are violating their policies about copying, multiple-loading, and networking software, but are reluctant to press the issue with their customers (Williams, 1985).

**Personality Traits and Attitudes**

Additional research on the personality of a business computer criminal (Meier and Geis, 1982), has shown that he
develops a set of rationalizations or justifications which allow him to regard his action as reasonable behavior, (Example: "Everyone else is doing it"). Coleman (1985) and Geis (1982) have concluded that these computer criminals are psychologically "normal" and conform closely to American middle-class ideals with a considerable stake in the community. However they may be viewed by others as "egocentric" and "reckless" (Coleman, 1985). Most of this research studied business computer criminals who had been prosecuted. Their need for justification may have come after they were apprehended and charged with their crime.

Clinard (1969) identified some personality traits which may be important in determining participation in other types of white-collar crime including egocentricity, emotional insecurity or feelings of personal inadequacy, negative attitudes toward other persons in general, and the relative importance of status symbols of money and prestige. Bequai (1978) portrays computer criminals as young, technically competent, and usually aggressive. Some steal for personal gain, others for the challenge, and still others because they are trying to improve technology and education. Many of them see themselves as being pitted against the computer, a challenge of man versus machine (Bequai, 1978).

Parker (1975) found in his detailed study of 17 cases of business computer fraud that perpetrators of computer crime are young (average age is 29, median age is 25, range
is 18-46). Their management and professional skills are predominant (70% were managers or highly experienced technical professionals). Their personal characteristics were as follows:

1. They were viewed as very desirable employees: reliable, trustworthy, bright and motivated.

2. They were not special as a group, and not professional criminals who take pride in their crime.

3. Their greatest fear was detection, and having their illegal acts made known to family, friends, and fellow employees.

Krauss & MacGahan (1979) asserted that motives to commit computer crime may develop suddenly or may take a period of years to grow. Attitudes which reflect dissatisfaction with one's job by feeling taken advantage of, feeling cheated in terms of compensation, or not being given a fair shake may result in revenge or "getting even". However, Krauss & MacGahan (1979) consider a computer criminal to be a "regular sort of fellow" who works for an employer whose supervision is lax.

High rates of inflation and budget cuts have robbed employees of purchasing power. Earned income often does not keep pace with increasing costs. Lack of sufficient financial remuneration has long been a motivation for white-collar crime. Altheide, et al., (1978) found:

1. There is a long tradition for employees to accept
and actually expect "wages-in-kind" which are extras to supplement their objective dollar or material earnings and for employers to provide extra "perks" in the form of bonuses or special privileges.

2. Employees may steal for revenge or dignity (job dissatisfaction) and try to synthesize their low job status (or salary) with personal regard by dispensing goods to friends, taking goods home, or taking advantage of services provided at work.

3. The pressures of work group norms and standards can promote and limit theft.

4. Employees seldom see themselves as criminals or threats to morality and social order.

Information Dissemination

Are educators aware of the legal aspects of software piracy? Do they understand the ramifications of their actions? Twenty states have mandated or legislated computer-education programs (Talab, 1985). On the other hand, private industry expects more responsibility on behalf of educators, and feels that it is doing the best that it can without an industry standard or definitive legislation (Williams, 1985).

School boards are beginning to assume the responsibility for computer crime in education by adopting policies on software copyright (see Appendix C for an
example) in order to eliminate the risk of being prosecuted for violations of the law (Bellevue Public Schools, 1985; Papillion LaVista Public Schools, 1986; School District of Ralston, 1986; Zakariya, 1985). A model policy on software copyright for education and accompanying statement on networking and multiple-machine software has been developed by the International Council on Computers in Education (1983). Organizations of professional educators have developed codes of ethical conduct for educators working with computer technology (ICCE, 1987a). An additional policy statement on software copyright by the ICCE (1987b) includes a model policy for school districts to follow.

Guidelines which make an effort to encourage the effective use of technology in reading classrooms have been adopted by the International Reading Association Computer Technology and Reading Committee (1984). Unfortunately, much of the current literature about the educational uses of computer technology describes a methodology for developing plans for computer education. This literature rarely mentions or even alludes to the legal use of computers or prevention of software piracy in education (Becker, 1987; Meeks, 1987; Naiman, 1987; Osgood, 1987, Vakos, 1986).
Extended List of References


Williams & Wilkins Co. v. United States, 420 U. S. 376 (1975).

Dear Graduate Student:

The questionnaire attached here is part of a research study I am conducting for my Master's thesis.

The purpose of the study is to examine the ways in which educators use computer software, as well as their attitudes about lending and copying software.

I would greatly appreciate your assistance in completing this study. You are being asked to participate, because you are a graduate student in Education at UNO, and because the instructor of this course has allowed me to come into your class and ask for your help.

It will take you 20-25 minutes to complete the questionnaire. DO NOT PUT YOUR NAME, THE NAME OF YOUR SCHOOL DISTRICT, OR THE NAME OF THIS COURSE anywhere on the answer sheet. All subjects are to remain anonymous, and all the data collected for this study will be confidential. It will be available only to the researcher and faculty supervisor listed at the bottom of this sheet. Should results be documented in a written article, neither individuals' nor organizations' names will appear. The questionnaires themselves will be destroyed as soon as the data are entered to computer. No one will know that you or the students enrolled in this course participated in the study.

We would like you to complete the questionnaire IF:

-- YOU ARE TEACHING (or employed in an instructional capacity)

-- AND YOU HAVE ACCESS TO A COMPUTER AS PART OF YOUR JOB.

IT IS NOT NECESSARY THAT YOU ALSO OWN YOUR OWN PERSONAL COMPUTER, though some of the items on this questionnaire deal with personal computers.

Thank you for your help.

Susan Fry, researcher
Dr. Dona Kagan, faculty advisor
Computing Teacher Inventory (CTI)

General Answer Sheet Instructions

Some of the questions require a TRUE (T) or FALSE (F) answer, the rest of the questions require using A, B, C, D, E as multiple choice answers. Read each section of the questionnaire carefully so as to accurately indicate your answers. Each section will be indicated by a broken line.

1. The total number of years of my teaching experience is:
   (A) 0-5 years (B) 6-10 years (C) 11-15 years (D) 16-20 years (E) 21 or more years.

2. Most of my professional experience has been in:
   (A) Grades K-6 (B) Grades 7-12 (C) Both or other.

3. (T or F) I own a microcomputer.
   If your answer to this question is TRUE, please continue on to Question #4. If your answer is FALSE, skip ahead to Question #16 and continue.

Indicate the number of times per week you use your personal microcomputer for each of the following purposes.

   (A) less than 1 (B) 1-2 (C) 3-6 (D) 7-10 (E) 10+

4. To write programs in Basic/Logo.
5. To write programs in other languages.
6. To word process personal correspondence.
7. To word process school work (tests, assignments, etc.).
8. To play games.
9. For personal management (budget, taxes, investments, etc.).
10. For professional management (gradebooks, attendance, etc.).
11. To make copies of software.
12. To preview software for professional use.
13. To transfer information via a modem.
14. To participate in computer club activities.
15. (T or F) My microcomputer at home and the one(s) I have access to at school, are compatible.

16. (T or F) I own microcomputer software.

If your answer to this question is TRUE, please continue on to Question #17. If your answer to this question is FALSE, please skip ahead to Question #36 and continue.

Indicate how many times you obtained microcomputer software in each of the following ways below:

(A) 0  (B) 1-2  (C) 3-6  (D) 6-10  (E) 10+

17. Purchased original program from a computer store.
18. Purchased original program by mail order.
19. Purchased original program from a colleague/friend.
20. Traded original program for another original program.
21. Copied program from magazine.
22. Copied program from a colleague/friend.
23. Copied program from school.
24. Received a free copy of program from a colleague/friend.
25. Received a free copy of program from a student.
26. Received a free copy of program from a professor.
27. Traded copy of program for copy of another program.

Indicate the degree to which you agree or disagree with the following statements about lending personal software.

(A) Strongly Disagree  (B) Disagree  (C) Neutral  (D) Agree  (E) Strongly Agree

28. I lend software when I am asked without restrictions.
29. I only lend program disks without the documentation.
30. I lend programs with the understanding that the borrower is not allowed to make a copy.

31. The borrower may copy anything I didn't pay for myself.

32. I lend software that I purchased.

33. I lend software to someone, if I can borrow equivalent software from them (even exchange).

34. I lend public domain software easily.

35. I lend software with the expectation that the borrower will probably make a copy of it.

36. (T or F) I have a microcomputer in my classroom.

37. (T or F) I have a microcomputer in my office at school.

38. (T or F) I use microcomputers in a lab situation at school.

If you use a microcomputer at school, indicate the number of times per week you use it for each of the following reasons:

(A) less than 1  (B) 1-2  (C) 3-6  (D) 7-10  (E) 10+

39. To write programs in Basic/Logo.

40. To write programs in other languages.

41. To word process personal correspondence.

42. To word process school work (tests, assignment, etc.).

43. For drill and practice.

44. For tutorials.

45. For simulations.

46. For personal management (budget, taxes, investments, etc.).

47. For professional management (gradebooks, attendance, etc.).

48. To make copies of software.

49. To preview software for professional use at school.
Indicate the degree to which you agree or disagree with the following statements about lending school software.

(A) Strongly  (B) Disagree  (C) Neutral  (D) Agree  (E) Strongly Disagree

50. I lend software when I am asked without restrictions.
51. I only lend program disks without the documentation.
52. I lend programs with the understanding that the borrower is not allowed to make a copy.
53. I lend public domain software.
54. I lend cite licensed software.
55. I lend software to someone, if I can borrow equivalent software from them (even exchange).
56. I lend software to students.
57. I lend software with the expectation that the borrower will probably make a copy of it.

58. (T or F) Excluding cite licensed and public domain software, my school generally purchases one copy of each piece of software and makes copies for use.
59. (T or F) I have to check software out from the library or department head, etc.
60. (T or F) I may keep a program as long as I need it.
61. (T or F) My school has a policy on software use and copyright.
62. (T or F) I wish (am glad) my school had (has) a policy on software use and copyright.
63. (T or F) I want more training on the legal use of software.
64. (T or F) My school has a cite licensing agreement for some software (Example: MECC).
Whether or not you participate in this behavior, please indicate the degree to which you agree or disagree with the following reasons given for copying software and/or using copied software.

(A) Strongly Disagree (B) Disagree (C) Neutral (D) Agree (E) Strongly Agree

65. Public domain software can be legally used and copied by anyone.
66. The owner of software can do what he/she wants with it.
67. Most commercial software is too expensive.
68. The software developers are being unrealistic, by expecting us not to make our own copies.
69. Educators have a special exception under the copyright law.
70. My school doesn't provide enough money for quality software.
71. I am expected to use computers with my students.
72. I want to provide computer experiences for my students.
73. I want to expand my own computer experience/expertise.
74. I can legally copy any program which is not copy-protected.
75. I can make archival/back up copies for my own use.
76. Copy programs are legal, so I can make copies of any program which is copyable by them.
77. The copyright laws are too vague and don't include computer software.
78. Licensing agreements vary too much from software to software.
79. I am doing it as a favor to help a friend/colleague.
Indicate how often you have consciously participated in the following behaviors as an adult. If the behavior does not apply to you, leave the answer blank. (For example: If you have never smoked on a regular basis, leave answer to Question #80 blank.

(A) Never  (B) Seldom  (C) Sometimes  (D) Often  (E) Very frequently

80. Smoked in a "No Smoking" area.
81. Run a stop sign/light.
82. Exceeded the speed limit.
83. Made U-turns in a no U-turn Zone.
84. Passed in a "No Passing" zone.
85. Didn't wear a seatbelt in a state where it was required by law.
86. Did not make passengers to wear seatbelts in a state where they are required to by law.
87. Sped up across an intersection when the light turned yellow.
88. Parked in a "No Parking" zone.
89. Parked over the allowable time limit.
90. Driven while under the influence of alcohol.
91. Gone the wrong way on a one-way street.
92. Misfiled my income taxes.
93. Copied video tapes.
94. Reproduced copyrighted materials for use in the classroom without permission from the publisher.
95. Shoplifted.
96. Jaywalked.
97. Crossed against a "Don't walk" sign.
98. Took school supplies for my personal use at home.
99. Used a school reprography/duplicating machine for personal use.
100. Switched price tags on items in a store for purchase.
CTI Subscales:  Programming Uses of Microcomputers
                  Personal Uses of Microcomputers
                  Professional Uses of Microcomputers
                  Legal Procurement of Software
                  Illegal Procurement of Software
                  Lending Policy with Full Restrictions
                  Lending Policy with Few Restrictions
                  Disposition Toward Copying Software (due to a lack of knowledge),
                  Feelings of School Pressure to Copy Software Illegally
                  Other Impersonal Crime Committed
Teacher Stress Inventory (TSI)

Please indicate the extent to which each of the following items is stressful to YOU in YOUR job, by selecting ONE of the alternative responses from A to E. Don't spend a lot of time thinking about the items, but go with your first reaction.

A = Not stressful
B = Somewhat stressful
C = Considerable stressful
D = Decidedly stressful
E = Extremely stressful

101. Feeling there is a lack of administrative support for teachers in my school.


103. Feeling my opinions are not valued by my principal.

104. Feeling my principal give me too little authority to carry out the responsibilities assigned to me.

105. Feeling there is a lack of recognition for good teaching in my school.

106. Feeling I cannot tell my principal in an open way how I feel about many school-related matters.

107. Trying to motivate students who do not want to learn.

108. Having students in my class who talk constantly.

109. Feeling too many parents are indifferent about school problems.

110. Having to tell my students the same things over and over.

111. Feeling that a few difficult to discipline students take too much of my time away from the other students.

112. Feeling I do not have adequate control of my students.

113. Working in a school where there is an atmosphere of conflict among teachers.

114. Feeling some teachers in my school are incompetent.

115. Having a few teachers in my school who do not carry their share of the load.

116. Feeling that cliques (social groups) exist among teachers in my school.

117. Feeling there is competition among teachers in my school rather than a team spirit of cooperation.
A = Not stressful
B = Somewhat stressful
C = Considerable stressful
D = Decidedly stressful
E = Extremely stressful

118. Having to do school work at home to meet what is expected of me.

119. Having insufficient opportunity for rest and preparation during the school day.

120. Having too little clerical help.

121. Feeling I never catch up with my work.

122. Working for an inadequate salary.

123. Feeling my job does not provide the financial security that I need.

124. Feeling my salary is not equal to my duties and responsibilities.

TSI Subscales: Lack of Administrative Support

Working with Students
Working with Teachers
Task Overload
Financial Insecurity
Teacher Job Satisfaction Questionnaire (TJSQ)

The following statements refer to organizational factors that can influence the way a teacher feels about his/her job. These factors are related to teaching and to the individual's perception of the job situation. On your answer sheet indicate the degree to which you agree or disagree with each of the following statements.

(A) Strongly (B) Disagree (C) Neutral (D) Agree (E) Strongly Disagree

125. Teaching provides me with an opportunity to advance professionally.
126. Teacher income is adequate for normal expenses.
127. Teaching provides an opportunity to use a variety of skills.
128. When instructions are inadequate, I do what I think is best.
129. Insufficient income keeps me from living the way I want to live.
130. My immediate supervisor turns one teacher against another.
131. No one tells me that I am a good teacher.
132. The work of a teacher consists of routine activities.
133. I am not getting ahead in my present teaching position.
134. Working conditions in my school can be improved.
135. I receive recognition from my immediate supervisor.
136. If I could earn what I earn now, I would take any job.
137. I do not have the freedom to make my own decisions.
138. My immediate supervisor offers suggestions to improve my teaching.
139. Teaching provides for a secure future.
140. I receive full recognition for my successful teaching.
141. I get along well with my colleagues.
142. The administration in my school does not clearly define its policies.
143. My immediate supervisor gives me assistance when I need help.
144. Working conditions in my school are comfortable.
145. Teaching provides me the opportunity to help my students learn.
146. I like the people with whom I work.
147. Teaching provides limited opportunities for advancement.
148. My students respect me as a teacher.
149. I am afraid of losing my teaching job.
150. Teaching involves too many clerical tasks.
151. My immediate supervisor does not back me up.
152. Teaching is very interesting work.
53. Working conditions in my school could not be worse.
154. Teaching discourages originality.
155. The administration in my school communicates its policies well.
156. I never feel secure in my teaching job.
157. Teaching does not provide me the chance to develop new methods.
158. My immediate supervisor treats everyone equitably.
159. My colleagues stimulate me to do better work.
160. My students come to class inadequately prepared.
161. Teaching provides an opportunity for promotion.
162. My immediate supervisor watches me closely.
163. I am responsible for planning my daily lessons.
164. Physical surroundings in my school are unpleasant.
165. I do not have the freedom to use my judgment.
166. I am well paid in proportion to my ability.
167. My colleagues are highly critical of one another.
168. I do have responsibility for my teaching.
169. My colleagues provide me with suggestions or feedback about my teaching.
170. Teaching provides me an opportunity to be my own boss.
171. My immediate supervisor provides assistance for improving instruction.
172. I do not get cooperation from the people I work with.
173. My immediate supervisor is not afraid to delegate work to others.
175. Teaching encourages me to be creative.
176. My immediate supervisor is not willing to listen to suggestions.
177. Teacher income is barely enough to live on.
178. I am indifferent toward teaching.
179. The work of a teacher is very pleasant.
180. I receive too many meaningless instructions from my immediate supervisor.
181. I dislike the people with whom I work.
182. I receive too little recognition.
183. Teaching provides a good opportunity for advancement.
184. My interests are similar to those of my colleagues.
185. I am not responsible for my actions.
186. My immediate supervisor makes available the material I need to do my best.
187. I have made lasting friendships among my colleagues.
188. Working conditions in my school are good.
189. My immediate supervisor makes me feel uncomfortable.
190. I prefer to have others assume responsibility.
191. Teacher income is less than I deserve.
192. I go out of my way to help my colleagues.
193. I try to be aware of the policies of my school.
194. When I teach a good lesson, my immediate supervisor notices.
195. My immediate supervisor explains what is expected of me.
196. Teaching provides me with financial security.
197. My immediate supervisor praises good teaching.
198. I am not interested in the policies of my school.
199. I get along well with my students.
200. Pay compares with similar jobs in other school districts.
201. My colleagues seem unreasonable to me.

The End

Thank You!

TJSQ Subscales: Supervision
Colleagues
Working Conditions
Pay
Responsibility
Work Itself
Advancement
Security
Recognition
Appendix C: Policy on Software Copyright

It is the intent of the School District of Ralston to adhere to the provisions of copyright laws in the area of microcomputer programs. Though there continues to be controversy regarding interpretation of those copyright laws, the following procedures represent a sincere effort to operate legally. We recognize that computer software piracy is a major problem for the industry and that violations of computer copyright laws contribute to higher costs and greater efforts to prevent copies and/or lessen incentives for the development of good educational software. All of these results are detrimental to the development of effective educational uses of microcomputers. Therefore, in an effort to discourage violation of copyright laws and to prevent such illegal activities:

1. The ethical and practical problems caused by software piracy will be taught in all schools in the District.

2. District employees will be expected to adhere to the provisions of Public Law 96-517, Section 7(b) which amends Section 117 of Title 17 of the United States Code to allow for the making of a back-up copy of computer programs. This states that "...it is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided:
   a. that such a new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or
   b. that such a new copy and adaptation is for archival purposes only and that all archival copies are destroyed in the event that continued possession of the computer program should cease to be rightful."

3. When software is to be used on a disk sharing system, efforts will be made to secure this software from copying.

4. Illegal copies of copyrighted programs may not be made or used on school equipment.

5. The legal or insurance protection of the District will not be extended to employees who violate copyright laws.

6. The Assistant Superintendent for Curriculum and Staff Development of the Ralston School District is designated as the only individual who may sign license agreements for software for schools in the district. (Each school using the software also should have a signature on a copy of the software agreement for local control.)

7. The principal of each school site is responsible for establishing practices which will enforce this policy at the school level.