

INFORMATION TECHNOLOGY IN
SOCIAL WORK EDUCATION & PRACTICE:
AN ANNOTATED BIBLIOGRAPHY

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Introduction

This bibliography was compiled in partial fulfillment of three library doctoral fellowships at the Lillian F. & Milford J. Harris Library of the Mandel School of Applied Social Sciences at Case Western Reserve University. It consists of abstracts of journal articles relating to the use of computers and other technology in social work education and social work practice in the United States. Although there has been much innovative use of computer technology in the fields of psychology, psychotherapy and health care (areas which are closely related to the field of social work), this bibliography intentionally excludes summaries from articles published in these disciplines.

Social work articles published between 1995 and 1999 are summarized and presented in alphabetical order by primary focus. Abstracts of articles published prior to 1995 are included in an Appendix at the end of the bibliography.

Abstracts for 55 articles from 22 journals are included in the bibliography. The breakdown of journals with cited articles is as follows: Computers in Human Services (25); Social Work (5); Health & Social Work (3); Administration in Social Work (2); Journal of Continuing Social Work Education (2); Journal of Teaching in Social Work (2); Clinical Social Work Journal (1); the Clinical Supervisor (1); Human Services in the Rural Environment (1); Information Technologies: Teaching to Use-Using to Teach (1); Info World (1); International Social Work (1); Journal of the Applied Social Sciences (1); Journal of Baccalaureate Social Work (1); Journal of Family Social Work (1); Journal of Health and Social Policy (1); Journal of Social Work (1); Professional Development (1); Research on Social Work Practice (1); Social Work and Social Sciences Review (1); Social Work in Education (1); Social Work in Health Care (1).

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Teaching Computer Skills to Students

Finn, J. & Lavitt, M. (1995). A survey of information technology-related curriculum in undergraduate social work programs. The Journal of Baccalaureate Social Work, 1 (1), 39-53.

This article begins with a discussion of the increased information technology (IT) usage within social work since the 1970's, and identifies further potential uses of information technology within the field. Because of its applicability to the social work profession, the authors discuss the desirability of, and barriers to, incorporating computer literacy requirements within bachelor's and master's social work education programs. The authors then present results of their survey examining the extent to which BSW programs perceive the need for, and incorporate, information technology within their curriculum. Results indicate that, although respondents generally agreed about the importance of including IT literacy within the curricula, the majority had only a minimal presence of IT within their program. The most frequent reason for not integrating IT within BSW education was that there was not enough room in the current curriculum. Suggestions were made regarding how such integration can occur. For example, the authors suggest that information technology content could be taught within *existing* curricular areas and introduced as part of current practice strategies.

Folaron, G. & Stanley, M. (1998). Integrating library research skills into the BSW curriculum via e-mail. Journal of Teaching in Social Work, 17 (1/2), 3-14.

Students must be minimally computer literate to effectively use university libraries. They frequently experience barriers in using library resources such as online catalogs. This article describes a listserv created to encourage student discourse in a BSW Practice I course. The listserv was found to be an effective means of integrating information on library skills and technology. A social work librarian participated on the listserv for the purposes of familiarizing students with the role of reference librarians, introducing information on library research skills and developing student-librarian relationships. Pre- and posttests reveal that students' use of library technology had increased over the semester during which library and technology instructions were provided.

Grebel, H. & Steyaert, J. (1995). Social informatics: beyond technology, a research project in schools of social work in the European community. International Social Work, 38, 151-164.

Based on an overview description of the current uses of information technology (IT) in human services across Europe, the authors of the study pose the following questions:

What should professional social workers know about the use of information technology (IT) in human services?

How far and in what way do schools of social work meet the demands of the field on this subject?

What are the constraints?

The results of the research show how schools of social work across Europe integrate information technology into their curricula. The authors recommend moving the status of

information technology forward by introducing social informatics. Of concern is the wide gap between the decisive use of informatics in social work agencies and the little attention paid to this in the curricula of schools of social work.

Roosenboom, P.G.M. (1995). Solving the problems of computer use in social work. Computers in Human Services 12 (3/4), 391-394.

This author distinguishes between problems of automation and “informatisation” in regard to teaching computer technology to social workers. He defines informatisation as a process in which new information is generated but does not yet have a place in an organization. Most problems encountered when introducing computer technology in social work are described as being of the automation or informatisation type. Organizational and technical approaches to solving such difficulties are suggested. The following steps are recommended for implementation: develop criteria for decision making, implement the criteria to determine its validity, define information needs, and finally define the data model and algorithm.

Using Technology to Teach Social Work

(1999). **Professional Development**, 2 (1), entire issue.

This entire issue of Professional Development is devoted to articles dealing with the “potential and emerging impact of technology on continuing education”. (p. 3) Titles and authors of articles are:

Kelly, M.J. & Lauderdale, M.L. Globalization, technology and continued professional education.

Lauderdale, M.L. & Kelly, M.J. Technology and continuing education in social work.

Kreuger, L.W. & Stretch, J.J. The failed promise of hypertechnology in social work.

Pittman, S.W. Paradigm shifts and e-training preparedness.

Kim, Y.J. New information technology and social work education in South Korea.

Darkwa, O.K. Continuing social work education in an electronic age: the opportunities and challenges facing social work education in Ghana.

Landuyt, N. Internet technology and the assessment of supervisors: a unique perspective for professional development and continuing education.

Gustafson, L.F. & Kuhn, A. Infusing technology into the social work curriculum.

Blakely, T. & Shoenherr, P. (1995). Telecommunication technologies in social work distance education. Journal of Continuing Social Work Education, 6 (3), 8-12.

Although research finds distance education to be as effective for learning as traditional education, distance education has been relatively slow to develop within schools of social work. After describing the technological means of delivering distance education courses (video tapes, satellite transmission, and compressed video through fiber optics or telephone lines), the authors discuss the role of continuing education departments and social work faculty in administering distance education programs.

Conboy, A., Auerbach, C., Beckerman, A., Schnell, D., & LaPorte, H. H. (2000). MSW student satisfaction with using single-system-design computer software to evaluate social work practice. Research on Social Work Practice, 10 (1), 127-138).

This article examines students’ reaction to the potential for using computer software to assist social work students in learning practice evaluation techniques. Students in one research class at Yeshiva University used a program designed specifically for computer tasks of data entry, data analysis, and graphic presentations of single-system-design research in social work practice. An evaluation of the program was conducted with 136 students and results showed that more than 95% of the students thought the program added a valuable component to research. Another 81.9% found the program helpful in evaluating practice. The authors encouraged further development of evaluation software programs.

Conklin, J. & Osterndorf, W. (1995). Distance learning in continuing social work education: promise of the year 2000. Journal of Continuing Social Work Education, 6 (3), 13-17.

Distance education allows practitioners to gain needed skills and information through quality education away from the traditional campus. The article discusses issues pertinent to continuing education such as: associated technology and effectiveness; relative costs (with particular emphasis on costs associated with information technology vs. savings associated with distance learning); and the effect of a few distance learning programs on other schools and agencies. It may be advisable for social work departments to form alliances with other university departments (such as media design and production personnel) in order to create effective distance continuing education programs. One positive effect for agencies lies in distance education's convenience, affordability and flexibility when compared with traditional social work continuing education programs.

Crook, W. & Brady, M. J. (1998). Computer-assisted instruction in the classroom: using a web shell. Computers in Human Services, 15 (2/3), 193-208.

This article provides a brief history of computer-assisted instruction (CAI) and web-based instruction (WBI), followed by a history of the theories related to these forms of instruction. Brady and Crook next describe the purpose and efficacy of an Internet-based shell program that had been incorporated into traditional social work courses at Florida State University. The program, *Construe*, was used to facilitate social work education via the Internet. Results of student surveys following the courses indicated that most students found that the computer component of the course had enhanced both their educational experience and their comfort using computers. The primary limitations of students' learning were technical difficulties and problems related to having access to computers.

Forster, M. & Rehner, T. (1998). Part-time MSW distance education: a program evaluation. Computers in Human Services, 15 (2/3), 9-22.

This article describes an evaluation of a part-time school of social work program with a substantial distance-education component. The evaluation examined student academic performance, instructors' ability to achieve instructional objectives, interactions among and between students and faculty, and quality of instructional environment. The evaluation found distance education courses to be comparable to traditional courses based on grade comparisons and student, faculty and staff surveys. On the other hand, students and faculty voiced concerns about the limitations in interaction and spontaneity that resulted from the interactive video learning environment.

Forte, J. A., (1998). Less pain, more gain: computer applications for teaching applied social statistics. Information Technologies: Teaching to Use-Using to Teach, 71-87.

This paper reports on the use of a computer-based approach to teaching applied social statistics in an undergraduate social work program. MicroCase, a statistical software package, was incorporated into coursework with the intent of reducing anxiety over learning statistics. Results of evaluative efforts are presented. Course format, classroom procedures,

workbook and homework assignments, evaluation tools, and teaching strategies are also suggested.

Freddolino, P. P. (1998). Building on experience: lessons from a distance education M.S.W. program. Computers in Human Services, 15 (2/3), 39-50.

This paper compares interview data from an entirely distance education-based M.S.W. cohort with a comparable group of students on the main campus. Freddolino utilizes this data to discuss key issues asked about electronically mediated graduate social work education. These issues include: positive and negative aspects of the program; the benefits and costs of participation; and students' overall perspectives on the program. The overall impression from the students interviewed is that the distance education M.S.W. program is a viable alternative to the "traditional" program, but it is not anyone's *preferred* option; it has costs and benefits for all participants.

Galambos, C. & Neal, C. (1998). Macro practice and policy in cyberspace: teaching with computer simulation and the Internet at the baccalaureate level. Computers in Human Services, 15 (2/3), 111-120.

Computer-literacy among BSW students is critical given human service agencies' increasing dependence on computer technology. This paper presents a number of ways of incorporating computer and Internet education within the baccalaureate curriculum. Classroom computer simulations are one such approach. Particular emphasis is given to the utilization of approaches such as computer simulation in teaching policy and macro practice courses.

Jennings, J., Siegel, E. & Conklin, J. (1995). Social work education and distance learning: applications for continuing education. Journal of Continuing Social Work Education, 6 (3), 3-7.

Findings from a national survey of schools of social work indicate that progress is slow in developing distance education components for both professional and continuing education social work programs. This is problematic given the anticipated increasing importance of distance education in these programs. The authors describe a model distance education program and present a distance education strategy for delivering continuing social work education. The authors also describe technological, pedagogical and management questions for agencies and social work schools to consider when planning the addition of a distance education component to a continuing education program. Questions include the following: Who are the consumers of the educational programs? Can distance education be used to enhance social work education's mission by extending the classroom into the worksite, and vice versa? Should educational courses that do not carry university credit be offered through universities? Can social work values and ethics be transmitted through distance education? What are the costs of distance education?

Ligon, J., Markward, M., & Yegidis, B. L. (1999). Comparing student evaluation of distance learning and standard classroom courses in graduate social work education. Journal of Teaching in Social Work, 19 (1/2), 21-29.

This study compared the student course evaluations of standard education and distance learning courses in the school of social work of one southern university. The sample included 14 distance learning (DL) and 122 standard education courses. A twenty-item quantitative student course evaluation and a seven-item qualitative questionnaire were used to compare difference between social work courses taught in a standard classroom setting with those taught using distance learning technology. Comparisons of identical courses taught in both formats found that students rated distance learning higher than the standard classroom for a course having predominantly lecture content. Conversely, ratings for clinical practice courses were just the opposite with lower ratings for distance learning than the standard classroom. Students' major concerns centered on the need for additional technical support. Survey responses indicated that difficulties with audio reception had more impact than video difficulties.

Magneson, H. (1996). Open learning/distance education: is this social work education's new challenge? Human services in the rural environment, 19 (4), 16-22.

This article reviews models of social work education other than the traditional on-campus professional school model. Distance/open learning is defined, contemporary issues around the topic are discussed, and arguments are provided for restructuring of social work education to provide a greater emphasis on distance learning. The author writes, for example, that while traditionalists hold that social work education requires the "hands-on" approach of traditional programs, there is evidence that students' on-campus socialization may not be as significant to learning as was once thought. Furthermore, distance education technology can still be interactive, and so positive socialization experiences can still be provided through this modality.

Miller-Cribbs, J. E. & Chadiha, L. A. (1998). Integrating the Internet in a human diversity course. Computers in Human Services, 15 (2/3), 97-110.

Social work students, faculty and staff are increasingly utilizing information technology applications such as electronic mail. Students are also increasingly utilizing the Internet and online library resources for their class assignments. The authors describe applications of information technology to social work domains such as practice, advocacy, networking, communication, participation in policy formation, and teaching. This paper describes the integration of the Internet within a foundation level social work class on human diversity. The authors conclude by stating advantages and disadvantages of incorporating information technology applications, such as the Internet, within the social work curriculum.

One advantage is that students have access to international/global perspectives, thus allowing cross-cultural comparisons. Also, because students can connect with agencies, policy makers and local, state, and federal government officials, they are able to participate directly in the policy-making process. The Internet expedites access to information and sharpens computer skills.

A disadvantage is that information can be inaccurate because a mechanism for evaluating Internet accuracy does not exist. In addition, students may have difficulty navigating through the vast amount of information available. Also, Internet-based

assignments may be difficult for students in schools without adequate support or computer resources. Finally, the Internet lacks direct interpersonal interaction.

Patchner, M. A., Petracchi, H. & Wise, S. (1998). Outcomes of ITV and face-to-face instruction in a social work research methods course. Computers in Human Services, 15 (2/3), 23-38.

This study compared students enrolled in a foundation research methods course receiving face-to-face instruction with students receiving instruction through ITV (Interactive Television). Although the students receiving face-to-face instruction fared better on the mid-term, there were no statistically significant differences on the scores of the final exam, written paper, or course grade. Additionally, there was not a statistically significant difference between the two groups on either a research and statistics knowledge test or on a survey measuring students' attitudes towards research. Both groups expressed favorable attitudes towards ITV.

Rafferty, J. (1997). Shifting paradigms of information technology in social work education and practice. Journal of Social Work, 27, 959-974.

This article examines how information and communication technology impact social work education and practice. It particularly addresses issues surrounding clients and management information systems (MIS), as well as practitioner decision-support systems. Learning technology in social work education is discussed, with emphasis on curriculum issues and barriers to implementation. Barriers include: lack of suitable materials and hardware infrastructure; equity issues; reluctance of teachers to use courseware originating outside their own department; teaching staff skill base; and lack of technical support.

Resnick, H. (1998). Paraphrase II: a listening skills training program for human service students. Computers in Human Services, 15 (2/3), 89-96.

In this article, Resnick describes Paraphrase II, a multimedia listening-skills training program. The program provides: a definition of paraphrasing; basic concepts of the skill of paraphrasing; advantages and disadvantages of paraphrasing; ineffective utilization of this skill; and practical applications of paraphrasing in social work situations with clients and colleagues. Paraphrase II utilizes seven learning components to challenge and engage students to learn and use the skill. Additionally, to increase its efficacy, Paraphrase II includes graphics, text, sound and video.

Sieppert, J.D. & Krysik, J. (1996). Computer-based testing in social work education: a preliminary exploration. Computers in Human Services, 13 (1), 43-61.

This article presents findings from a survey of social work students' attitudes toward computer-based testing. The study identified high levels of pretest anxiety before the test. Students liked the computer-based test's ability to provide immediate scoring. The authors describe critical barriers that exist in using computer-based testing in social work education. Recommendations for further development of computer-based tests in social work education are provided.

Stocks, J.T. & Freddolino, P.P. (1998). Evaluation of a World Wide Web-based graduate social work research methods course. Computers in Human Services, 15 (2/3), 51-70.

This article presents the results of an evaluation of an entirely Internet-based social work research methods course in experimental design. The same instructor who taught this course also taught a section of the same course during the same semester on campus. The two classes are compared based on students' grades and satisfaction. Grades were comparable between the two classes. Additionally, while students in the Internet section appreciated the flexibility inherent in the Internet design, they found the lack of face-to-face interaction to be a drawback of their course. The authors present recommendations for other programs considering Internet-based classes. These include the creation of on-line courses for those students who find it difficult to attend on-campus classes, and for those courses where immediate instructor feedback is not a necessity. Another recommendation is that students taking on-line courses should be provided with frequent prompts for class list discussion.

Using Computer Technology in Social Work Practice

Becnel, J. M., Ray, S., Wolf, T. M., Lotten, T., & Williams, J. Jr. (1998). The New Orleans Patient Tracking System (PTS): data management for a network of community-based alcohol and drug treatment providers. Computers in Human Services, 14 (3-4), 73-98.

This article discusses the Patient Tracking System used by the New Orleans Target Cities Project. The system networks fifteen alcohol and drug treatment service delivery units operated by ten community-based agencies. Four central intake units provide centralized assessment and referral to appropriate services. This management information system supports centralized intake, standardized assessment, slot management, patient-program matching, patient tracking and self-corrective program evaluation for the network of drug treatment providers. Preliminary evaluation of the system emphasizes the need for a realistic perception of the time and money needed for system development. Communication and training are critical to successful implementation.

Butterfield, W. (1998). Human services and the information economy. Computers in Human Services, 15 (2/3), 121-143.

This article begins with a description of the information economy, the fundamental premise of which is that accurate and timely information will enable our country's needed goods and services to be produced more efficiently. In this understanding information is not an end, but rather a means, of efficiently utilizing resources. The article goes on to discuss the impact of the information economy on human services, including such major issues as: the changing nature of work; the cost to human service agencies of adopting technology; the move to electronic record keeping and data management; the need for developing a data integrity management process; and the impact of the Internet and intranets on software developments.

Cohen, G. E. & Kerr, B. A. (1998). Computer-mediated counseling: an empirical study of a new mental health treatment. Computers in Human Services, 15 (4), 13-26.

One potentially significant application of information technology in social work is the development of Internet-based counseling services. Little research exists, however, on the efficacy of this counseling modality. This study compares computer-mediated counseling and traditional face-to-face counseling on both treatment of anxiety and on attitudes towards counseling. Results found that clients in both treatment modalities had experienced a significant and comparable decrease in anxiety. Furthermore, clients ratings of counselors' expertness, attractiveness, and trustworthiness were not affected by the mode of delivery. These results support the further exploration of potentially effective uses of computer-mediated counseling.

Davidson, T. & Davidson, J.R. (1995). Cost-containment, computers and confidentiality. Clinical Social Work Journal, 23 (4), 453-464.

The authors state concern that managed care's increased use of cost-efficient computer technology for storing client information compromises client confidentiality. The authors discuss ethical issues such as workers' responsibility to insurance companies in relation to preserving the client's right to privacy. The authors conclude that matters have worsened and will likely continue to do so regarding confidentiality violation for insurance case reviews. To help uphold clients' rights to confidentiality, the authors recommend that case reviewers be brought into a more personal level of relationship with the client, so that clients know who is storing information about their lives. They also recommend a signed agreement between the insurance company and the client stating how confidentiality of computerized records is to be assured. Social workers must maintain aggressive advocacy to ensure that their clients' confidentiality is upheld.

Finnegan, D.J. (1996). Unraveling social workers' ambivalence toward computer technology: an analysis of the attitudes of social work students towards computers and social work practice. Computers in Human Services, 13 (2), 33-49.

This author describes a study in which social work graduate students half way through their program were asked about their current computer use and interest. Students were also queried about their interest in learning about computer usage in social work practice. Results indicate that although students do not report being adept at using computers, they do describe such usage as important in practice. Respondents also revealed a concern about dehumanizing effects of computers. This concern seems to be related to their perceptions of both computer technology's usefulness, and to the feasibility of learning this technology.

Galinsky, M. J., Schopler, J. H., & Abell, M. D. (1997). Connecting group members through telephone and computer groups. Health & Social Work, 22 (3), 181-188.

This article reviews the practice literature on the use of technology-based groups and presents the results of a survey of group practitioners that focused on their experiences with telephone and computer groups. Benefits of using this technology included increased accessibility, convenience, and anonymity; problems were decreased cues, technological issues, and group process difficulties. Implication of using telephone and computer technology for group practice, particularly in health settings, are discussed.

Gelman, S. R., Pollack, D., & Weiner, A. (1999). Confidentiality of social work records in the computer age. Social Work, 44 (3), 243-252.

This article summarizes issues around confidentiality as it relates to computer records, the Internet and e-mail. It explores the concept of information protection and makes recommendations to minimize violations of privacy.

Giffords, E. (1998). Social work on the Internet: an introduction. Social Work, 43 (3), 243-251.

This article describes Internet applications to social work such as e-mail, listservs, and the World Wide Web. It also discusses how electronic journals, Web pages, and discussion groups can facilitate communication within the social work field. The benefit of these technologies is both that they increase access to information and offer an innovative forum for academicians, practitioners, researchers and students to contribute to the research and practice knowledge base. The article closes with a comprehensive listing of Internet resources for social workers.

Grishman, M.H. (1995). Development of a computer information management system. Social Work in Health Care, 22 (2), 73-86.

This author describes the process of creating a computer information management system in the Department of Veterans Affairs' Social Work Service area. This system was designed and implemented using seven phases of development: needs assessment and requirement analysis, general design, detailed design, system development, installation, system maintenance and operation, and evaluation. The particular experiences of those involved in planning of the current system are described. Examples are provided of the system's high risk screening of hospital patients, and of a quality control screen applicable to all patients.

Hile, M. G. (1998). The history and function of the target cities management information systems: an introduction to the special issue. Computers in Human Services, 14 (3/4), 1-8.

The Center for Substance Abuse Treatment's Target Cities initiative was designed to improve community-based substance abuse treatment services in several large metropolitan areas within the United States. One component of the initiative involved each Target Cities project developing an information system to: a) collect client information; b) match clients to treatments; and c) track treatment results. The article compares the Target Cities projects and describes their common assumptions and concepts. These are that: 1) all clients should receive a standardized assessment; 2) assessments should be conducted independently of the treatment network; 3) treatment selection should be based on clinically relevant variables, and not on factors such as provider advertisement, location or reputation; and 4) systematic monitoring and evaluation provide the necessary tools for self-correcting systems.

Howard, M.D. (1995). From oral tradition to computerization: A case study of a social work department. Computers in Human Services, 12 (3-4), 203-219.

This author describes changes regarding discharge planning in a teaching psychiatric hospital's social work department. Due to increased pressure on workers to administer to more clients in a more efficient manner, a computerized database was developed to aid in workers' attempts to meet these demands. The author presents this case study to inform others about the process of developing such a database through the systems perspective. Support from hospital management is clearly indicated as crucial to a smooth-running department.

Karon, P. (1996). Client/server system helps find homes for special kids. InfoWorld, 18 (3), 60.

The article describes a system allowing social workers to access placement data throughout the state of Wisconsin. The author describes IT decisions specific to this system, as well as the fact that, in 1995, more than 300 children were placed using the system.

Kaye, R. A., Stephens, R. C., Chen, H. T. & Bruno, W. J. (1998). Development and use of information systems in the Cleveland Target Cities Demonstration project. Computers in Human Services, 14 (3/4), 9-28.

This article describes the Target Cities project implemented by the Alcohol and Drug Addiction Services Board of Cuyahoga County (Cleveland, Ohio). This five-year project, begun in 1993, was funded by the Federal Center for Substance Abuse Treatment. Cleveland's Target Cities project uses a "one stop shopping" model that provides coordinated services for addicted persons. Three central intake sites provide assessment, referral and care management. The model "seeks to improve treatment outcomes through the referral and placement of addicted persons in services that are best suited to their needs." Clinical and business applications are supported by a centralized information system. Preliminary assessment of the project highlighted the need for timely data updates regarding client movements. The importance of having a clear vision of all potential user groups when designing the assessment instrument was also stressed. It was recommended that training be targeted at those persons who actually assess clients and determine treatment.

Linn, N. A., Schneider, S. J., McCreery, R. & Kasab, D. S. (1998). Expert system for utilization of alcohol and drug abuse cases. Computers in Human Services, 15 (4), 1-12.

This study evaluated an expert computer system designed to: a) serve as a client information database; and b) make AOD treatment decisions based on the standardized criteria developed by Health Management Strategies, Inc. (HMS). The system was evaluated in comparison to decisions made by managed care nurse reviewers, and by a panel of physicians who had helped develop the criteria. The possible decisions were either approval for inpatient detoxification or referral for further consideration. The expert system and the nurse reviewers agreed with the physician panel in approximately 85 percent of cases. The expert system and nurse reviewers were more likely to agree with the physician's panel in cases approved for inpatient treatment than in cases referred for further consideration.

Marlowe-Carr, L. C. (1997). Social workers on-line: a profile. Computers in Human Services, 14 (1), 59-70.

This article profiles social workers utilizing on-line services, and compares their demographic characteristics with those of NASW members. 162 social workers were selected from 32 on-line social work discussion groups. The results showed significant differences in usage by gender: 22.7% of the NASW members are males, yet 53.5% of the on-line participants were men. Also, social workers associated with colleges or universities were better represented in the online group. Electronic mail was the most frequently used on-line service. The article concludes with recommendations for NASW and schools of

social work in terms of technology training and utilization. For instance, almost 80% of those surveyed felt that social work schools should incorporate computer and on-line usage into the curriculum.

Marson, S. (1997). A selective history of Internet technology and social work. Computers in Human Services, 14 (2), 35-49.

“Organized chaos” is the theme of the short history of the Internet and social work. It is a history of paradoxes. The article reviews the Internet’s military roots, the features of which appear on the surface to be contrary to social work values. This essay traces the unlikely links among the original military agenda, astounding engineering feats, online social interaction action, and social work education and practice. It then reviews social workers’ utilization of the Internet, and offers further guidelines and recommendations. A short glossary is provided to readers unfamiliar with technical terms.

Martinez-Brawley, E.E. (1995). Knowledge diffusion and transfer of technology: Conceptual premises and concrete steps for human services innovators. Social Work, 40 (5), 670-682.

The author analyzes key factors in the successful dissemination and adoption of new knowledge and innovative practices. The successful adoption of innovative practices relies heavily on the ability of all parties to view the product as being beneficial to all those involved. The article highlights the implementation of a community social work program in Pennsylvania as an example of successful knowledge dissemination. The author offers this project as an analogy for successful adoption of technology innovations.

McCready, D. J., Pierce, S., Rahn, S. L., & Were, K. (1996). Third generation information systems: integrating costs and outcomes. Tools for professional development and program evaluation. Administration in Social Work, 20 (1), 1-15.

The authors present information on using integrated client information systems to determine the “cost per clinical contact hour” and a “cost per closed case.” Criteria and formulas for determination are included. The importance of having workers use objective assessment tools (before, during, and at case closing) is stressed.

Miller, D. B. & DiGiuseppe, D. (1998). Fighting social problems with information: the development of a community database-the violence information network. Computers in Human Services, 15 (1), 21-34.

Centrally accessible databases enable the synthesis of complex and disparate datasets, such as datasets from various human service organizations. The benefit of the centralized database is its ability to provide communities with important information on rates, trends and risk factors associated with a given population or social problem. This article describes the Violence Information Network (VIN), a community database providing community surveillance of violence and factors related to violence. The authors describe challenges encountered while developing VIN, and provide recommendations for it in the future. VIN is presented as a prototype for other communities to consider when designing databases dedicated to any number of community issues.

Oyserman, D. & Benbenishty, R. (1997). Developing and implementing the integrated information system for foster care and adoption. Computers in Human Services, 14 (1), 1-20.

This article first discusses the foster care system's particular need for effective information technology. The main functions of information technology within the foster care system are: sound decision making; inter and intra-agency communication about cases; and case monitoring. Current information management practices reduce agencies' ability to perform these functions. The authors propose a conceptual framework to improve this situation. Their proposal focuses on: bringing expertise to the front line; meeting information needs at all agency levels; and meeting reporting requirements of the state and federal government. The authors present as an example of this framework the Integrated Information for Foster Care and Adoption (IIS-FCA), a system that has been implemented in Michigan child welfare agencies. The paper discusses costs and benefits associated with the IIS-FCA.

Pardeck, J.T. (1997). Computer technology in clinical practice: a critical analysis. Social Work & Social Sciences Review, 7 (2), 101-111.

The author poses philosophical and ethical questions about the use of computer systems for diagnosis and assessment. He explains the decision making process within an Expert System framework. Pardeck argues for the need to put factual client information within a social context and notes that information managed through an Expert System lacks the nuances of language and human interaction. Use of this technology without consideration of the client's social reality creates its own set of ethical implications and should be used with caution.

Pardeck, J. (1998). Rationalizing decision-making through computer technology: a critical appraisal. Journal of Health and Social Policy, 9 (4), 19-29.

This article addresses the factors involved in the successful development of a management information system within human service agencies. It outlines key areas for computerized information management such as program evaluation, analysis of outcome measures, and client data collection. The importance of involving staff at all levels in the development of an information system is stressed.

Pardeck, J.T., Dotson, B.M., Ricketts, A.K., McCully, K., & Lewis, A.E. (1995). A replication of a study exploring the utilization of computer technology by social workers. The Clinical Supervisor, 13 (2), 127-140.

The use and perception of computer technology by social workers is discussed. This study replicates a 1986 study and finds similar results. Namely, social workers have a limited understanding of computer technology and use. Furthermore, they receive limited training both while in school and afterwards in their places of work. The authors suggest the need for a greater emphasis on using new computer technologies for the improvement of social services.

Rapp, L. A., Dulmus, C. N., Wodarski, J. S., & Felt, M. D. (1998). Integrated human service delivery system: public welfare model. Journal of Applied Social Sciences, 22 (2), 151-160.

This article proposes an Integrated Human Service Delivery System model that would utilize a case management approach to improve the effectiveness and efficiency of the present social services delivery system. This model proposes to use the latest computer technology to ensure system integration in the form of accurate assessment, appropriate referrals, effective interventions and consistent follow-up. A standardized package of rapid assessment instruments is included in the model. Increased collaboration within and between social service agencies is a primary objective of the integrated program.

Rock, B. D., Beckerman, A., Auerbach, C., Cohen, C., Goldstein, M. & Quitkin, E. (1995). Management of alternate level of care patients using a computerized database. Health & Social Work, 20 (2), 133-139.

This article describes the experiences of social workers in an urban teaching hospital with managing alternate level of care patients and the development by the Department of Social Work Services of a computerized database to better manage this population. Evaluation of information retrieved from the database showed that waiting for a nursing home and waiting for Medicaid were both major contributors to delays in discharge. Incorporating the Medicaid application procedure into the social work service delivery system positively impacted the discharge planning process.

Rock, B. & Congress, E. (1999). The new confidentiality for the 21st century in a managed care environment. Social Work, 44 (3), 253-262.

This article reviews the literature on the impact of technology on confidentiality, especially as it relates to managed care. The article discusses levels of security, including log-on procedures, firewalls, and encryption, which can be used to protect sensitive information. Guidelines are presented to help professionals protect and promote confidentiality within the constraints of technology and managed care.

Root, L.S. (1996). Computer conferencing in a decentralized program: an occupational social work example. Administration in Social Work, 20 (1), 31-45.

The author presents the use and utility of individual communication (electronic mail) and group-based “virtual meetings” (computer conferencing) in the human service arena. The author also demonstrates the use of computer conferencing in administering decentralized social service agencies. The success of a computer conference is dependent on regular participation by members. Conference topics must be relevant to the participants’ work. Staff training and individualized technical support is also critical.

Schein-Levi, J. & Pollack, D. (1997). Social work, parenting, and the Web. Journal of Family Social Work, 2 (3), 5-16.

The large number of websites offering commercial products and educational materials to parents is not surprising, given that forty percent of Internet users are between the ages 18 and 24. This article suggests that parenting skills may be similarly offered to parents on an

interactive basis. The authors describe two parenting programs, and discuss translating such programs onto the Internet. They close with a discussion of the advantages and disadvantages of Internet-based parenting programs.

Schoech, D., Jensen, C., Fulks, J. & Smith, K. K. (1998). Developing and using a community databank. Computers in Human Services, 15 (1), 35-54.

Today's user-friendly database software enables community data to be readily available to community planners and activists. However, a dearth of information and recommendations exist regarding the complexities of developing and maintaining such a community databank. This article describes a community databank on addictions developed and maintained by a small community planning agency over several years. It describes the details of data collection, programming and distribution. The article next discusses the current use of the database, as well as lessons learned, and the database's projected future development.

Schopler J. H., Abell, M. D., & Galinsky, M. J. (1998). Technology-based groups: a review and conceptual framework for practice. Social Work, 43 (3), 254-267.

This article provides a comprehensive review of the professional, popular, and social psychology literature related to technology-based groups. Important features of technology-based groups are identified at the individual, group, and environmental system levels. Based on this framework, ways to prepare social workers for practice with technology-based groups are discussed and guidelines for practice are suggested.

Stoecker, R. and Stuber, A. C. S. (1997). Limited access: the information superhighway and Ohio's neighborhood-based organizations. Computers in human services, 14 (1), 39-57.

This article describes a 1996 survey of Internet access among Ohio's neighborhood-based organizations. Of 189 replying organizations, 134 have computers. Of these 134, 89 have adequate processors, and only 16 have fast enough modems, 11 with telecommunication software and only three with an Internet service provider. The authors argue that Internet resources should be available for these types of organizations on a larger scale as a communication and networking tool, as well as to access Internet resources.

Tompkins, P. L. & Southward, L. H. (1998). Geographic Information Systems (GIS): implications for promoting social and economic justice. Computers in Human Services, 15 (2/3), 209-226.

This article describes the implications of using Geographic Information Systems (GIS) technology in social work practice as a tool for visualizing social and economic inequalities. After a general introduction to GIS, and a description of the historical uses of GIS, the authors describe current applications of GIS technology in social work practice, education and research. The authors also present illustrative examples of GIS-generated maps.

Weinberg, N., Shmale, J., Uken, J., & Wessel, K. (1996). Online help: cancer patients participate in a computer-mediated support group. Health & Social Work, 21 (1), 24-29.

The authors report on a computer-mediated support group for six breast cancer patients. For a three-month period, patients used home computers to connect to a computer bulletin board on which they read messages from and posted messages to each other. The patients had no difficulty learning to use the computer and used it an average of one hour a week. The patients discussed their medical conditions, shared personal concerns, and offered support. The online approach provided many features of traditional face-to-face support groups in a more accessible format.

Appendix

Information Technology in Social Work Education & Practice: Social Work Journal Articles – 1990-1994

Auslander, G.K. & Cohen, M.E. (1992). The role of computerized information systems in quality assurance in hospital social work departments. Social Work in Health Care, 18 (1), 71-92.

The authors outline a computerized information system used to help ensure quality assurance. This system is potentially useful for multiple levels of assessment: structural, process and outcome. Developing the system also required developing quality care indicators and operating a quality assurance program. Illustrations of these roles are provided based on a country-wide information system for hospital social work departments in Israel.

Caputo, R.K. & Cnaan, R.A. (1990). Information technology availability in schools of social work. Journal of Social Work Education, 26 (2), 187-198.

This article describes a study of social work schools inside and outside the U.S. The study's goals were to identify the current use of computer technology in these schools. Support was found for the hypotheses that: schools in the U.S. use this technology more than those outside the country; bigger schools use more computers and more updated the equipment; and schools with graduate programs have better technology and use it more extensively. Suggestions are made for policy and curriculum changes at social work schools.

Courtney, M.E. & Collins, R.C. (1994). New challenges and opportunities in child welfare outcomes and information technologies. Child Welfare, 73 (5), 359-378.

These authors begin by addressing the limitations of outcome information for child welfare services. They propose the following qualities in future efforts: data systems that allow for longitudinal tracking of children and families; data systems that encompass information about the entire child welfare services system; and information-rich systems that are user friendly and give priority to the needs of workers. Specific recommendations are made for creating and improving systems, and for increasing information collection.

Cwikel, J.G. & Cnaan, R.A. (1991). Ethical dilemmas in applying second-wave information technology to social work practice. Social Work, 36 (2), 114-120.

These authors describe the second wave of computer technology as strongly impacting social work practice. Second-wave technology includes: modern databases, decision-support systems, expert systems, electronic networks, and therapeutic applications. Benefits of this technology are described as well as ethical concerns, including individualized care and use of treatment time. The roles of social work students and educators in second wave technology are emphasized.

Ezell, M., Nurius, P.S., & Balassone, M.L. (1991). Preparing computer literate social workers: An integrative approach. Journal Of Teaching in Social Work, 5 (1), 81-99.

This article discusses a program for teaching computer technology to social work students. The program emphasizes the integration of new computer skills into student coursework. The authors suggest that hands-on and analytic skills be taught in direct service, administration, and research courses.

Gingerich, W. J. (1990). Expert systems and their potential uses in social work. Families in Society: The Journal of Contemporary Human Services, 71 (4), 220-228.

This author defines expert systems as those systems that: first ask a series of questions; then identify a problem; and finally make recommendations for addressing the problem. These “decisions” are made through existing rules, or knowledge, in the system. A brief review of creating an expert system is presented. Potential uses for such systems in social work practice are discussed. They include: making field expertise readily available; education and skills development; increasing validity of treatment; and enhancing theory development. Potential problems with expert systems include lack of human warmth and unresolved ethical issues regarding privacy. The author challenges workers and educators to aid in the responsible development and implementation of expert systems.

Kilduff, M. (1990). Viewpoint: Automation and the practitioner-client relationship. Families in Society: The Journal of Contemporary Human Services, 71 (2), 102-109.

The author presents the benefits of automation in human services. Issues that are discussed include: the intake; the practitioner-client relationship; automation in therapeutic services and in management; and potential problems in automation of certain projects.

Latting, J.K. (1994). Diffusion of computer-mediated communication in a graduate social work class: lessons from “the class from hell.” Computers in Human Services, 10 (3), 21-45.

One instructor’s experience with introducing computer-mediated communication (CMC), including email, into a social work class is discussed. The instructor’s style was highly participatory and students were required to use e-mail communication with classmates and in an on-line session with other social work schools. Evaluation of this experiment was conducted within an interpretive interactionist framework. Findings include impact on class culture and emergence of latent meanings. Recommendations are also given.

Mutschler, E. & Hoefler, R. (1990). Factors affecting the use of computer technology in human service organizations. Administration in Social Work, 14 (1), 87-101.

The author uses Keen’s (1980) conceptual model for information systems adoption in a pilot study of 60 human service agencies. The study describes the user-related factors,

organizational factors, and technology factors that contribute to the adoption of information technologies.

Pardeck, J.T. & Schulte, R.S. (1990). Computers in social work intervention: Implications for professional social work practice and education. Family Therapy, 17 (2), 109-121.

This article discusses the impact of computer technology on aspects of social work intervention including: inventory testing, client history, clinical assessment, computer-assisted therapy, and the computerized therapy. The authors propose a design for a course in the computerization of social services.

Patterson, D.A. & Yaffe, J. (1994). Hypermedia computer-based education in social work education. Journal of Social Work Education, 30 (2), 267-277.

The authors of this article define hypermedia as information technology that is user-directed and interactive, and that involves various types of media such as text, animation, graphics, sound, and video. Hypermedia technology and its theoretical bases are then described, and its uses in social work education are reviewed. Specific examples are given to illustrate possible applications.

Richter, M.J. (1993). Kentucky's TWIST on 'user-friendly' technology. Governing, 6 (11), 84.

This article describes a human services information system designed and maintained by social workers. The Worker's Information System (TWIST) is a case-management system designed to be a practical tool for Kentucky's 1,200 social workers. The ultimate goal of the system is to allow workers to spend more time with clients. The project is in the second year of a five-year plan. The benefits of user involvement in designing a database are highlighted.

Schoech, D., Cavalier, Al. R., and Hoover, B. (1993). Using technology to change the human services delivery system. Administration in Social Work, 17 (2), 31-52.

This article describes the Integrating Technology into Service Delivery (ITSD) Project, implemented between 1986 and 1990 by a collaboration of education, research, and service delivery organizations. The authors found that an information and communication tier can promote change within the human services delivery system. The major lessons learned are synthesized into four assumptions about how technology-based strategies can be used to change a community human services delivery system.

Semke, J.I. & Nurius, P.S. (1991). Information structure, information technology, and the human services organizational environment. Social Work, 36 (4), 353-358.

These authors present suggestions for developing information structures in social service agencies. When planning information systems, attention should be paid to the following: the agency's specified purpose and goals; identified means of addressing the

purpose and goals; and relevant reasoning for choosing such methods. Important types of structures affecting these decisions are discussed. Attempts should be made to integrate practice evaluation with quality control and information automation.

Shani, A. B. R. and Sena, J. A. (1994). Information technology and the integration of change: sociotechnical system approach. Journal of Applied Behavioral Science, 30 (2), 247-270.

This article describes the use of information technology in organizational change. The authors use a sociotechnical framework to examine organizational implications of new information technology systems. The article provides a summary of three orientations to change, and describes one example: the introduction of a Local Area Network (LAN) in an agency. The article concludes with a discussion about the integration of change and information technology.

Staudt, M. and Craft, J. (1992). An information management system for school social work practice. Social Work in Education, 14 (1), 36-41.

Describes a school-based information management system used to track individual students, program compliance, and outcome reviews. A major benefit of using the system was its compliance with state data collection requirements. The authors note that staff involvement in the development of the system was critical to its acceptance.

Steyaert, J. (1994). Soft computing for soft technologies: Artificial neural networks and fuzzy set theory for human services. Computers in Human Services, 10 (4), 55-66.

This author describes neural networks, or technology that can learn from making associations among patterns of input and output. Such networks are currently used in business. Fuzzy logic is described as introducing the “concept of something not only being completely true or false, but true or false in degrees.” This logic is used to operate neural networks. Application in the human service field is currently limited to the medical field, for use in decisions regarding treatment. Development for future use in child risk assessment is suggested.