ED446333 2000-08-00 Historical Context: The Relationship of Computer Technologies and Counseling. ERIC/CASS Digest.

ERIC Development Team

www.eric.ed.gov

Table of Contents

If you're viewing this document online, you can click any of the topics below to link directly to that section.

ERIC Identifier: ED446333
Publication Date: 2000-08-00
Author: Granello, Paul F.
Source: ERIC Clearinghouse on Counseling and Student Services Greensboro NC.

Historical Context: The Relationship of Computer Technologies and Counseling. ERIC/CASS Digest.

THIS DIGEST WAS CREATED BY ERIC, THE EDUCATIONAL RESOURCES INFORMATION CENTER. FOR MORE INFORMATION ABOUT ERIC, CONTACT ACCESS ERIC 1-800-LET-ERIC
Computers have been around since the Electronic Numerical Integrator and Computer, or ENIAC, was invented in 1946. The relationship between computers and counseling,

and in wider sense psychotherapy, also has existed for decades. The impact of computer technologies on counseling has changed over time. The purpose of this digest is to summarize and review the historical events of the counseling-computer relationship. This will help provide a context for counselors in which to reflect on their use of computer technologies in the future. Counselors may have to play a unique role in that they are not simply consumers of computer technology but also social advocates for its humane application.

THE 1950S AND 1960S: THE MAINFRAME, MINI, AND PC AS THERAPIST

Initially, large mainframe computers were expensive and difficult to maintain. They were primarily only owned by large corporations, universities, and government agencies. Computational time was an expensive resource and mainframes did not utilize programming languages that were user friendly. The result of these factors was a very limited impact of computers on the counseling profession. However, it was in the 1950's that theorists like B. F. Skinner and Norman Crowder developed ideas about programmed instruction that are the historical antecedents for modern computer aided instruction and we-based distance education that are currently in vogue (Niemiec & Walberg, 1989).

In the early 1960's minicomputers came to replace mainframes. In 1962 Digital Equipment Corporation (DEC) produced the first minicomputer. These machines used integrated circuits and were much smaller and more affordable than mainframes. As a result, computational time became a more plentiful resource, and when coupled with the development of more user friendly programming languages (BASIC, PASCAL, PLATO, ILLIAC) a wider audience began to take an interest in the application of computers to counseling. Computer aided instruction was first explored in 1959 when IBM assisted in the development of the first program to teach mathematics. In 1963, in cooperation with Stanford University, IBM released COURSEWRITER, the first programming language specifically designed for computer-aided instruction (CAI). Another leader in the development of CAI was the Computer Education Research Laboratory (CERL), which worked closely with Control Data Corporation to develop PLATO (Programmed Logic for Automatic Teaching Operations). PLATO became the most widely used instructional program in the United States and it was primarily directed at college level instruction. Thus it is really in the 1960's that the computer-counseling relationship begins in earnest.

In the late 1960s the idea of computer-as-therapist was explored. One example of such a program, ELIZA, was developed in 1966. The programmers sought to emulate the reflective comments of a person-centered therapist. A version of the program is still available to look at today on the World Wide Web (www-ai.ijs.si/eliza-cgi-bin/eliza_script). It soon became apparent that ELIZA and other programs like it had serious limitations in terms of interpreting natural language, so the idea of the computer replacing therapists did not have technological viability at that time.

THE 1970S AND 1980S: MICROCOMPUTERS FOR EVERYONE

The advent of the microcomputer made computing time a much cheaper resource. Microcomputers also were increasing in computational power exponentially. Counselors began to interface with computers much more, and in the 1980s several began to research their applications to therapy, counselor training, and the ethical ramifications of the technology on the profession. Two interesting examples of programs developed in the 1980's include the PlatoDCS (Dilemma Counseling System) and MORTON. PlatoDCS was a computer program designed to help clients who felt "stuck" with making a decision between two adverse consequences. This program presented the user with a structured model for solving dilemmas (Wagman & Keber, 1984). The second example, MORTON (Selmi, Klien, Griest, Johnson, & Harris, 1982), was designed to assist clients with mild to moderate depression. The program used a psycho educational approach focused on cognitive therapy principles of identifying cognitions that may lead to depression.

Interest seemed to peak in the counselor-computer relationship in 1984 when the journal, Counselor Education and Supervision ran a special issue on the topic. In 1988 Lambert wrote an article that illustrated many of the difficulties that the counseling profession had in adopting the widespread use of computers for therapeutic and training purposes. These included a lack of trained faculty and the expense of producing educational software.

One area of counseling that was profoundly affected by the advent of microcomputers in the 1980's has been vocational guidance. Today virtually all major assessment instruments for vocational guidance and personality testing are available in computer administered or scored formats.

THE 1990S AND BEYOND

Interest seemed to wane in the early 1990s as evidenced by a drop in scholarly articles about computers in counseling journals. However, technological changes were about to occur again with the advent of the Internet and World Wide Web. The Internet and easier programming methods for its use have revitalized the computer counseling relationship. For the first time in the computer counseling relationship, the number of counselors, trainees, and faculty using technology grew from a small, elite group to a sizeable cohort. Suddenly professional counseling organizations had web pages, counselor education programs had courses on-line, and listservs were being employed for professional communication (ICN, COUNSGRADS). In spite of these advances, many limitations still exist for the counseling computer relationship. These include the professions ability to work with difficult questions about delivering therapy over the internet and training students via distance education.

The potential for the use of computer by the counseling profession seems only limited

by individual creativity. The possibility of using artificial intelligence programs to provide case simulations, or virtual reality technologies to treat mental and emotional disorders may seem like it is science fiction, but if history informs us we know that the counseling and computer relationship will continue to evolve and grow.

CONCLUSION

The computer counseling relationship has evolved over time. Counselors have not avoided engagement with computer technologies but have become more involved with them as they have become a more plentiful resource and more user friendly. Counselors have used computers for therapeutic and educational purposes. In addition to learning to use the technology, counseling as a profession must cope with the many ethical questions that arise from implementing computer mediated training and therapy. Perhaps the greatest challenge to our profession in the future is not only to exploit the benefits of the computer-counseling relationship but also to advocate for the use of computer technology by the society as a whole in ways that protect-rather than diminish-human freedom and dignity.

REFERENCES

Cairo, P. C., & Kanner, M. S. (1984). Investigating the effects of computerized approaches to counselor training. Counselor Education and Supervision, 24, 212-221. Engels, D. W., Caulum, D., Sampson D. E. (1984). Computers in counselor education: An ethical perspective. Counselor Education and Supervision, 24, 193-202.

Halpain, D. R., Dixon, D. N., & Glover, J. A. (1987). The great therapist program: Computerized learning of counseling theories. Counselor Education and Supervision, 27, 255-260.

Lambert, M. (1988). Computers in counselor education: Four years after a special issue. Counselor Education and Supervision, 28, 100-109.

Niemiec, R. P., & Walberg, H. J. (1989). From teaching machines to microcomputers: Some milestones in the history of computer-based instruction. Journal of Research on Computing in Education, 21, 263-276.

Selmi, P. M., Klein, M. H., Greist, J. H., & Harris, W. G. (1982). An investigation of ccomputerassisted cognitive-behavior therapy in the treatment of depression. Behavior Research Methods and Instrumentation, 14, 181-185.

Wagman, M., & Kerber, K. W. (1984). Computer-assisted counseling: Problems and prospects. Counselor Education and Supervision, 24, 142-167.

Research and Improvement, Contract No. ED-99-CO-0014. Opinions expressed in this report do not necessarily reflect the positions of the U.S. Department of Education, OERI, or ERIC/CASS.

—

Title: Historical Context: The Relationship of Computer Technologies and Counseling. ERIC/CASS Digest.
Document Type: Information Analyses---ERIC Information Analysis Products (IAPs) (071); Information Analyses---ERIC Digests (Selected) in Full Text (073);
Available From: ERIC Counseling and Student Services Clearinghouse, University of North Carolina at Greensboro, 201 Ferguson Building, P.O. Box 26171, Greensboro, NC 27402-6171. Tel: 336-334-4114; Tel: 800-414-9769 (Toll Free); Fax: 336-334-4116; E-mail: ericcass@uncg.edu; Web site: http://ericcass.uncg.edu.
Descriptors: Computers, Counseling, Counselor Role, Ethics, Psychotherapy, Social History, Technology
Identifiers:
###

—

▲

[Return to ERIC Digest Search Page]