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**CONTENTS**



*This study investigated the prevalence of computer anxiety by area of practice, hours of weekly use, access to equipment, and availability of training for social workers (N = 244) in South Carolina, Georgia, and North Carolina. Measured by the Computer Anxiety Index (CAIN), levels of anxiety were found to be lowest for those who have computers in their work areas, received training, and use computers to accomplish work tasks. Statistically significant positive correlations were found between anxiety levels and high levels of training need as well as the number of hours of weekly use and training received. A significant negative correlation was found between anxiety levels and weekly hours of use.*

KEYWORDS. Computers, technology, anxiety

*This article lays the foundation for examining the usefulness of a bilingual website "Amigos" as a psycho-educational, technological human service tool for connecting communities. It discusses how web-based information and resources on topics of interest to various members of our diverse communities may assist them in looking for further help. In addition, the article identifies opportunities for sharing multicultural experiences, requesting referrals, and asking questions. Implications for the use of technology in counseling service and training will be discussed.*

KEYWORDS. Bilingual website, technology as psycho-educational tool, website and human services, website and Spanish-speaking users, multiculturalism through technology



*This article reports the results of a recent project designed to explore issues in using information and communications technology (ICT) in the professional training of preschool education specialists. The focus of the study was on the effectiveness of ICT in promoting and maintaining educational collaboration. Electronic conferencing facilities were set up and their utilisation monitored. Factors associated with non-participation were explored further by means of questionnaires. Gender issues in the use of ICT emerged as an important focus in this context. The authors identify barriers to full conference participation at a number of levels. They suggest that, unless these potential human and technological barriers are addressed, the impact of ICT in this field may continue to be relatively limited.*

KEYWORDS. Electronic conferencing, distance learning, professional collaboration, early years education

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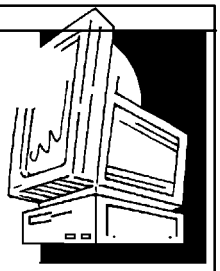

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# Computer Anxiety and Social Workers: Differences by Access, Use, and Training

Gil Choi
Jan Ligon
Jim Ward

**ABSTRACT.** This study investigated the prevalence of computer anxiety by area of practice, hours of weekly use, access to equipment, and availability of training for social workers ($N$ = 244) in South Carolina, Georgia, and North Carolina. Measured by the Computer Anxiety Index (CAIN), levels of anxiety were found to be lowest for those who have computers in their work areas, received training, and use computers to accomplish work tasks. Statistically significant positive correlations were found between anxiety levels and high levels of training need as well as the number of hours of weekly use and training received. A significant negative correlation was found between anxiety levels and weekly hours of use. 

**KEYWORDS.** Computers, technology, anxiety

## *INTRODUCTION*

The U.S. Census Bureau reported that the number of households with computers increased from 15% in 1989 to 37% in 1997. Computer use

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by adults anywhere, including work and home, increased from 28% to 47% during this period. As the use of computers continues to expand, the need for human services professionals, agencies, and organizations to employ computer technology continues to expand as well. In fact, over a decade ago computers were being viewed as a revolution that would change the nature of professional job performance (Guimaraes & Ramanujam, 1986; Lee, 1986).

Despite the increasing use of computers in the workplace, evidence has emerged that the use of computers by professionals in general can be limited due to computer anxiety, negative attitudes toward computers, and lack of training (Bozionelos, 1996; Igbaria et al., 1989). Earlier studies reported that 30% of white collar workers and managers (James, 1982) and 21.3% of British managers and professionals experienced computer anxiety (Bozionelos, 1996). Other studies have reported the underutilization of computers by professionals in the workplace (Bozionelos, 1996; Briggs & Kindler, 1993).

There has been considerable research focusing on the effect of human-computer interactions (Rosen & Maguire, 1990). Human perception, evaluation, and reactions were investigated and one of the effects experienced by many individuals using computers is the arousal of negative affective reactions (Cooper & Stone, 1996). Such reactions have been referred to as computer aversion (Meier, 1985), computer resistance (Martinkour, Henry, & Zmud, 1996), computer user stress (Hudiburg, 1992), computerphobia (Jay, 1985), e-phobia (Katz, 2000), and computer anxiety (Raub, 1981). The final term, computer anxiety, is most commonly used although computerphobia is referred to synonymously in some studies (Martinkour et al., 1996; Rosen & Maguire, 1990).

## *COMPUTER ANXIETY*

Earlier, Raub (1981) defined computer anxiety as the ''complex emotional reactions that are provoked in individuals who interpret computers as personally threatening'' (p. 9) while Howard, Murphy, and Thomas (1987) explained computer anxiety as a ''fear of impending interaction with a computer that is disproportionate to the actual threat presented by the computer'' (p. 14). More recently, McInerney and McInerney (1994) identified computer anxiety as ''an affective

response of apprehension or fear of computer technology accompanied by feelings of nervousness, intimidation, and hostility'' (p. 28).

Rosen and Maquire (1990) performed a metaanalysis of 109 studies that investigated anxiety and stress associated with using a computer and concluded that computer anxiety affected 25% of those studied although one study reported that 46% of the participants were experiencing computer anxiety (Gordon, 1995). Rosen and Maquire (1990) attributed computer anxiety to previous uncomfortable interactions with computers that make ''all future computer experiences and even mechanical experiences appear to be negative regardless of outcome'' (p. 185). Computer experience has been reported to be a consistent correlate of computer anxiety (Cohen & Waugh, 1989; Chu & Spires, 1991; Heinssen et al., 1987; Igbaria & Chakrabarti, 1990; Rosen et al., 1987). Lloyd and Gressard (1984) suggest that a major factor in computer anxiety is a lack of familiarity with computers, and that with increased experience anxiety should decrease. Although other researchers have also confirmed this hypothesis (Heinssen, Glass, & Knight, 1987; Howard & Smith, 1986), Weil, Rosen, and Sears (1987) dispute the hypothesis that familiarity with computers reduces computer anxiety and argue that ''during repeated exposure to the computer, the computerphobic is being reconditioned at increased levels of anxiety which, in turn, increases discomfort and anxiety'' (p. 180).

Such conflicting perspectives on the role of experience in computer anxiety seem to be based on two differing theoretical stances: one on a social learning theory model and another on a clinical model. Meier (1985) argues that computer anxiety must be understood from a social learning theory perspective and purports that computer anxiety is a learned experience stemming from a result of low competence in computer use and low expectation of outcome so that the anxiety will gradually diminish through building computer skills and successful experiences. Rosen et al. (1987) conceptualize computer anxiety as an affective disorder with a range of anxiety from mild discomfort to severe phobia. Computer anxiety is also found to be a predictor of achievement in computing skills and influences the degree to which computers can be utilized effectively by users (Marcoulides, 1988).

Prior computer experience has also been found to predict computer anxiety. Marcoulides (1988) reports that there is a statistically significant, though weak, negative relationship between computer anxiety and computer experience. Reed and Palumbo (1988) also report a

negative relationship between computer experience and computer anxiety. Liu, Reed, and Phillips (1992) report a similar negative relationship between prior experience and computer anxiety. Several studies have reported that there is no relationship between gender and computer anxiety (Anderson, 1996; Anthony, Clarke, & Anderson, 2000; Dyck & Smither, 1994) while McPherson (1998) found "no significant relationship between personality type and computer anxiety" (p. 28). Studies have also reported that older adults were less anxious than younger adults (Dyck & Smither, 1994), people having severe mental illness have higher levels of computer anxiety (Safford & Worthington, 1999), and those who are self-directed have less anxiety (Hemby, 1998). In addition, McInerney, McInerney, and Marsh (1997) studied a group of Australian students and found that computer anxiety may actually facilitate learning.

## *ATTITUDES TOWARDS THE USE OF COMPUTERS*

There have been numerous social work publications that have addressed the benefits, implications, and barriers to enhanced computer utilization (Caputo & Cnaan, 1990; Doelker & Lynette, 1988; Finn, 1990; Finnegan & Ivanoff, 1991; Hooyman, Nurius, & Nicoll, 1990; Mutschler & Hoefer, 1990). Some authors have expressed pervasive concerns of social workers that computer technology may hurt the client-therapist relationship (e.g., Mandell, 1989). Doelker and Lynette (1988) contend that "it has been well-documented in the literature that human services staff have a rather negative attitude toward computers and their use in human service agencies" (p. 3). Lack of knowledge and understanding of how a computer works seems to cause fear and uncertainty among social workers (Sullivan, 1980) while Alalszewski (1985) reports that social workers often fail to see the benefits of using computers, perceiving more problems than benefits. Karger (1986) observes social workers' computer anxiety in their perception that the computer system will "mold social work practice into a system which it can rationalize, measure, and evaluate" (p. 120). Even though the obtaining and processing of information has always been an integral part of social work practice, workers have been slow to use computers for those purposes (Briggs & Kindler, 1993).

The purpose of this study is to further investigate computer anxiety and its relationship to computer training and exposure to computers at the

worksite. For this study, computer anxiety is conceptually defined as the fear or apprehension felt by individuals when they use computers, or when they consider the possibility of computer utilization (Henerson, Morris, & Fitz-Gibbon, 1978). This definition was the basis for the development of the Computer Anxiety Index (Simonson et al., 1987).

## *METHOD*

### *Participants*

Using a nonprobability sampling method, a self-administered questionnaire with a stamped reply envelope was mailed in the spring of 1998 to 319 social work practitioners serving as field instructors in South Carolina, Georgia, and North Carolina for graduate social work students enrolled at the University of South Carolina. A follow-up letter was mailed two weeks after the questionnaire had been distributed followed by telephone calls to urge participation in the study. A total of 244 completed questionnaires were received for a response rate of 76.5%. Respondents included 22.2% (55) males and 77.8% (189) females; 80.3% were White, 16.7% were African-Americans, 2.1% were Native Americans, and .9% marked ''other.'' Respondents had been in social work practice for an average of 14.5 years (SD = 7.80), with a range of one to 35 years. The average number of years of employment at their current agency was 7.82 (SD = 6.45), with a range of two to 30 years, and the mean age was 45.81 (SD = 8.27) for males and 42.74 (SD = 8.67) for females with a range of 25 to 64 years. Regarding areas of practice, the largest numbers of respondents were working in mental health settings (32%), followed by health/medical (15.8%), and child welfare agencies (13.7%), respectively. Fifty-five percent of the respondents were employed in the public sector, 38.5% in the private sectors, and 4.9% by other settings.

### *Measures*

Computer anxiety was measured by the Computer Anxiety Index (CAIN) developed by Simonson et al. (1987). The instrument primarily measures: (1) avoidance of computers and the general areas in which computers are located, (2) excessive caution with computers, (3) negative remarks about computers, and (4) attempts to shorten periods

when computers are being used. The CAIN has been shown to have high test-retest reliability (r = .90) and internal consistency reliability (Cronbach alpha = .94). The 26-item instrument asks individuals to indicate their opinions and affective reactions to the computer. The authors note that computer attitudes, which are at the core of computer anxiety, refer ''to an individual's feeling about the personal and societal use of computers in appropriate ways'' (p. 234) and that positive attitudes reflect ''an anxiety free willingness or desire to use the computer, confidence in one's ability to use the computer, and a sense of computer responsibility'' (p. 234).

Some CAIN items are positively stated, e.g., ''Having a computer available to me would improve my productivity,'' and some items are negatively stated, e.g., ''Computers are too complicated to be of much use to me.'' The negatively stated items were reverse scored to avoid response bias. The response options range from (1) strongly agree to (6) strongly disagree with a possible score range of 26-156; higher scores indicate greater anxiety. The internal consistency reliability of the scale in this study had a coefficient alpha of .91. Composite scores were obtained by summing responses and dividing by the number of questions. In addition, the questionnaire included items developed for this study to assess the availability and use of computers, area of practice, as well as various aspects of computer training. For example, respondents rated their need for computer training from 0 (low) to 5 (high).

## *RESULTS*

Table 1 shows mean CAIN scores relative to the availability of a computer at work, weekly hours of use at work, and reliance on computers to complete work tasks. Anxiety scores are lowest for those having a computer on their desk and highest for those identifying no need for a computer. CAIN scores are highest for those who do not use their computer and lowest for those using the computer 21 hours per week or more. Scores are highest for workers who do not rely on the computer to complete work tasks and lowest for those who rely very much on the computer for work completion.

Table 2 provides mean CAIN scores related to three aspects of training questions. First, those who have received training have lower anxiety scores than those who have not. Second, those who have received advanced computer training have lower anxiety scores than

TABLE 1. Computer Anxiety Index (CAIN) Scores by Computer Experiences at Work

| | | CAIN Score | | |
|---|---|---|---|---|
| Computer Experience | N | Mean | SD | Range |
| Have computer at work | | | | |
| On desk | 163 | 40.3 | 10.7 | 27-79 |
| Share | 36 | 46.0 | 11.7 | 30-81 |
| Not provided | 25 | 45.4 | 11.0 | 29-68 |
| Don't need | 7 | 73.2 | 17.8 | 42-96 |
| Weekly hours of computer use at work | | | | |
| None | 32 | 55.8 | 18.4 | 29-96 |
| 1-5 | 80 | 45.9 | 11.5 | 29-79 |
| 6-10 | 54 | 40.4 | 9.8 | 27-75 |
| 11-15 | 26 | 36.8 | 11.9 | 29-73 |
| 16-20 | 17 | 35.0 | 4.8 | 29-42 |
| Over 21 | 33 | 34.6 | 5.0 | 29-38 |
| Level of reliance on computer for work completion | | | | |
| Not at all | 31 | 57.0 | 15.5 | 29-96 |
| A little | 25 | 50.2 | 13.2 | 32-79 |
| Some | 41 | 45.7 | 11.3 | 29-73 |
| Much | 62 | 40.2 | 8.7 | 29-69 |
| Very much | 83 | 36.6 | 8.0 | 27-75 |

those who have received introductory or intermediate levels of training. Finally, those who feel that the training made them ''very proficient'' in computer skills following the training reported lower scores than all other levels of proficiency.

Spearman's Rho, a nonparametric correlational statistic, was calculated using SPSS to determine the relationship between computer use and training to CAIN scores. A statistically significant negative correlation between hours of use and CAIN scores was found, $r_s(230) = -.462$, $p < .01$. In addition, a statistically significant negative correlation was found between the quality of computer training received and anxiety scores, $r_s(162) = -.174$, $p = .027$; those who rated training experiences higher reported lower anxiety scores. Also, respondents rated their need for training from 0 (low) to 5 (high) with most respondents reporting scores of 3 (25%), 4 (30%), or 5 (23%). A significant positive correlation was found between the self-rated level of

TABLE 2. Computer Anxiety Index (CAIN) Scores by Skills and Training Needs

| | | CAIN Score | | |
|---|---|---|---|---|
| | N | Mean | SD | Range |
| Received training outside agency | | | | |
| No | 176 | 44.2 | 13.2 | 27-96 |
| Yes | 67 | 40.3 | 11.7 | 29-76 |
| Received training inside agency | | | | |
| No | 66 | 56.6 | 14.1 | 30-96 |
| Yes | 162 | 41.7 | 12.1 | 27-87 |
| Level of training received | | | | |
| Introductory | 105 | 44.1 | 12.7 | 29-81 |
| Intermediate | 53 | 37.8 | 9.5 | 29-75 |
| Advanced | 10 | 34.7 | 5.7 | 29-46 |
| Level of proficiency in using skills addressed in training | | | | |
| Not at all proficient | 11 | 52.7 | 18.9 | 29-81 |
| Slightly proficient | 21 | 51.0 | 17.2 | 29-79 |
| Moderately proficient | 62 | 42.9 | 9.7 | 29-66 |
| Quite proficient | 60 | 38.5 | 10.3 | 29-75 |
| Very proficient | 22 | 33.9 | 4.6 | 29-46 |

need for training and CAIN scores, $r_s(221) = .138$, $p = .04$; greater needs for training were related to higher anxiety scores.

A significant positive relationship was also found between the number of hours of weekly use and the level of training received, $r_s(167) = .180$, $p = .020$; higher users receive higher levels of training. Also, a significant negative correlation was found between hours of use and the level of training needed, $r_s(230) = -.161$, $p = .014$. However, the relationship between the rated quality of training received and weekly hours of use was not statistically significant at $p < .05$.

## *DISCUSSION*

The results of this study indicate that the level of computer anxiety varies by area of practice, availability of equipment, amount of use, and participation in training. Respondents who have direct access to computers at work generally report lower levels of computer anxiety. Respondents who use their computers at higher levels of hours per week and who depend on the computer to accomplish work tasks

report lower anxiety than those who use their computers less or who do use them to accomplish their work. This study provides encouraging information concerning the benefit of training given the significant correlation between computer use and having received training. It is also noteworthy that, given the significant relationship between training needs and CAIN scores, administration of the CAIN may be very useful as a screening tool to identify those who are in need of additional computer training.

There are several limitations that must be noted concerning this study. First, the investigation reflects the responses of only one limited geographic area and may not reflect those of other parts of the country. Second, this study focuses on social workers but does not provide data on other human services providers. Finally, the data is based on self-reports which may not fully address the areas studied. Therefore, future research is needed that includes other geographic areas, additional disciplines within human services, and other data gathering methodologies such as direct observation or logs.

The results of this study may be viewed from more than one perspective. On the one hand, there are many social workers who actively use computers for a wide range of purposes, obtain ongoing training, and report low levels of anxiety about using computers. On the other hand, there are many social workers who do not have computers in their work areas, are in need of training, and report higher levels of anxiety about using computers. Given the strong correlations found between training and reduced anxiety levels, agencies may wish to consider increasing the availability as well as the relevance of training for social workers.

In addition, while the results of this study provide encouraging support that those who have access to computers, training, and who are frequent users of the equipment have lower levels of computer anxiety, the manipulation of these variables may not resolve the problem of computer anxiety. For example, Rosen and Weil (1995) reported in their study of almost 500 teachers who had ready access to computers that the myth "that all you need to do is to provide a technophobic person with some computer experience and this will eliminate the problem" (p. 27) is not true. Szajna (1994) also notes that the interplay of computer anxiety and computer aptitude is not clear while Reznich (1996) notes that the approach to computer training for adults is critical to its impact on computer anxiety.

Although further research, with more subjects, in other geographical areas is needed, this study provides additional insight about the current status of computer access, use, and training among social workers. With the continued refinement of software and hardware and the burgeoning Internet, it is imperative that social workers capitalize on the potential for technology to maximize the effectiveness of our agencies and their services.

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# Using the Internet to Help Diverse Populations: A Bilingual Website

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**ABSTRACT.** This article lays the foundation for examining the usefulness of a bilingual website ''Amigos'' as a psycho-educational, technological human service tool for connecting communities. It discusses how web-based information and resources on topics of interest to various members of our diverse communities may assist them in looking for further help. In addition, the article identifies opportunities for sharing multicultural experiences, requesting referrals, and asking questions. Implications for the use of technology in counseling service and training will be discussed. 

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**KEYWORDS.** Bilingual website, technology as psycho-educational tool, website and human services, website and Spanish-speaking users, multiculturalism through technology

## *INTRODUCTION*

The role played by computers in the delivery of social services has increased dramatically in recent years (Daines, Gask, & Usherwood, 1997; DeGuzman & Ross, 1999; Murphy & Pardeck, 1988; Sampsom Jr., 1998). Computers have been identified as useful tools that are capable of interacting with clients, identifying symptoms, and rendering clinical assessments and services (Cohen & Kerr, 1998; Durodoye & Ennis-Cole, 1998; Schneir, Kipke, Melchior, & Huba, 1998; Stevens & Lundberg, 1998; Zarr, 1994). Furthermore, computers, and especially the Internet, can be used to provide information for preventing problems and promoting mental health among diverse populations.

Presently, computers and the Internet are contributing to the education of our new generation of youth and are helping them to be informed and aware of ways to cope with difficulties (Levin, 1999). Research shows that the proliferation of gangs, violence, and drug abuse involving adolescents and young adults in general is a continuing problem (Milan & Keily, 2000). Hence, it is important for society to reach these populations as they search for an identity, a place, and a way to learn impulse control (Clarke & Schoech, 1984), so further problems can be avoided. Local community centers, church groups, and schools constitute the main current support system for youths and their families. However, these services are not enough and many times service providers lack knowledge and specific training on the cultural issues presented (Flores, 2000). Thus, a need exists for additional resources and new ways to supplement present support systems. Thus, computers and the Internet are new tools that can be used to achieve this goal. Nevertheless, using computers as a psycho-educational tool in counseling services presents concerns within the mental health community (e.g., confidentiality). These concerns have kept computers from being fully utilized in the mental health field.

The explosive growth of the Internet in the ’90s has resulted in a new universe in cyberspace and an additional support system with the potential to help diverse populations. New technological advances,

such as the Internet, help bridge distance and cultures, allowing people to communicate with each other all over the world. New funding by both public and private sources has brought computers, the Internet, and the necessary resources into local schools and public libraries. As a result, the youth of today who are the first generation to grow up with computers have embraced this technology. Notwithstanding, the recent increase in the literature on computers and computer research, little has been written on the use of this technology to facilitate a psycho-educational process for diverse populations. What has been written in this regard ranges from a general discussion of ethical issues in using computers in counseling to the practical applications of using the computer in the mental health field (Anderson & Hornby, 1996; Bersof, 1999; Bloom, 1998; Christie, 1999; Myrick & Sabella, 1995; Rust, 1995; Zalaquett & Sullivan, 1998). However, little attention has been given to the potential use of computers via the Internet for delivering service to the diverse youth populations and their families. In addition, because ethnic individuals, couples, and families have limited geographic access to counseling services, some have not fully embraced counseling services as a viable means of addressing problems and obtaining information. According to Jerome (1995), it is also possible that many economic factors have played a major role in keeping a large segment of this population from obtaining counseling services.

Since the Internet is used around the world, it seems logical that support systems for diverse populations be created there. To this end, a bilingual (English and Spanish) website called ''Amigos'' was developed jointly between a southern California university and a private company. The objective was to provide a location that allows computers users to get information about multiculturalism, education, and mental health issues.

## *"AMIGOS": A BILINGUAL WEBSITE*

''Amigos'' is designed to target three populations: monolingual English users, monolingual Spanish users, and bilingual English/Spanish users. It aims to provide several services. First, ''Amigos'' presents web-based information and resources on topics of interest to families, adolescents, and/or persons of diverse ethnic backgrounds. Second, the website provides opportunities for users to share their

multicultural experiences with other students, parents, or teachers. Third, it affords a means for developing communication between the university, the community, and other interested professionals. Fourth, it refers users to the Individual, Family, and Child Counseling Clinic services at the university.

## *"AMIGOS" DESCRIPTION*

The website address is: <*http://edweb.sdsu.edu/people/cguanipa/amigos/index.html*>

The ''Amigos'' website consists of the following web pages:

1. Carmen Says-Get Info [Dice Carmen]
2. Comments-Send to Carmen [Comentarios]
3. Answers [Respuestas]
4. Information-Get Help [Encuentra Ayuda]
5. Share Multicultural Experiences [Comparta Experiencias Multiculturales]

The first section, Carmen Says-Get Info, provides informational essays on a variety of topics of interest intended for adolescents, their families, and teachers. Essays address general issues faced by some people and unique problems encountered by others when coping with life in the United States. For examples of these essays, please see website.

Periodically, from September to May, a new essay related to topics of interest is placed on the website. Individual, couple, and family counseling graduate students write these essays. In addition, ''Amigos'' users send any responses to or questions about the subject to this section. The ''Amigos'' team answers them or provides resources as needed.

The second section, Comments-Send to Carmen, provides a mechanism for users to send in questions, comments, and/or suggestions to qualified professionals. General questions are answered and appropriate referrals are given if needed.

The third section, Answers, is the location of answers to selected comments and/or questions sent to ''Amigos.'' Some examples of the kinds of comments and questions sent to ''Amigos'' are as follows:

Are Hispanic-Anglo intermarriages common? How do their families differ?

I am a teacher of the Spanish language at a high school in Missouri. I would like to know if you think your website will be a place where my students could contact other Hispanic teenagers and share cultural information?

I am 16 and I feel attracted to people from my own sex. I am afraid to tell my parents my feelings. What do you think? (Scared 16).

Excellent website. Keep up the good work in bridging cultures.

Tú página es fantastica, te escriberé pronto. [Translation: Your page is fantastic, I will write to you soon.]

La felicito por el excelente trabajo que está haciendo y por su interes en promover multiculturalism. Estoy orgullosa que usted sea Hispanica. [Translation: Congratulations for the excellent work and for your interest in promoting multiculturalism. I am proud that you are Hispanic.]

I am an American studying to be an oncological nurse in Australia. Your page has been very helpful to me in understanding what I am going through. I am glad it is culture shock and not something else. Thanks.

I find your article on culture shock interesting. I am curious if you have given any thoughts or study to the following: I am near the end of my first year teaching 6th grade to Hispanic students here in the states, some of whom have been in the United States less than two years. While students' reactions to American culture are expected and understood, I feel I am seeing a teacher response to these students that affect them negatively and that, I suspect, may be a kind of culture shock.

Our school of nearly 1000 students, grades 2-6, is over 70% Hispanic and the majority of the teachers are not bilingual. I

> wonder if the second stage of culture shock is what these teachers experience. The children, in a sense, establish their own culture, and these teachers are in the minority. I suspect the teachers may feel insecure within a 'foreign culture.' Any comments? Regards.

The fourth section, Information-Get Help, is an on-line informational resource web page for locating links to other web pages and agencies that provide information, referrals, and/or services.

The fifth section, Share Multicultural Experiences, is a group of web pages that offers users an opportunity for expressing personal stories of intergenerational and multicultural triumphs and challenges. It provides information and interchange for cultural learning. Some examples are:

> Dear Carmen. I celebrate a Jewish holiday called Hanukkah. It is just like Christmas except there is not a Christmas tree and it only lasts one day. Hanukkah lasts eight days. Hanukkah is based on when in Jerusalem the Jewish people almost ran out of oil to burn for light except for one bottle that could last only one day. But magically it lasted eight and saved them.

> Dear Carmen. . . . I celebrate a holiday called "La Rosca." "La Rosca" is a holiday about Christmas. "La Rosca" is celebrated with a big cake with fruits like cherry and pineapple. It looks like a big donut. In the cake there is a baked in thimble, a ring, and a baby Jesus. When you cut the cake and you get a thimble, it means you will sew up your life. If you get a ring, it means that you will get married, and if you get a baby Jesus, you have to make tamales for your family.

> I am an Indian 11 years of age. On December 31 we have a holiday that is called Deevali; we go to places and eat junk food.

> Hello world wide web. My name is Carlee. I know to some of you this is familiar but to some of you this is new. The 4th of July is the day when America won our freedom. My family goes onto a hill every year to watch the fireworks. Good bye.

From September to May, questions and comments are answered

every day by the ''Amigos'' team. The team consists of a psychologist who is also a marriage and family therapist and graduate students from two counseling and school psychology programs at the university. Their goal is to provide hope, new perspectives, helpful information, and referrals to the diverse population that contacts the ''Amigos'' page daily.

Team members are trained on multicultural issues and research. They search for current information in professional organizations, scholarly journals, textbooks, consultation with supervisors, and use their own judgement when writing responses and suggesting referral services. This assistance is an essential task for the future of the ''world is a village'' philosophy that we live in today.

Next Steps: The ''Amigos'' website introduces other pages as needs and interests are indicated. Next Steps-Get the Scoop posts ideas and future directions of the ''Amigos'' website. Currently, facilitating communication among our ''Amigos'' worldwide readership is being explored. Hopefully, special topics such as careers, becoming ''American,'' special events/holidays, family issues, acculturation, and other topics will be addressed. In addition, opportunities for collaborative research with other institutions interested in this project will be explored. The information acquired through this project can promote multicultural sensitivity and multicultural learning among the participants and among students of this university and other institutions that would like to be involved with the project.

''Amigos'' is designed for the Internet to provide anonymity, interactivity, and accessibility to libraries and schools ''Amigos'' may also help remove the stigma associated with having personal problems, thereby promoting the awareness of psychological counseling services available, encouraging counseling referrals and overcoming the difficulty of accessing services.

The ''Amigos'' program is different from chat rooms because it is accessible at anytime not by a prescheduled time. Further, it is run by professionally trained graduate students and their experienced supervisors. On the Internet, other web pages have been developed to provide services to diverse users, such as quepasa.com, teachingtolerance.org, and religioustolerance.org; however, university setting counseling psychology departments have not yet fully developed a wide number of referral interactive services via the Internet for monolingual or bilingual clientele.

## *"AMIGOS" USERS' CHARACTERISTICS*

In order to explore the characteristics of the population who uses "Amigos" and the expressed need for this type of services by monolingual and bilingual users, a random sample of 50 users was selected for analysis. The group consisted predominantly of young single adults (50%) adolescents (10%), teachers and administrators (30%), adults with couples' problems (5%), and children (5%). The average age of the group was 30 years old. Fifty percent of the participants responded in Spanish. The types of inquiries and/or comments from the users fell into five categories: usefulness, interest, multicultural/ educational value, connecting with others, and mentoring and role modeling.

## *CONCLUSION*

The delivery of psycho-educational services over the Internet may: (a) provide clients access to needed information; (b) sensitize multiethnic clients to counseling services; (c) inform diverse populations about individual, couple, and family therapy services; (d) provide opportunities for diverse populations to present questions about coping with issues of everyday life; (e) expand access to referrals; (f) inform the public about specific topics of interest; (g) provide an opportunity so counseling students may have contact with what concerns people the most; and (h) develop multicultural awareness and sensitivity.

## *RESTRICTIONS*

Irresponsible use of this advanced technology may bring some difficulties. For instance, the lack of uniformity among state laws may limit the type of information provided (e.g., child abuse regulations by state; eligibility for psychological services offer by state). In addition, there is no guarantee that information sent and received will be kept strictly confidential due to the limitations of security issues with Internet use. Further, there may be misuse of technology by untrained personnel. Finally, direct access to resources offered over the Internet may be limited (e.g., only accessible to registered users, university students, and/or people who know how to work with computers).

Consciousness raising and self-awareness are vital in the development of multicultural effectiveness (Corvin & Wiggins, 1989). In working toward becoming more culturally responsive, we as professionals, must be aware of all new resources available which may help diverse populations in their daily living (Vargas & Koss-Chioino, 1992).

Mental health providers need to be aware of the possible pitfalls of the Internet and must educate themselves and their clientele about Internet risk factors while offering helpful services to diverse populations (Levin, 1999). A commitment to offer quality services to bilingual population and a capacity for being inclusive, respectful, and flexible are essential when working with this clientele. "Amigos" may be a helpful tool for achieving these goals.

We believe that the method of information-assisted education, described herein, is not dehumanizing either in the sense of removing people from clinical help or in depriving users of their individuality (Colby, 1985). The use of technology for human services can be congruent with the ethics of helping professions that attempt to provide effective and up-to-date care which may be accessed by everyone in our society. For diverse populations, this strategy is a non-stigmatic means of acquiring valuable psycho-educational information (Colby, 1985). For clinicians, this service provides a procedure for working within a preventive modality. It can help demystify misconceptions about family, couple, and individual counseling. This technological method of service delivery offers a way of reaching many more of the target group than most other traditional methods. Because hardly a day goes by without something in the news about computers, the Internet, and/or cyberspace, would it not be unethical to neglect to use a powerful tool such as the Internet for helping multiethnic families?

Ultimately, it lies in our hands, as responsible professionals, to systemically, contextually, and continually evaluate all new technology used for delivering psycho-educational services (Colby, Gould, & Aronson, 1989; Sampson, Kolodinsky, & Greeno, 1997). The rigorous evaluation of this bilingual website will be the next challenge of the "Amigos" team.

It is our hope that our individual, marriage, and family counseling fields will study and fully embrace in the near future the constructive use of the new communication modalities for providing services for the people we strive to help. Using technology may promote the means for ethnic populations to have equal opportunities for accessing information and services.

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The role played by computers in the delivery of social services has increased dramatically in recent years (Daines, Gask, & Usherwood, 1997; DeGuzman & Ross, 1999; Murphy & Pardeck, 1988; Sampsom Jr., 1998). Computers have been identified as useful tools that are capable of interacting with clients, identifying symptoms, and rendering clinical assessments and services (Cohen & Kerr, 1998; Durodoye & Ennis-Cole, 1998; Schneir, Kipke, Melchior, & Huba, 1998; Stevens & Lundberg, 1998; Zarr, 1994). Furthermore, computers, and especially the Internet, can be used to provide information for preventing problems and promoting mental health among diverse populations.

Presently, computers and the Internet are contributing to the education of our new generation of youth and are helping them to be informed and aware of ways to cope with difficulties (Levin, 1999). Research shows that the proliferation of gangs, violence, and drug abuse involving adolescents and young adults in general is a continuing problem (Milan & Keily, 2000). Hence, it is important for society to reach these populations as they search for an identity, a place, and a way to learn impulse control (Clarke & Schoech, 1984), so further problems can be avoided. Local community centers, church groups, and schools constitute the main current support system for youths and their families. However, these services are not enough and many times service providers lack knowledge and specific training on the cultural issues presented (Flores, 2000). Thus, a need exists for additional resources and new ways to supplement present support systems. Thus, computers and the Internet are new tools that can be used to achieve this goal. Nevertheless, using computers as a psycho-educational tool in counseling services presents concerns within the mental health community (e.g., confidentiality). These concerns have kept computers from being fully utilized in the mental health field.

The explosive growth of the Internet in the ’90s has resulted in a new universe in cyberspace and an additional support system with the potential to help diverse populations. New technological advances,

such as the Internet, help bridge distance and cultures, allowing people to communicate with each other all over the world. New funding by both public and private sources has brought computers, the Internet, and the necessary resources into local schools and public libraries. As a result, the youth of today who are the first generation to grow up with computers have embraced this technology. Notwithstanding, the recent increase in the literature on computers and computer research, little has been written on the use of this technology to facilitate a psycho-educational process for diverse populations. What has been written in this regard ranges from a general discussion of ethical issues in using computers in counseling to the practical applications of using the computer in the mental health field (Anderson & Hornby, 1996; Bersof, 1999; Bloom, 1998; Christie, 1999; Myrick & Sabella, 1995; Rust, 1995; Zalaquett & Sullivan, 1998). However, little attention has been given to the potential use of computers via the Internet for delivering service to the diverse youth populations and their families. In addition, because ethnic individuals, couples, and families have limited geographic access to counseling services, some have not fully embraced counseling services as a viable means of addressing problems and obtaining information. According to Jerome (1995), it is also possible that many economic factors have played a major role in keeping a large segment of this population from obtaining counseling services.

Since the Internet is used around the world, it seems logical that support systems for diverse populations be created there. To this end, a bilingual (English and Spanish) website called ''Amigos'' was developed jointly between a southern California university and a private company. The objective was to provide a location that allows computers users to get information about multiculturalism, education, and mental health issues.

## *"AMIGOS": A BILINGUAL WEBSITE*

''Amigos'' is designed to target three populations: monolingual English users, monolingual Spanish users, and bilingual English/Spanish users. It aims to provide several services. First, ''Amigos'' presents web-based information and resources on topics of interest to families, adolescents, and/or persons of diverse ethnic backgrounds. Second, the website provides opportunities for users to share their

multicultural experiences with other students, parents, or teachers. Third, it affords a means for developing communication between the university, the community, and other interested professionals. Fourth, it refers users to the Individual, Family, and Child Counseling Clinic services at the university.

## *"AMIGOS" DESCRIPTION*

The website address is: <*http://edweb.sdsu.edu/people/cguanipa/amigos/index.html*>

The ''Amigos'' website consists of the following web pages:

1. Carmen Says-Get Info [Dice Carmen]
2. Comments-Send to Carmen [Comentarios]
3. Answers [Respuestas]
4. Information-Get Help [Encuentra Ayuda]
5. Share Multicultural Experiences [Comparta Experiencias Multiculturales]

The first section, Carmen Says-Get Info, provides informational essays on a variety of topics of interest intended for adolescents, their families, and teachers. Essays address general issues faced by some people and unique problems encountered by others when coping with life in the United States. For examples of these essays, please see website.

Periodically, from September to May, a new essay related to topics of interest is placed on the website. Individual, couple, and family counseling graduate students write these essays. In addition, ''Amigos'' users send any responses to or questions about the subject to this section. The ''Amigos'' team answers them or provides resources as needed.

The second section, Comments-Send to Carmen, provides a mechanism for users to send in questions, comments, and/or suggestions to qualified professionals. General questions are answered and appropriate referrals are given if needed.

The third section, Answers, is the location of answers to selected comments and/or questions sent to ''Amigos.'' Some examples of the kinds of comments and questions sent to ''Amigos'' are as follows:

Are Hispanic-Anglo intermarriages common? How do their families differ?

I am a teacher of the Spanish language at a high school in Missouri. I would like to know if you think your website will be a place where my students could contact other Hispanic teenagers and share cultural information?

I am 16 and I feel attracted to people from my own sex. I am afraid to tell my parents my feelings. What do you think? (Scared 16).

Excellent website. Keep up the good work in bridging cultures.

Tú página es fantastica, te escriberé pronto. [Translation: Your page is fantastic, I will write to you soon.]

La felicito por el excelente trabajo que está haciendo y por su interes en promover multiculturalism. Estoy orgullosa que usted sea Hispanica. [Translation: Congratulations for the excellent work and for your interest in promoting multiculturalism. I am proud that you are Hispanic.]

I am an American studying to be an oncological nurse in Australia. Your page has been very helpful to me in understanding what I am going through. I am glad it is culture shock and not something else. Thanks.

I find your article on culture shock interesting. I am curious if you have given any thoughts or study to the following: I am near the end of my first year teaching 6th grade to Hispanic students here in the states, some of whom have been in the United States less than two years. While students' reactions to American culture are expected and understood, I feel I am seeing a teacher response to these students that affect them negatively and that, I suspect, may be a kind of culture shock.

Our school of nearly 1000 students, grades 2-6, is over 70% Hispanic and the majority of the teachers are not bilingual. I

> wonder if the second stage of culture shock is what these teachers experience. The children, in a sense, establish their own culture, and these teachers are in the minority. I suspect the teachers may feel insecure within a 'foreign culture.' Any comments? Regards.

The fourth section, Information-Get Help, is an on-line informational resource web page for locating links to other web pages and agencies that provide information, referrals, and/or services.

The fifth section, Share Multicultural Experiences, is a group of web pages that offers users an opportunity for expressing personal stories of intergenerational and multicultural triumphs and challenges. It provides information and interchange for cultural learning. Some examples are:

> Dear Carmen. I celebrate a Jewish holiday called Hanukkah. It is just like Christmas except there is not a Christmas tree and it only lasts one day. Hanukkah lasts eight days. Hanukkah is based on when in Jerusalem the Jewish people almost ran out of oil to burn for light except for one bottle that could last only one day. But magically it lasted eight and saved them.

> Dear Carmen. . . . I celebrate a holiday called "La Rosca." "La Rosca" is a holiday about Christmas. "La Rosca" is celebrated with a big cake with fruits like cherry and pineapple. It looks like a big donut. In the cake there is a baked in thimble, a ring, and a baby Jesus. When you cut the cake and you get a thimble, it means you will sew up your life. If you get a ring, it means that you will get married, and if you get a baby Jesus, you have to make tamales for your family.

> I am an Indian 11 years of age. On December 31 we have a holiday that is called Deevali; we go to places and eat junk food.

> Hello world wide web. My name is Carlee. I know to some of you this is familiar but to some of you this is new. The 4th of July is the day when America won our freedom. My family goes onto a hill every year to watch the fireworks. Good bye.

From September to May, questions and comments are answered

every day by the ''Amigos'' team. The team consists of a psychologist who is also a marriage and family therapist and graduate students from two counseling and school psychology programs at the university. Their goal is to provide hope, new perspectives, helpful information, and referrals to the diverse population that contacts the ''Amigos'' page daily.

Team members are trained on multicultural issues and research. They search for current information in professional organizations, scholarly journals, textbooks, consultation with supervisors, and use their own judgement when writing responses and suggesting referral services. This assistance is an essential task for the future of the ''world is a village'' philosophy that we live in today.

Next Steps: The ''Amigos'' website introduces other pages as needs and interests are indicated. Next Steps-Get the Scoop posts ideas and future directions of the ''Amigos'' website. Currently, facilitating communication among our ''Amigos'' worldwide readership is being explored. Hopefully, special topics such as careers, becoming ''American,'' special events/holidays, family issues, acculturation, and other topics will be addressed. In addition, opportunities for collaborative research with other institutions interested in this project will be explored. The information acquired through this project can promote multicultural sensitivity and multicultural learning among the participants and among students of this university and other institutions that would like to be involved with the project.

''Amigos'' is designed for the Internet to provide anonymity, interactivity, and accessibility to libraries and schools ''Amigos'' may also help remove the stigma associated with having personal problems, thereby promoting the awareness of psychological counseling services available, encouraging counseling referrals and overcoming the difficulty of accessing services.

The ''Amigos'' program is different from chat rooms because it is accessible at anytime not by a prescheduled time. Further, it is run by professionally trained graduate students and their experienced supervisors. On the Internet, other web pages have been developed to provide services to diverse users, such as quepasa.com, teachingtolerance.org, and religioustolerance.org; however, university setting counseling psychology departments have not yet fully developed a wide number of referral interactive services via the Internet for monolingual or bilingual clientele.

## *"AMIGOS" USERS' CHARACTERISTICS*

In order to explore the characteristics of the population who uses "Amigos" and the expressed need for this type of services by monolingual and bilingual users, a random sample of 50 users was selected for analysis. The group consisted predominantly of young single adults (50%) adolescents (10%), teachers and administrators (30%), adults with couples' problems (5%), and children (5%). The average age of the group was 30 years old. Fifty percent of the participants responded in Spanish. The types of inquiries and/or comments from the users fell into five categories: usefulness, interest, multicultural/ educational value, connecting with others, and mentoring and role modeling.

## *CONCLUSION*

The delivery of psycho-educational services over the Internet may: (a) provide clients access to needed information; (b) sensitize multiethnic clients to counseling services; (c) inform diverse populations about individual, couple, and family therapy services; (d) provide opportunities for diverse populations to present questions about coping with issues of everyday life; (e) expand access to referrals; (f) inform the public about specific topics of interest; (g) provide an opportunity so counseling students may have contact with what concerns people the most; and (h) develop multicultural awareness and sensitivity.

## *RESTRICTIONS*

Irresponsible use of this advanced technology may bring some difficulties. For instance, the lack of uniformity among state laws may limit the type of information provided (e.g., child abuse regulations by state; eligibility for psychological services offer by state). In addition, there is no guarantee that information sent and received will be kept strictly confidential due to the limitations of security issues with Internet use. Further, there may be misuse of technology by untrained personnel. Finally, direct access to resources offered over the Internet may be limited (e.g., only accessible to registered users, university students, and/or people who know how to work with computers).

Consciousness raising and self-awareness are vital in the development of multicultural effectiveness (Corvin & Wiggins, 1989). In working toward becoming more culturally responsive, we as professionals, must be aware of all new resources available which may help diverse populations in their daily living (Vargas & Koss-Chioino, 1992).

Mental health providers need to be aware of the possible pitfalls of the Internet and must educate themselves and their clientele about Internet risk factors while offering helpful services to diverse populations (Levin, 1999). A commitment to offer quality services to bilingual population and a capacity for being inclusive, respectful, and flexible are essential when working with this clientele. "Amigos" may be a helpful tool for achieving these goals.

We believe that the method of information-assisted education, described herein, is not dehumanizing either in the sense of removing people from clinical help or in depriving users of their individuality (Colby, 1985). The use of technology for human services can be congruent with the ethics of helping professions that attempt to provide effective and up-to-date care which may be accessed by everyone in our society. For diverse populations, this strategy is a non-stigmatic means of acquiring valuable psycho-educational information (Colby, 1985). For clinicians, this service provides a procedure for working within a preventive modality. It can help demystify misconceptions about family, couple, and individual counseling. This technological method of service delivery offers a way of reaching many more of the target group than most other traditional methods. Because hardly a day goes by without something in the news about computers, the Internet, and/or cyberspace, would it not be unethical to neglect to use a powerful tool such as the Internet for helping multiethnic families?

Ultimately, it lies in our hands, as responsible professionals, to systemically, contextually, and continually evaluate all new technology used for delivering psycho-educational services (Colby, Gould, & Aronson, 1989; Sampson, Kolodinsky, & Greeno, 1997). The rigorous evaluation of this bilingual website will be the next challenge of the "Amigos" team.

It is our hope that our individual, marriage, and family counseling fields will study and fully embrace in the near future the constructive use of the new communication modalities for providing services for the people we strive to help. Using technology may promote the means for ethnic populations to have equal opportunities for accessing information and services.

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# Collaborative Learning at a Distance: Electronic Conferencing in the Professional Training of Preschool Education Specialists

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**ABSTRACT.** This article reports the results of a recent project designed to explore issues in using information and communications technology (ICT) in the professional training of preschool education specialists. The focus of the study was on the effectiveness of ICT in promoting and maintaining educational collaboration. Electronic conferencing facilities were set up and their utilisation monitored. Factors associated with non-participation were explored further by means of questionnaires. Gender issues in the use of ICT emerged as an important focus in this context. The authors identify barriers to full conference participation at a number of levels. They suggest that, unless these potential human and technological barriers are addressed, the impact of ICT in this field may continue to be relatively limited. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail*

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## *BACKGROUND*

Professional development through distance learning allows professionals to further their learning with only limited access to face-to-face interaction with tutors and fellow learners. The use of information and communications technology (ICT) has brought about important developments in this field, providing new ways of enabling and supporting learning. Collaboration with others can facilitate the broadening of professional perspectives and give insight into the views, values and attitudes of others and of service delivery systems across different countries and cultures.

Underpinning human communication and collaboration are processes of social interaction and social construction based on Vygotsky's theory of socio-historical psychology (Vygotsky, 1978). Through social interaction and experiential learning, individuals construct their own meaning of the contexts within which they find themselves. Gallimore and Tharp suggest that: ". . . from kindergarten to graduate seminars, the small discussion group where text and personal understanding, can be compared, discussed and related is the prime opportunity for this unique social interaction" (Gallimore & Tharp, 1990, pp. 195-197, cited in McKendree, Stenning, Mayes, Lee, & Cox, 1998, p. 111).

It is widely thought that electronic technology offers new means of enhancing this type of interaction, bringing participants at a distance into communication with each other (Rimmershaw, 1999). The findings of other studies, however, suggest that specific factors associated with electronic conferencing technologies may present identifiable barriers to this *social* process. Magee and Wheeler, for example, suggest that participants may have difficulties with the loss of non-verbal cues. They cite Love (1992) who found that the lack of social cues in electronic conferencing led to the subsequent development of "emoticons" (figures created with character symbols on the keyboard that are

used to convey the emotional context in which a line of text is typed). Love suggested that it was easy for a lack of a social dimension to group processes to lead to a drop in the number of contributions about the task (Magee & Wheeler, 1997, p. 15).

Viewed from this social interactionist perspective, it has been argued that learners need to be aware of their responsibility to engage in social interaction essential to support mutual learning, if that learning is to be effective (Pedlar, 1981). What Knowles terms ''effective andragogical practice'' is characterised by processes in which participants learn to direct their own learning, learn collaboratively with the help of colleagues rather competing with them, and learn to self-analyse their own experiences (Knowles, 1983).

In the context of computer mediated conferencing (CMC), Knowles' approach to adult learning is supported by Wiesenberg and Hutton, 1996, who found that students needed to be assisted to become self directed ''by creating a community of learners who depend on themselves and each other for ideas, information and feedback.'' Their research found that to succeed in a CMC learning environment, students must ''learn how to learn both individually and collaboratively, which includes reflecting on their own and others' contributions.''

Computer conferencing (an approach in which individual participants contribute electronic messages to a common location that are then viewable by all those with legitimated access) is a well established means of communication in distance learning courses. The use and benefits of this approach are well documented in the literature. The principal advantages of the asynchronous communication associated with computer conferencing are reported as:

- interaction at any time chosen to suit the learner;
- progress at the learner's own pace (allowing time for reflection before responding to a message);
- a higher level of interaction between participants;
- equalization of participation by reducing the typical dominance of some individuals in face-to-face settings;
- benefits for learners who read and follow discussions, even if they do not contribute themselves; and
- a shift in the focus of learning, moving from the tutor to the learner, who can then take control of the learning him(her)self.

(Burge, 1994; Harasim, 1987; Magee & Wheeler, 1997; McKendree, Stenning, Mayes, Lee, & Cox, 1998; Sharpe & Bailey, 1999; Weisenberg & Hutton, 1996).

Burge (1994), however, comments that the use of CMC in higher education poses as many challenges as it creates new opportunities. Among the difficulties identified are:

- inequality of participation associated with different levels of computer literacy;
- technical difficulties using equipment and facilities;
- the time-consuming nature of having to read and write messages;
- loss of visual and non-verbal clues in communication, leading to misinterpretation of text;
- difficulty in tracking the flow of conversation and developing an interactive dialogue;
- problems in understanding the contributions of others;
- inability to develop insights and build up theories about learning; and
- unsuitability for certain people because of a conflict of learning styles.

(Burge, 1994; Magee & Wheeler, 1997; Ross, Crane, & Robertson, 1995; Weisenberg & Hutton, 1996; Wilson & Whitelock, 1998).

In terms of the use of CMC technology, the literature suggests a gender divide. Citing Burstyn (1993), Moffat argues that ''attitudinal barriers are created by socialisation that gives a perception of different male and female roles and capabilities'' (Moffat, 1997, p. 371). Moffat also cites Busch (1995) and Kirkwood (1988). Busch identified national studies describing how ''different social experiences create gender differences in attitudes towards computers'' whilst Kirkwood found that female students had less access to computers in the home (males had their own computer whereas females had to share with the children in the family) (ibid.). O'Rourke (1999) points out that the burden of meeting the costs of access to learning at a distance is normally on the learner and that this alone may determine whether an individual is able to participate. She refers to statistics showing that computer ownership in Canada is twice as prevalent in two parent families as in single parent families, the majority of which are typically

headed by a woman. On this basis, O'Rourke questions the value to women of the newer technologies:

> These technologies will only be of benefit for women if they genuinely accommodate practical needs for flexible learning, allow for the inclusion of women's reality and support women's preferred approaches to learning to the same extent as current distance education strategies. (O'Rourke, 1999, p. 107)

For some women, computer conferencing may not fit well with their preferred modes of learning. Heiler and Richards (1988), Grace, (1991) and von Prummer (1994) each argue that women learn best through discussion and reflection and tend to prefer face-to-face contact. von Prummer refers to her earlier study (Kirkup & von Prummer, 1990) which showed that women preferred what she terms ''social learning.''

> Women placed a higher value than men on local support services and interactive elements. The provision of interactive elements would allow students to meet and share their experiences, both of studying at a distance and of the ways their personal and professional lives interact with their studies. (ibid., p. 6)

On this basis, von Prummer argues for ''women friendly perspectives'' (i.e., ways of organising education for women that is more suited to their needs). Citing Turkle and Papert (1990), Kirkup raises the question as to ''whether male and female students have different preferred learning styles which lead to them using ICT differently'' (Kirkup, 1995, p. 219).

As distance learners, women tend to have to cope with additional outside pressures during their studies in comparison with their male counterparts. Grace (1994), May (1994) and von Prummer and Rossie (1990) each highlight the potential conflict of study with home life for students who are married and have children and emphasise the extent to which family and housekeeping responsibilities for women require their studies to be planned around the needs of the family.

Professionals working in early education, the subjects of the present study, are predominantly female. They operate in a ''deeply gendered field'' in which ''the perceptions of gender are deeply embedded and intertwined with perceptions of class and ethnicity'' (Penn & McQuail,

1997, p. 43). Members of this occupation often feel undervalued because their skilled work with young children appears not to be greatly valued. Many key workers, despite holding professional qualifications, feel that they have a very low status in the educational profession as manifested in low salaries and the absence of coherent national qualifications and promotion structures. Poor occupational status and low salary may impose financial constraints that prohibit or limit access to technology. In turn, this may affect family attitudes towards female professionals seeking home-based opportunities for further professional development.

## *CONTEXT AND AIMS OF THE STUDY*

Northern College (a Scottish higher education institution) has developed online distance learning within its Bachelor of Arts (BA) degree in Early Childhood Studies and Postgraduate Award Scheme. Both programmes are designed for individuals working with children of up to 8 years of age, who already hold a basic professional qualification and who wish to further their professional development. In collaboration with preschool education faculties in Finland, Iceland, Ireland, and Norway, staff at Northern College secured European Union funding to explore the impact of ICT on the professional training of preschool education specialists. This article reports on one aspect of that collaborative initiative.

Developmental work in year one was aimed at setting up electronic conferencing facilities to meet the needs of teachers and nursery nurses employed by one Scottish local authority (a public sector agency responsible for social services including the education of preschool and older children). For these purposes, *FirstClass* was adopted as the preferred software system since it allowed potential access via a local area network, modem or (subsequently) via the Internet. In practice, however, to be able to engage in the conferences, participants in the project had to log on to a server based in Scotland, using client software on their own machine. Access via modem proved difficult because of the relatively high cost of international telephone calls.

Students were encouraged to use the electronic conferences to communicate with each other concerning pedagogical issues of relevance to their studies of early childhood. Formative evaluation at the end of

year one indicated a low level of computer conference use. Participants attributed this outcome to two main constraints preventing them from making full use of *FirstClass*, viz. a general lack of confidence in using computers and/or computer conferencing; and the inconvenience of having to travel to a local authority centre to access computers.

Building on the lessons learned from the first year, the approach taken in year two included the provision of a one-day training course in the use of the *FirstClass* program, and direct access for all participants to a computer either at home or at their workplace. A decision was also made to focus the use of conferences over a shorter time period, a strategy that had previously worked successfully in one of the partner countries. A second cohort of Scottish preschool education professionals was identified, comprising eleven female mature students (nine Scottish and two Icelandic), each of whom was employed as a nursery teacher or nursery nurse. As part of their degree course, these participants were given the opportunity to collaborate with colleagues in the partner countries using CMC.

The principal research objectives in year two were to ascertain the:

- Extent of the collaboration between participants using electronic conferencing;
- Effectiveness of the revised (year two) approach and new support systems in overcoming previous barriers to participation identified in year one;
- Nature of any remaining barriers to the use of electronic technology as a means of promoting communication and professional collaboration.

## *METHODOLOGY*

Two *FirstClass*[1] conferences were set up, respectively entitled ''Child Transitions'' and ''Curriculum Frameworks.'' These ran concurrently with the two participant groups, each conference relating to the main issues raised within two learning modules being studied by the Scottish students. Tutors in all five participating countries were approached and potential participants were identified in Norway, Iceland, and Scotland. In the event, nine Scottish students, all female, became involved (five in the ''Child Transitions'' conference and a

different four in ''Curriculum Frameworks''), together with two Icelandic students (also female) who participated in both conferences. After initial negotiation, Norwegian students did not take part. Thus, a total of seven students participated in the ''Child Transitions'' conference and six in ''Curriculum Frameworks'' conference. All volunteered to become involved in the project, thus demonstrating a level of personal commitment to collaborative learning. Although all were employed in the early education field, none stood to gain financially or directly in career terms from their involvement.

An introductory conference was used as a forum for students to give information about themselves and their workplace setting and to begin to use the CMC system in a relatively nonthreatening way. Students were prompted to do this in a semistructured way by means of tutor invitations and questions. After this introductory experience, conference items were posted by a named tutor at approximately two-week intervals from January to March 1999.

Evidence for the study was gathered from the following data sources:

- Examination of the content of messages posted on the conference pages or sent by e-mail;
- Analysis of the ''history'' of the conferences (gained by looking at the history of all *FirstClass* messages, from which it was possible to trace the online sequence of messages sent, the number of students who read them and how many replied);
- A questionnaire sent to student participants in Scotland and Iceland, by means of *FirstClass* and also by ordinary mail; and
- A second questionnaire sent to the three participating Scottish and two Icelandic tutors via *FirstClass*.

The student questionnaire was designed to explore issues of prior familiarity and confidence in using computers; the effectiveness of training given in the use of *FirstClass* e-mail and conferencing systems; access to *FirstClass* facilities; and participants' use of the electronic conferences.

## *THE FINDINGS*

In this article we report on the data from year 2. Full reports of the

research procedures and findings from both years of the project can be found in Greig, McLuckie, and Payne, 1998; Greig and Payne, 1999; and McLuckie, 1999.

*Students' Participation in the Electronic Conferences*: From analysis of the conference histories, it was found that a total of 15 messages were posted in the introductory conference for "Child Transitions." Six of these were written by students in response to the tutor's initial message; three were responses by one student to the messages of three other students; and six were messages posted by the tutors. Thus, six of the potential seven students read and responded to the lead tutor's initial message inviting them to participate by writing about themselves and their work setting (the other student was in hospital at the time and subsequently did not contribute to any of the conferences).

One student read only one of the introductory messages written by one other student and did not read any further messages from either students or tutors in this or the subsequent four conferences. Of the remaining five students, four students read four messages and one student read three messages, although the students were not necessarily reading the same messages. Reasons cited for this early non-participation included: initial technical problems, poor local access to CMC facilities and other pressures, leaving little opportunity to read the messages. Thus, at the stage of getting to know about each other, participants did not have even basic information about some of the people with whom they were conversing. For example, four students did not have information about one participant in the group (a different individual for each one) and the fifth did not know anything about two of the participants. One student who sent replies to three of the students received a reply back from only one of these. Of the remaining two replies sent by her, one was read but not responded to and the other was not even read.

One pair of students, one Scottish and one Icelandic, interacted with each other and maintained a dialogue throughout the succeeding four conferences about aspects of the course materials. The content of their exchanges was initially only on the professional issues raised but, as time progressed, they often opened or concluded with more familiar comments, about the weather for example. They exchanged information about ways in which they helped the children in their care adjust to new situations (such as commencing nursery school and/or moving from the nursery to primary stage) and the different learning experi-

enced by the children. In addition to detailed explanations of their own practice, they asked questions about each other's practice. The messages varied in length from short paragraphs in response to questions posed, to a whole page giving detailed information. In their final reflections on the conferencing experience, they concluded they had each gained from learning about the other's experiences and that the problems of helping children to cope with social transition and new learning appeared to be the same whatever the setting or country.

The response pattern of the remaining two Scottish students continued throughout the four "Child Transitions" conferences; i.e., they either read messages posted by the tutors and/or students but did not enter the debate by responding, or they did not read the messages at all. The second Icelandic student participated to a greater extent than the two Scottish students in that she responded to the tutor's requests and interacted in one of the conferences. A total of twelve messages were posted in the first main conference but this had decreased to six by the fourth conference.

In the introductory conference for "Curriculum Frameworks," a total of 10 messages were posted: five by students in response to the tutor's initial message and five by the tutors. Apart from one student who did not attend the training day or take part in any of the conferences, the three Scottish and two Icelandic students wrote something about themselves and their work setting in this introductory conference. As in the "Child Transitions" conference, not everyone read the introductory messages that each had written. Thus, two students read one message, two students read two messages, and one student read three messages (from a potential total of four messages from other students). One student's message was read only by tutors.

After the initial conference, one of the Scottish students did not read or respond to any further messages. In the four main conferences, more students posted messages than was the case for "Child Transitions," but these were mainly in response to the tutor's questions. There was most discussion (eleven messages) about the early years curriculum in conference 3. In both "Child Transitions" and "Curriculum Frameworks," however, it appeared difficult to keep the momentum of discussion going when students either read only some of the messages or did not reply to messages posted by others. A total number of six messages were posted in the first main conference of "Curriculum Frameworks" and this increased to nine by the fourth conference.

In general, tutors based in Scotland actively encouraged participants to engage in interactive debate and tried to keep the momentum of the conferences going. Icelandic tutors read the majority of the messages in all the conferences but did not tend to interact themselves. From their responses to the questionnaire, Scottish tutors reported being encouraged by the quality of the interactions between the conference participants. The lead tutor was surprised that, even though there was not a generally high level of response to the conferencing system, students expressed the view that they would welcome a module delivered via a web site.

Thus, although use of CMC facilities was more extensive in the second year of the project, there was still a low level of overall participation. Possible reasons for this are discussed further in later sections of the paper.

*Impact of Improvements Introduced in Year 2*: Benefit seemed to be derived from the induction training introduced in year 2 of the project, particularly in familiarising participants with the basic CMC technology (8 out of 9 questionnaire respondents reported such benefits). The study highlighted that time and support needed to be invested in ensuring that participants had a basic familiarity and confidence with the technology *before* it was used in context, especially with inexperienced users. Access to *FirstClass* in year 2 also appeared to have been less problematic (only one respondent reported consistent access problems). It is anticipated that access via standard Web browsers, without the need for dedicated client software, will further reduce access problems in future.

Seven of the nine Scottish students and the two Icelandic students returned completed questionnaires. These yielded more information about their reasons for non-participation or limited involvement in the conferences. For some of the students, only one of the contributing factors was cited as being associated with non-participation. Where multiple factors were cited, it was more likely that individuals had not participated at all or dropped out during the period of the conference, particularly if the student was not a confident computer user. Reasons identified included: lack of confidence in using a computer (N = 5); worries about the technology (N = 3); poor access to a computer or technology centre (N = 1); and a preference for knowing conference participants in advance of conference discussions (N = 1). These find-

ings suggest that still more might have been done to familiarise participants with the technology.

*Remaining Barriers to Fuller Conference Participation*: Questionnaire returns from nine students showed that, despite all having access to a computer at home, half (5) of these early education professionals remained uncomfortable with the day-to-day use of computers. In Scotland and in Europe more widely, education authorities have given higher priority to the ICT resourcing of schools at secondary, rather than at primary or nursery level. This has obvious implications for the ICT skill and confidence levels of staff involved in early years education. It is hoped that, under proposals for the National Grid for Learning in the UK, more equal resource provision might, in turn, lead to a greater confidence in ICT use.

Server crashes on two occasions, with consequent delays in service availability, may have had a negative effect of the enthusiasm of those affected, although this was not highlighted in questionnaire returns. Nonetheless, it was concluded that reliable backup and rapid recovery procedures must be carefully considered and implemented prior to usage, especially when conferencing with inexperienced participants.

## *DISCUSSION*

The literature reviewed earlier suggests that, for effective collaboration to take place, CMC users must: see themselves as individuals with knowledge and experience *worth* sharing with others; *value* the idea of collaboration with others; and be reasonably *confident* of their ability to use this technology in the course of their further learning. Each of these premises is, of course, shaped by broader social, economic and occupational processes.

In considering outcomes, the authors were led to hypothesise that the extent of CMC participation may have been affected by factors pertaining to the particular study context and the specific group of participants involved, even when allowance was made for the impact of technical failures such as system crashes. Whilst the small-scale and non-experimental nature of the project must necessarily limit what can be concluded with confidence, three interconnected issues suggested themselves for further consideration:

- The possible impact of socioeconomic factors affecting access to CMC technology on participants' ability to collaborate effectively with others;
- The particular nature of communicative interaction associated with electronic conferencing; and
- The possible impact of working exclusively with members of an explicitly gendered and low-status occupation;

These are discussed in turn below.

*The Possible Impact of Socioeconomic Factors Affecting Access*: This study identified three participants for whom computer access at home was a particular problem because of financial worries about high telephone bills and parental concerns about teenage children having unsupervised access to e-mail and the Internet. When the reasons given for conferencing non-responses were further investigated, underlying physical and psychological access factors also came to light. For example, despite considerable efforts, one participant never achieved ready access to a computer either at home or work; another lacked transport to and from an outreach education centre where the technology was available; and a third was found to be experiencing pressures in her life that meant interaction with other participants was not seen as a priority. In each case examined, participants themselves identified these access difficulties as having directly affected their level of CMC participation. Having access to CMC facilities at home seemed particularly important in encouraging its use and, in this respect, the differential access factors identified earlier in the literature survey seem especially relevant (Kirkwood, 1988; O'Rourke, 1999).

*The Particular Nature of Communicative Interaction Associated with Electronic Conferencing*: Effective communication demands skills of self-expression, attentive listening, and balancing levels of mutual participation. These processes are assisted in a face-to-face situation because participants can read the emotional reaction of others through their ''body language'' (posture, gesture, and involuntary movement). These features are largely absent in a virtual environment and, for anyone unsure of themselves, this factor may exacerbate tensions and worries. (One questionnaire respondent reported that ''. . . getting to know people without feeling uncomfortable, seeing them face to face . . .'' would have encouraged her to participate more.)

Communication via an electronic written medium may, therefore, be threatening simply because of not knowing other participants or being able to see their reactions (Magee & Wheeler, 1997). The fact that some students did not read even the introductory messages posted by other participants undoubtedly made this worse. It would be interesting to see whether this particular problem could have been alleviated by the use of simple video technology. Participants also drew attention to additional anxieties associated with the idea that one's CMC contributions have to be typed out, can then be read by many (anonymous) people and cannot, therefore, easily be retracted. To join in the conference, you have already had to commit yourself, as it were, to a publicly stated viewpoint. This contrasts with a face-to-face conversation where experience suggests that it is normal for participants' viewpoints to emerge, change and firm up in the process of the discussion. In such circumstances, we may all be more prepared to express a view on matters about which we are uncertain at the outset.

Collaboration, especially at a professional level, is a sophisticated process, which moves beyond simple interactive communication. It demands both a desire to learn from others' viewpoints and experience and an ability to negotiate and agree on the issues to be discussed. Previous research into collaborative distance learning suggests that a prerequisite is the creation of an inclusive and trusting learning ethos, in which *both* the contributions of participants *and* the process of collaborative learning are explicitly valued (Hipp, 1997, citing May, 1993). Wiesenberg and Hutton suggest that CMC tutors have a responsibility to create an inclusive learning environment from the outset, taking into account students' own learning needs and preferences (Wiesenberg & Hutton, 1996, p. 97). With hindsight, insufficient attention may have been given to this process in advance of establishing the conferences. The introductory conferences, for example, were designed to facilitate the sharing of biographical information but, as was emphasised earlier, this process relied on conference interaction, a factor that might in turn have been negatively influenced by a lack of initial familiarity between participants. The authors consider that it would be worth experimenting with some other form of information-sharing *prior* to engagement in electronic conferencing. Tutors might also have taken a more active role in facilitating the emergence of an inclusive learning environment during the conferencing phase, e.g., by following up non-participation at an individual level via e-mail or

telephone. The general encouragement given by tutors via conference messages did not appear to overcome individual inhibitors to full participation.

*The Possible Impact of Working Exclusively with Members of an Explicitly Gendered and Low-Status Occupation*: Research on women involved in distance learning suggests that they are prone to feel insecure and isolated, to have a fear of failure, not infrequently to consider giving up their studies and to feel at a loss as to whom to turn to for help (Hipp, 1997). (These characteristics may, of course, be shared by a significant proportion of adult distance learners, irrespective of their gender or occupational status.) As the students in this project were all women distance learners, it might be anticipated that they would show a certain lack of confidence in interaction with relative strangers, especially through CMC participation. The present study suggested that lack of confidence as a learner might have been amplified, for some participants, by a low preexisting level of ICT familiarity (3 out of 9 questionnaire respondents). As has already been suggested, working in a relatively low-status occupation such as preschool education, could have exacerbated this factor because of the low level of investment in ICT infrastrucure in this sector, limiting practitioner access. For example, one student who did not participate but had hoped to do so said "If I had been able to attend the training, I would probably have used the system at work." Even for students personally committed to furthering their own understanding through collaborative learning, this factor is considered to have been an added inhibitor. We conclude that attention must be paid to this issue when working with groups who, for a number of reasons, might lack the experience or confidence to overcome normal worries about what might be involved in electronic communications with others at a distance.

## *LESSONS LEARNED*

The main lessons learned from this project may be grouped under three headings and summarised as follows:

*ICT access issues:*

- The need to secure straightforward and reliable access to CMC facilities for all participants, preferably in their own home;

- The importance of evaluating ICT access in the user's normal workplace as a background factor;
- The desirability of achieving CMC access via standard web browsers, rather than dedicated client software;
- Appreciation of the potential impact of socioeconomic factors creating differential access.

*Technical familiarity and confidence in CMC use:*

- Vital importance of induction training and initial familiarisation, including help in setting up basic equipment such as modems;
- Nonthreatening evaluation of levels of technical competence and confidence early on, before putting the system to full use;
- Exploration of other ways of getting to know participants in advance of electronic conferencing, e.g., brief biographical descriptions (including photographs?) circulated by mail or fax;
- Early tutor emphasis (possibly by setting the tone through example) on the fact that it is OK to try ideas out, hazard opinions, and so on.

*Support for CMC learners:*

- Vital need to ensure reliable backup and rapid recovery from system failure, otherwise inexperienced users may drop out;
- Proper acknowledgement of problems associated with distance learning, e.g., isolation, pressure of other life tasks (possibly, especially for women CMC home users);
- Tutor intervention at individual level when conference drop-out first occurs (this also demands sound technical competence among tutors).

## *CONCLUDING COMMENTS*

This small-scale study pointed up barriers to the effective use of electronic conferencing for distance learning with professionals. It emphasised the impact of both technological and human inhibitors of full participation. It was considered that relatively low levels of conference participation were associated with factors such as technical system failure, unfamiliarity with (and poor access to) computing

equipment, lack of confidence in CMC use and the nature of CMC communication itself. The specific characteristics of the learner group–exclusively female professionals involved in preschool education–suggested themselves as factors worthy of further investigation. More specifically, it would be interesting to explore possible relationships between gender and technical confidence by setting up a CMC project of this kind in a professional field where men are more numerous. Likewise, any links between low levels of CMC participation and low occupational status could usefully be explored further by means of a comparative study involving other, higher-status, professional groups such as secondary teachers.

It is argued that proper attention to all such factors, in advance of the introduction of computer conferencing technology, is important for eventual success. With increased ease of access to communication and information technology, both in the home and at the workplace, any gap between the technology and its pedagogical application must be addressed if effective electronic learning environments are to be created to serve the needs of learning communities.

Despite these reservations, this project was judged successful overall in bringing about an enhanced level of collaborative learning by means of CMC. The majority of those who participated reported finding the interactions with fellow professionals helpful for their own practice and thinking. They also found that the technology had introduced enhanced levels of convenience and flexibility to the learning process. We end, therefore, with the quoted view of one such participant:

> I feel taking part in the conference has been a good learning experience for me, increasing my knowledge of the computer's e-mail (facilities) and my confidence to take part in open debate on my computer.

## NOTE

[1]The *FirstClass* conferencing facility has well-developed threading facilities with each threading level showing as indented text. Used within the conference area, it allows full tracking of the development of a discussion, identifying separate individual contributions. In this project, five threading levels were employed. *FirstClass* also has a message history facility that was used to identify students who monitored discussions by reading messages without actually posting new contributions.

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# ClientTouch

| Software Review Summary | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Poor | | | | | | | | | | Excellent |
| Performance | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **X** | 9 | 10 |
| Ease of Use | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **X** | 9 | 10 |
| Error Handling | 0 | 1 | 2 | 3 | 4 | 5 | 6 | **X** | 8 | 9 | 10 |
| Documentation | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | **X** | 10 |
| Value for Money | 0 | 1 | 2 | 3 | 4 | 5 | 6 | **X** | 8 | 9 | 10 |

*Software Product*: ClientTouch, Stand-Alone Edition Version 2.0 with patch versions 2.01 through 2.1.3

*Keywords*: Information management, database management

*Product Summary*: ClientTouch is a database management system for social service agencies.

*Evaluation Summary*: ClientTouch is effective in helping agencies record and organize their client data into outcome reports. The output function of the program creates frequency data of clients, services, and so forth.

*Source*: Social Work Software, P.O. Box 1813, West Chester, Ohio 45071. Telephone: (513) 860-2192. http://www.socialworksoftware.com/ E-Mail: info@socialworksoftware.com

*Product Detail*: The price for ClientTouch is dependent on whether it is installed on a single computer or on a network, and if on a network, on the number of concurrent users. The price for single practitioner would be $1,500, while the price for a small agency of 10 users would be $11,000.

*System Requirements*: ClientTouch requires Windows 95/98/NT/2000.

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Director, Community Service Clinic, School of Social Work
University of Texas at Arlington
P.O. Box 19129
Arlington, Texas 76019-0129

*Hardware*: The software was tested on a custom made 233 MHz Pentium with 64 MB RAM, and Windows 98. The program is available on diskettes.

ClientTouch is a software package to help agencies manage their client files, track case information, and generate helpful frequency data for reports. ClientTouch could also be beneficial to individual practitioners who want to centralize information about clients and track the progress of their practices. Although ClientTouch is similar to other databases, such as Microsoft Access, ClientTouch is specifically designed for social service agencies.

The program is organized in four sections called modules. The *System Administration* module allows specific agency personnel, such as the agency director or clinical director, to define the range of data that should be collected to meet the agency's expectations for future reports or accountability. The second module is a *Security* system to define who can enter and access client data. The *Data* module facilitates the input of client information, but it also facilitates the easy retrieval and printing of client information. Finally, the *Reports* module generates a wide variety of frequency data, reports, and other feedback for the internal management of the agency or for outside funders or regulators.

*Report Module*. The software contains a helpful and friendly tutorial that takes the learner to the *Report* module and allows the user to manipulate data and produce helpful output. Sample data and report formats are provided to enable the learner to see, firsthand, some of

the possibilities of ClientTouch. The report module prompts the user with a series of questions to facilitate the retrieval of client data and the construction of reports. For example, the software asks "Who to Count," "Basis for Inclusion," and "Report Output." As a result, the report manager can generate a variety of reports, such as the number of clients who have a particular race, gender, age range, and income category. The data output is limited to frequency counts of categories and subcategories. Additionally, statistical analysis is not available in ClientTouch.

Potential users of ClientTouch should pay particular attention to its reporting capabilities. The report options are only limited by the data that the agency's System Administrator elects to incorporate into the system. For example, clinical staff might want a report on the number of participants in the parent education program that received referrals to a particular clinic in town. This report would look quite different from a year-end report to a foundation that funded one of the agency's programs. The Director of the Foundation might want the number of clients who participated in the special program, the number of low or middle-income clients, race, age, and the number and types of services provided to them.

*Data Module*. A wide variety of client information can be stored in the Data Module. For each client, agency personnel can request an extensive report that contains every piece of client data, or a short report can be generated about specific individuals. Additionally, case notes about clients may be added to their records and easily retrieved. A potential problem is that the data is not easily exported to other programs.

*System Administrator Module*. The ClientTouch Manual instructs the agency to select agency personnel to define specific roles. One person in the agency, System Administrator (SA), determines how clients' involvement with various parts of the agency will be reflected in the structure and content of the data collection and data entry. In essence, the unfolding structure anticipates the future needs of client data in every possible type of report or output to document the activities of the agency. For example, within the System Administration module, the SA makes a series of easily constructed lists. A click on the first icon produces a blank dropdown list that allows the SA to specify the largest organizing aspects of the agency called *Units.* One agency SA might enter the names of the three units of the agency that

serve clients, such as ''Social Services Department,'' ''Financial Aid,'' and ''Behavioral Health Department.'' The SA may list any number of units. Next, within this module, the second icon facilitates the listing of specific *Programs* in the agency. For example, the Social Services Department may have two programs called ''Family Services'' and ''Parent Training Program.'' The *Actions* icon in this module guides the SA to list all the actions or activities that are given to clients that may need to be counted in the future. The list of Actions might include ''Case Management,'' ''Training,'' ''Referral,'' and ''Assessment.'' ClientTouch allows the Administrator to specify *Funders* who are contributors or supporters of the agency. For example, the Administrator may designate ''School District Contract,'' ''United Way,'' and ''Smith Foundation'' as supporters of the various programs within the agency. Furthermore, within this module, the SA will construct lists for *Workers* (all personnel that work with clients or need access to the database), *Resource Types* (''Job training,'' ''Food,'' ''Classes,'' etc.), and *Actions* (''classes,'' ''counseling,'' ''referrals,'' and so forth). Finally, the SA can link any or all of the lists to better facilitate reporting in the future.

*Security Module*. Security is an essential requirement of any database and supporting data system. ClientTouch restricts access to the system by having different levels of security. Through a system of passwords, the System Administrator works within the Security Module to give various personnel different levels of access to the system. For example, workers are given the basic security or access level, but supervisors might be allowed greater access and control of the system. Only a small number of people can be given total control over the system, and, therefore, insure a safer system. The Data User is a person whose primary role is entering data and managing its contents. Similarly, the Reports User can have the authority to analyze the data and generate reports. As a cautionary note, the data file is partially encrypted so that some of the data is not surreptitiously accessible with word processing or spreadsheet software; however, some string variables, such as client names, street names, etc., are partially decipherable.

*Technical Problems.* When the original software was installed, the report section of the program produced compatibility problems with a different version of an OCDM file. When the company was contacted, the technical expert was very helpful to struggle through the nature

and source of the problem. A few weeks after the call, all owners of the software received a ''fix'' diskette to solve similar problems. Since that time other upgrades have arrived that continue to tweak an already useful database program.

*Potential Limitations*. The software was tested at the School of Social Work's mental health clinic. The various programs, services, and funding sources were easily organized within the Clinic's structure of interns, services to clients, and funding sources that are responsible for certain clients. ClientTouch's categories of Units, Workers, Resources, etc. (and the user constructed lists), make the program easy to learn and use; however, conceivably, a few large and complicated agencies may provide a complex of client services, program levels, and so forth that are too complicated for the categorical system of lists programmed into ClientTouch. Also, prospective users need remember that the ''statistics'' of the program are limited to frequency counts.

*Documentation*. The manual with ClientTouch was easy to read and use. The program was written in a relaxed, friendly format that reduced the level of stress associated with learning any new software. The tutorial gently coerced me into focusing on the report section of the program. The process helped me to see how the sample agency would utilize the software, and, therefore, its potential benefits. Finally, the documentation helped with the setup of the database by suggesting a process for determining the structure of the agency, the selection of personnel and their responsibilities relative to the database, and a step-by-step process for constructing the necessary lists and establishing their relationships to each other.

## *CONCLUSION*

ClientTouch is a reasonably sophisticated, but easy to learn, database for social service agencies. The documentation and software for ClientTouch enables the learner to setup a database to track the utilization of services, resources, staff, and clients. The program enables the agency to construct frequency reports that detail the particular characteristics of clients that receive specific services from various providers and programs within the agency.

Agencies that have multiple programs, various levels of care or services, or other levels of complexity should consider using Client-Touch. The program's versatility will fit a wide variety of settings, and administrators will only be limited by their degree of planning and anticipation for needed data and future output.

*Received: 07/25/00*
*Revised: 09/28/00*
*Accepted: 10/01/00*

# *Understanding Depression*

| *Software Review Summary* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Poor* | | | | | | | | | | *Excellent* |
| Performance | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Ease of Use | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Error Handling | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Documentation | 0 | 1 | 2 | 3 | 4 | 5 | 6 | **X** | 8 | 9 | 10 |
| Value for Money | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Overall Usefulness | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **X** | 9 | 10 |

*Software Product*: Understanding Depression CD-ROM. (Part of the Understanding Disability Series)

*Key Words*: Depression, mental illness, disability, mental health, computer-assisted learning.

*Product Summary*: This CD-ROM provides information about depression from both the consumer and the professional perspective, focusing on personal/family, treatment, employment, and community/cultural issues.

*Evaluation Summary*: This CD-ROM provides useful information about depression utilizing video and audio clips, slides, drawings, and animations of three consumers with depression as well as a variety of professionals to discuss the definition, treatment, personal/family, community, legal, and cultural factors related to depression. It is done in an attractive, well-organized, and user-friendly format.

The CD-ROM is accurate and up to date in providing information about depression. The multi-system approach fits well with the eco-

logical perspective used by social work and other community mental-health professionals. The CD-ROM would provide an excellent overview of depression for consumers of mental health services, their families, and employers. Its use as an educational tool for social work and other human service professionals is more limited. While it provides a good overview, it lacks the interactivity and complimentary resources (e.g., self-paced tutorials, quizzes, summary documents) that would make it an outstanding educational tool.

*Source*: The CD ROM was developed with a grant from the Department of Education, Rehabilitation Services Administration. Contact Information:

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*Product Detail*: The CD-ROM contains both MAC and PC versions of the program. I tested only the PC version with a Pentium 166, 64 meg. of memory, and 4X CD-ROM. It worked flawlessly. For the PC version, Quicktime must be installed before running the CD-ROM. Quicktime is provided on the CD-ROM. A computer with 32 meg. of memory, color monitor, CD-ROM and sound card is recommended. Text is provided with each scenario, so a sound card is not essential. The CD-ROM is simple to load and operate. The instructions on the CD-ROM are sufficient for most users and support is not likely to be needed. The program never crashed. The cost is of the CD is $25. Group rates are available for classes, etc.

*Reviewer Hardware and Software:* PC, Windows 95, 166 Pentium, 64 MB RAM, 4X CD-ROM, sound card, speakers.

*Reviewer:* Jerry Finn, Professor
University of New Hampshire
Department of Social Work
Durham, NH 03824
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*Organization*: This CD-ROM provides useful information about depression utilizing video and audio clips, slides, drawings, and animations of three consumers with depression as well as a variety of professionals to discuss the definition, treatment, personal/family, community, legal, and cultural factors related to depression. It is done in an attractive, well-organized, and user-friendly format. It takes about two hours to complete all of the units.

The CD-ROM is organized into 5 sections: Depression is . . . , Personal and Family, Community and Culture, Treatment, and Employment. Three consumers highlighting their personal experiences discuss each of these areas. In addition, professionals provide information about Medical/Legal and Functional aspects related to the five sections. Thus, a total of twenty-five learning segments are available. In addition, the CD-ROM contains a bibliography and a list of Websites with further information about depression.

Three consumers, an African-American female, a Euro-American male, and a Euro-American female who have been treated for depression relate their experiences through video and audio clips. One consumer also has related psychotic symptoms. All describe the symptoms of depression, their treatment process, their struggles with medication, and the impact of depression on their family, social functioning, self-esteem, and employment. The information provides three different, but overlapping views of depression. The scenarios both reinforce the professional description of depression and provide a stimulus for discussion of social issues such as stigma and discrimination related to depression.

Two sections, Medical/Legal and Functional, utilize video and audio clips of professionals to discuss depression in a more systematic manner. Information is provided about diagnosis, symptoms, and etiology of depression, issues of suicide and involuntary commitment, treatment options including inpatient and outpatient resources, case management, a brief discussion of issues of diversity related to diagnosis and treatment, and issues related to employment and the Americans with Disabilities Act. The Employment section also describes a Boston University model that utilizes a ''job coach'' and a continuum of support to help consumers with depression in finding and maintaining employment. Overall, the information is clearly and attractively presented.

*Intended Audience*: The authors do not describe their intended audience. I believe there are several audiences that would find the CD-

ROM useful. Consumers of mental health services and their families would find the information helpful in learning about some of the medical and social aspects of depression. The CD-ROM provides information clearly and in terms that a lay audience can understand. The CD-ROM can serve as a stimulus to families to promote questions and discussion with therapists and counselors. In addition, the CD-ROM presents those with depression as capable and able to function within society despite the hardships they face. This may help to provide hope and support to those and their families who are newly experiencing depression. The CD-ROM might be used in a waiting room of mental health clinic or therapist's office. It could be made available to families that have computers in their home (now about 40% of the US). It could also be of use as a form of public education in local libraries that are increasingly making computers available in their facilities. Finally, the CD-ROM would be of use in Employee Assistance Programs (EAP) to help both EPA professionals and company workers understand depression, especially as it impacts the workplace.

The CD-ROM might also be used as an educational tool in social work and other human service programs. It provides a good introduction to the topic of depression using a multisystem approach. The scenarios provide good material for class discussion, especially in the areas of personal and family strengths, the impact of culture and diversity, issues of stigma and discrimination, and community resource needs. A useful feature is an option to view an outline of the material in each section, and the outline can be easily printed.

As an educational tool, *Understanding Depression* is missing some elements that might promote and reinforce student learning. While the CD-ROM uses engaging video clips and animations, the interactive potential of a CD-ROM is not utilized to the fullest extent. First, the navigation is limited. One is able to select from the twenty-five topic areas, and it is possible to pause and stop in each area. Once in an area, however, it is not possible to fast forward or reverse the presentation. In addition, the introduction to the CD-ROM provides directions for using the CD-ROM. The Introduction can be skipped if desired. As soon as the button for the "menu" appears on the screen it is clickable, and can stop the introduction and take you straight to the menu. Since the CD-ROM takes about 2 hours to complete, it is likely that students would not view it in one sitting, or would want to come back to review material.

Other materials might be provided to enhance student (or consumer) learning. My wish list would include:

- Interactive quizzes that explain answers and/or provide links in the CD-ROM to the correct answer would promote learning;
- A table of common anti-depression medications with their effects and their side-effects;
- A depression assessment inventory (or several) that can be taken and scored;
- A summary of the validity and reliability of various measures of depression;
- A section describing common conditions that appear to be depression, but are not depression, e.g., drug interactions;
- A section that discusses depression in elders;
- A section that briefly discusses electro-convulsive therapy;
- A more comprehensive annotated bibliography. On the CD-ROM, only the first section of references is annotated. More references and more detailed abstracts might be provided;
- Internet sites are listed. These might be hot-linked so that they would take a viewer directly to the site when double-clicked;
- A summary of research data emphasizing issues of diversity, e.g., a table of the incidence of depression by age, race/ethnic group, sex, and income;
- A summary of common views of depression related to different ethnic and cultural groups along with implications for treatment. This is discussed in the CD-ROM, but more detail in written form would be useful;
- A discussion of consumer-based support groups, both in-person and online groups;
- Additional supportive resources such as national and state suicide hotline phone numbers.

*Validity*: The information provided appears to be current, up-to-date, and clearly presented. No information is presented, however, about the usefulness of the CD-ROM to consumers, educators, or mental health practitioners. Feedback from these constituencies would be useful.

*Received: 05/26/00*
*Accepted: 06/28/00*

# *Teen Choices and Challenges*

| *Software Review Summary* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Poor* | | | | | | | | | *Excellent* |
| Performance | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | **X** | 10 |
| Ease of Use | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Error Handling | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Documentation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **X** |
| Value for Money | NA | | | | | | | | | |

*Software Product*: Teen Choices and Challenges: Assessing and Addressing Adolescent Health Issues

*Keywords:* Survey, prevention, health education, kiosk software, CD-ROM questionnaire

*Product Summary*: Kaiser Permanente offers a mass-screening tool to evaluate adolescent health status. Combined with a counseling session, adolescents can be assessed as to their current status in health and mental health, educated on a variety of harmful behaviors, and healthy behaviors can be discussed and promoted.

*Evaluation Summary:* An excellent choice for agencies who wish to educate adolescents and prevent many injuries and illnesses. The software is easy to use, the questions are comprehensive and well crafted, and the photos reflect a multicultural group of teens. The manual is adequate and installation was smooth. Some of the adolescent jargon used may be more appropriate for urban youth. More information on confidentiality and emphasis on ensuring the privacy of the users would strengthen the program.

*Source*: Kaiser Permanente/Kaiser Foundation Health Plan, 1950 Franklin Street, 3rd Floor. Oakland, CA 94612 Phone (510) 987-3095

*Product Detail*: Currently no cost for the program, training, or technical support. Requires Win3.1 or higher, 486/66 MHz with 8 MB ram, sound card, 2x CD-ROM, 24 MB hard disk space. Win95/98 and NT, requires a minimum of 16 MB ram. Use of the video segment requires a fast system as any multi-media program would to avoid frame dropping.

*Reviewer Hardware and Software*: Reviewed on an IBM Pentium II 300 MHz running NT 4.0 (SP 4).

*Reviewer*: Joseph Polauf, MPA, MSW, Systems Analyst
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Kaiser Permanente, the national health care corporation, recognizes that adolescents are an underserved population with a serious and growing risk for illnesses and injuries–and that most of these are preventable. In response, Kaiser assembled a team of adolescent health specialists, physicians, health educators and social workers who developed an intervention named ''The Teen Challenge Program,'' a mass screening and education component for health promotion and harm prevention for youths aged 13 through 19. The format is similar to most in-person interview scenarios: the interviewee is given a questionnaire and afterwards meets with a live person to review the responses. In this case, the questionnaire is delivered via a CD-ROM and the interviewee keys in or mouse-clicks answers instead of using pen and paper. For the follow-up session, the interviewee is to see an in-person health counselor, so the software would work best in settings, such as community-based organizations, school-based services, non-profit social services agencies, medical clinics, and similar agencies that can provide such a trained staff. The content area of the questionnaire is designed to fulfill the guidelines of the American Medical Association's Guidelines for Adolescent Preventive Services.

It is easy to image how the Teen Challenge Program could be set-up. The agency installs a computer loaded with the ''Teen Choices

and Challenges'' CD-ROM software in a secure, private area where the teenaged client could sit down and work though the questionnaire. In the course of watching the CD-ROM, questions are presented one at a time, or one per screen. Each question is narrated in a neutral, matter-of-fact tone by an adult woman. Some of the language is delivered using slang, typically slang that is used in more urban areas. By adding an audio track that reads the questions aloud, reading ability is not a requirement for software use. Fortunately, for those that can read, the audio track can be turned off. The questions fall into ten topic areas: (1) Healthcare; (2) Caring for your body; (3) Feelings; (4) Weapons; (5) Tobacco; (6) Alcohol; (7) Marijuana; (8) Other Drugs; (9) Safety; and (10) Sex/Relationships. The questions are mostly clear and direct, such as ''Have you had a medical check-up in the last two years?'', ''Is there an adult you can really talk to about your problems?'', and ''Do you brush your teeth every night?''. (The degree that the adolescent user can answer such questions without a sense of invasion is not clear, but this reviewer certainly felt odd when faced with many of these questions.) At the end of each section, the program makes some general comments, and offers advice like eat a healthy diet, or exercise more. Once the adolescent is finished with the entire questionnaire, several things happen. The computer generates a report for the adolescent that highlights what is healthy and what is risky about the respondent's health. It doesn't make an assessment or score the results, but simply reiterates the response in a manner that also suggests some proactive healthy behaviors (like seeing a dentist or watching less TV). The counselor is provided a similar report but without the suggestions. The problems and concerns are highlighted, as well as the healthy behaviors, and a nice breakout of each issue in each topic area is provided. The counselor also is alerted to which questions the teen elected to not answer, which is an option for the teen if answering the question will initiate a mandated report to authorities. With the printed reports in hand, both the adolescent and the counselor are ready to have a focused and in-depth discussion of the adolescent's health.

The initial video of the program discusses some aspects of confidentiality, but it is a sensitive area in light of the recent events in lack of privacy with web shopping and so-called ''identity-theft.'' The adolescents are informed that they can choose not to respond to questions, but the counselor is informed of exactly what questions were not

responded to. This can be helpful as the counselor will want to know why wasn't the question answered, however, it doesn't respect the adolescent's understanding that not answering the question will render the question off-limits. The discussion around the use of the CD-ROM, the confidentiality issues, the need for the counselor to break confidentiality (as in the case of potential suicide risk) should be done with a genuine human begin, not by using the video on the CD-ROM. The engagement of the adolescent will most likely be strengthened by such a live discussion, which could advert a potential mistrust and anger later on. A confidentiality discussion between the counselor and adolescent is recommended before computer interaction begins.

The software stores the questionnaires and allows summary reports to be created, lending itself to many research and evaluation efforts the host agency may wish to undertake. The reports are uncomplicated and easy to create using the administrator menu. The overall ease of use for the adolescents and the agencies make Teen Choices and Challenges very accessible. The questions are not hard to understand, and most are ''yes/no'' format. There are two screen navigation buttons, ''Back'' and ''Exit.'' The only other option the user can set is the sound (on or off). The program cannot be modified beyond its goal of asking health questions. The questions cannot be reworded or added to. The administrator can have the questionnaire skip sections if needed, but not particular questions.

The software was tested on an IBM Pentium 300, running Windows NT 4.0, and a Pentium 200, running Windows 98. The CD-ROM lacks the auto-run feature, which would help installation. The QuickTime video software was not available for NT on the CD-ROM. The videos are small, 30 seconds to 90 seconds, and mostly still images with an audio track. They discuss the importance of good health and make general recommendations to stay healthy, like tooth brushing after eating candy. Except for the QuickTime video player, no other software is required. The software can also be configured to do nothing but provide these educational videos. In this mode, the software acts much like an educational kiosk. No data is recorded and users are free to select whatever topic they wish to see a video on without a log-on.

The CD-ROM could not be installed or accessed over a network, which would have been helpful for distributing it to PCs without a CD-ROM drive. Error messages were relevant and helpful to resolve unintended events. No events were able to hang the software or render

it inoperable. The software relies on both the mouse and the keyboard. Several Windows conventions, like using the tab key to move the focus on the screen, are not implemented. Keyboard purists, who hate to move to the mouse, will have to alternate between mouse clicks and using ''Enter'' key entries. However, given that the users will likely only use the software once or twice, this is a small issue.

The transitions between each topic area are animated by photos that fly in from different points on the screen. Fading, feathering and assorted graphical techniques add some visual interest, but this is an area where art is in the eye of the beholder, and the spinning cheerleader photo seemed a bit much. Mostly, the photos portray a multicultural group of adolescents engaging in activities related to the current topic area. For example, the topic of marijuana had a photo of a young person lighting a marijuana cigarette. There are no elaborate production features such as cartoons or music or highly stylized buttons, and this is a good thing as the subject matter is serious. At the end of each topic area, the Teen Choices and Challenges software informs the adolescent of the relevance of the health concerns in that topic, both in text and audio output, and with emphasis on the need for healthy behaviors. A brief credits section loads when the software is first started and logged on to by the administrator. The software is adequately documented in a 20-page manual.

No support was mentioned in the documentation that was provided for the review software. The reviewer's notes state that agencies are trained prior to use of the software by the vendor. This is very helpful to know as it is anticipated that the vendor will also provide consultation on the agency's issues with protecting confidentiality and having a trained counselor available for follow-up. The limited scope and functionality makes it easy to install and use, so for most agencies it will not be troublesome software. A fact sheet provided with the software reported on the pilot evaluation of the program and listed some rather amazing statistics. A high number of teens liked the program, thought it was helpful, and would likely make changes in their lifestyle as a result of using the software and follow-up counseling session. The evaluative research could have been strengthened with a control group, or perhaps more empirically based research on the merits of the approach.

The major concern is in privacy. The software does not require that the teens use a name or identifying information; however, the informa-

tion is stored and can be associated to the teen without difficulty. For example, each data file, when created, receives a timestamp by the operating system. If a sign-in sheet was used for the software, the files can be associated to individuals using the timestamp for the data files and the matching time periods recorded on the sign-in sheet. The laws on confidentiality, medical records, and electronic storage of highly sensitive information (HIV status, drug use, mental health, sexual orientation, etc.) vary from state to state, and within agencies as well. The Teen Choices and Challenges program, like all other software programs, cannot control the implementation of the software in all the various settings, or the safeguarding of the information it stores. In this day and age of data sharing between institutions, the argument that teens should be discouraged from using computerized assessment tools that probe their most personal lifestyle choices and experiences can be made. At a minimum, the teen could be fully informed about the manner in which their record is stored and who will have access to it.

In summary, engaging adolescents on health issues has become increasingly important in the face of rising rates of teen violence, sexually transmitted diseases, and tobacco, drug and alcohol abuse. The most effective prevention efforts occur at the individual level and involves the teenager discussing his or her personal activities and lifestyle choices with a professional adult, who is in the position to provide counseling, education, and referrals. The use of interactive multi-media as a tool to promote communication deserves attention by all health care professionals who serve adolescents, and optimistic should guide evaluations. However, before this particular software is used in a setting where users might be unsupervised, or the agency lacks the ability to protect the records (and the PC) in a secure manner, the privacy and security issues need to be addressed.

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# *BOOK REVIEWS*

PERSONAL COMPUTER APPLICATIONS IN THE SOCIAL SCIENCES, David A. Patterson. *Boston: Allyn & Bacon, 2000. 335 pages, ISBN: 0-205-28537-6*

There is a crucial purpose to this book that is not specifically stated by the author, but is written between the lines. That purpose is to vividly demonstrate to readers how technology can be a significant tool in the helping professions. The author seems to be a man on a mission, and a noble one, to not only inform us about technology's capabilities, which he clearly does, but to convert us to believers in the utility of technology in service provision. He is highly skilled in the extensive number of ways to make technology a strong tool in helping our clients and he seems determined to have others know what he knows. The ardor, with which he provides relevant and creative examples of technology's use, is testament to his passion for his subject. This clearly written and highly illustrative application of technology to social services usage will be a breath of fresh air to those who have been forced, in the past, to use business, education, and science oriented examples.

Writing a book about the technology of computers at the turn of the millennium is much like trying to write a book about managed care during this same time. If you bend down to tie your shoe, you may find yourself out of date by the time you have negotiated a double knot. Yet, many would argue, books need to be written. The author of this one tries to avoid such instant obsolescence by focusing much of the book on the development of understanding of underlying notions and

themes that guide technology's use. At the same time, he acknowledges that what each of us secretly desires is a concise "cookbook" that tells us exactly how to do everything there is to be done in the field.

This book is Patterson's effort to address both issues. As he states, "In this book, I have tried to steer a course between providing . . . step-by-step descriptions of specific uses of personal computers in social service tasks and delineating principles, concepts, and skills that transcend particular software, hardware, or tasks" (p. xiii). Much like we help students to acquire the knowledge, skills, and values to practice social work under a variety of conditions, he has tried to create a document that will provide readers with the "knowledge, skills, and confidence sufficient to fluidly adapt existing and emergent information technology to the service of clients" (p. xiv). How well the reader thinks he does this may depend on a particular person's previous exposure to information technology, since some of the chapters seem particularly technical while others offer more of a conceptual foundation with a degree of application guidance.

The book is very comprehensive in terms of the range of technology topics covered, offering something for everyone. It addresses the nuts and bolts of computer functioning and provides guidance on how to buy a computer that meets one's individual needs. The book also looks at a variety of software applications, such as uses of spreadsheets, databases, graphics and presentation software, and using word processing software for much more creative activities than letter or report writing. The Internet's use for individual and group communication as well as for access to a myriad of resources useful to social services staff and students is presented, and the ethical issues abounding in the technology of the new millennium are addressed. As mentioned previously, some sections are much more detailed than others reflecting, perhaps, the areas of the author's greatest interest and expertise, but all chapters leave one much more knowledgeable about the issues discussed. After reading the first chapter, the book can also can be examined in sections, based on what information technology (IT) skill one wants to master. In fact, if one tried to sit down and read the whole book straight through, a sense of being inundated would likely overtake the reader.

The audience for this work is two-fold, as described by the author. He wants to speak to both students on undergraduate and graduate levels who want to use technology and practitioners who want to update their technology skills. I think it is also useful for people who

want to know the ''state of the art'' use of technology in social services, on a personal computing level, even if they are not prepared to become more computer savvy at the moment.

The structure of the book is logical and coherent. At the beginning of each chapter, Patterson lays out a plan including what it will cover and what his goal is. He also summarizes at the end and offers some suggested exercises to practice what has just been discussed. To a large degree, he meets the goals he sets for each chapter.

In the first chapter, ''Comes A Revolution,'' he lays out what he sees as advantages in ''communication, collaboration, and cooperation'' of the personal computer. These include: communication that is not necessarily synchronous, tools for outcomes and assessment that are easily represented, more options in terms of communication capabilities, and a wider range of locations for work functioning. The author also begins his ''plea'' to our professions to see the value of technology in the services we provide. He states: ''If we see the personal computer as a tool for personal and creative expression, as an opportunity to develop skills of value in an age of information, we are thereby empowered by embracing the utility of the personal computer. Moreover, and perhaps more importantly, we are enabled in the performance of our duties to those whom we serve'' (p. 5).

The next chapter deals with hardware and helps us to learn about such things as the component parts of a computer and its accessories, processing speed and space, and the pros and cons of keeping things in the electronic world instead of converting to hard copy. As someone who has learned technology on a ''need to know'' basis, I found this chapter useful. Many of the basics of a Computer 101 course were news to me, because I had never enrolled in such a course. This text gives a clear, condensed version of how to understand the inner workings of those machines that I have come to rely on so heavily. I can't say I could now fix one of them, but that mysterious black box feeling is gone, and that is comforting.

The chapter on spreadsheets is the longest in the book, and one can understand why after finishing it. Patterson covers an amazing amount of material and much of it is about creative uses for spreadsheets, which he considers an underutilized resource given their flexibility, price, and availability. He discusses data collection procedures and data analysis on a bivariate and multivariate level, as well as single system design and fiscal management. One slight problem I found was

wading through some spreadsheet material, which I may never use if I were a clinician, to find other methods of using the software that would make my job a bit easier. For example, single system design charting, which was quite impressive, was imbedded between bivariate analysis, multivariate analysis, and fiscal management.

Patterson's chapter on databases is very useful to people who are befuddled by large databases but want to have some personal method of managing data for their particular caseload, job function, course load, or the like. Utilizing two software applications, Lotus Approach and Microsoft Access, he explores how data can be entered, stored, organized, selected, and formatted into reports for the powers-that-be. This is also a fairly technical chapter, but utilizing Access, I was able to follow his instructions and develop a database that could, quite easily, be used to view client information from a variety of perspectives once the initial building of the file was completed.

The next two chapters cover graphics and ways of using word processing software that expands the range of possibilities past what many usually consider the limits of such applications. Graphic representations of client level data are described using spreadsheet data. Patterson also does an ingenious job of showing how you can make ecomaps and genograms using spreadsheet graphics. This could be valuable to practitioners since the only software, with which I am familiar that is designed for this purpose, is still fairly expensive. He also shows us how to use word processing for ''smart notes,'' interactive and collaborative documents, mail merges, and web page design. I greatly prefer someone else, almost anyone else, to do mail merges, but it is good to have that knowledge readily available.

What I thought was useful, from a direct service perspective, was the strategy for recording notes and the interactive documents. On the former topic, there would be some up front work getting used to it, but the organization it would bring to case notes could be invaluable. On the latter topic, I immediately thought of how much information is available on the Internet if only someone retrieves it and distributes it. Patterson offers an example of a clinical director using interactive documents to pass on web sites about depression to her/his clinicians as a way of helping them to keep up with the ever-changing wealth of knowledge in the field. Both these areas have great potential for enhancing our expertise and our service to clients.

The chapter on presentation software is for a highly select audience who may want to create a slide show using IT, and who, more importantly, has the capacity to visually project the final product. Even at a university, albeit not a huge one, we are limited in this capacity due to the costs of hardware, but there is always tomorrow. Since the future comes so quickly in the technology field, we may find a wider audience for this application sooner than later. Patterson provides three options for creating slide shows and the procedures for converting them to training packages and mounting them for web page viewing.

No book on IT would be complete without a chapter, or two, on the Internet. This work is no exception. Patterson, however, seems to be fairly brief on this topic. Since other authors have recently written texts specifically on that subject, it is not so much an oversight as a conscious decision, I imagine, to focus on what has not been widely written about. The author does a successful job of giving the reader information about how to hook up to the Internet, how to use email, how to effectively utilize search engines, and the various cyberspace applications in social service practice. I would have liked to see a bit more discussion on how to evaluate sites for their reliability and accuracy, since there is much questionable information out there for the neophyte to sort through.

The final chapter on ethics is one that is extremely important to the use of informational technology in social services, especially in light of the limited discussion of the issue in the literature. Patterson addresses issues of informed consent in the provision of computer-based treatment, assessment and computer-mediated communications; confidentiality of communication and storage of client data; use of software and other IT resources; and use of someone else's intellectual property.

I came away from reading this chapter wishing the author had been even stronger in his warnings about the potential ethical problems in using IT as it relates to direct contact with clients. To his credit, he was very clear on the use of chatrooms, e-mail, and video conferencing when he said, "... social service providers are ill advised to use chat technologies to conduct group therapy or recommend the use of chat support groups unless there are substantial and dramatic improvements in their safety and security" (p. 305).

It was the areas under the heading of informed consent that left me questioning. In our profession we require informed consent to be meaningful, not just legally binding. Our clients must be *fully* aware of the

risks and benefits of any product or service that we provide or suggest. I would have liked to see something about the need to assess a client for technology "literacy" so we could decide if she/he is likely to be able to make an informed decision on the technology issue. This is not in any way to undermine the ethical principle of client right to responsible self-determination. It is to say that our ethical responsibility to inform is so paramount and complex in this area that it may currently deter the use of IT service delivery in some instances, if not adequately addressed.

I really wanted to like this book, because I think it is so important to have social workers knowledgeable about technology. After having read it, I can honestly say I did. Furthermore, I think it is a useful and timely book for the field with only a few glitches.

For example, an editor should have caught a couple of glaring technical errors such as the address for Gary Holden's social work search engine World Wide Web Resources for Social Workers (the correct address is: (*http://www.nyu.edu/socialwork/wwwrsw/*) or the omission of the Social Work Access Network, or SWAN, at *(http://www.sc.edu/swan/)*, which I have found useful on a number of occasions.

A suggestion that might have made this book even more user friendly would be to identify which sections are more specifically for direct practice workers and which have more relevance to supervisory or administrative types. While this might seem to compartmentalize the book too much for some people, I think it would aid workers in quickly finding procedures that are relevant to their job functions at the time.

In the final analysis, David Patterson provides social work professionals with a strong message about how to use personal computers and a wealth of good reasons to hop on the speeding train of information technology before it accelerates further, leaving them and their clients behind. I hope his words are heeded.

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SOCIAL WORK AND THE WEB, R. Vernon and D. Lynch. *CA: Wadsworth/Thomson Learning, 2000, 292 pages, ISBN: 0-534-365833*.

Considering the dynamic changes in the technology, I first questioned why anyone would write a book about the Web that was bound to be obsolete within a year. The authors themselves, who have been using the Web for teaching and practice since the early 1990s, admit that parts of the book are probably already obsolete. Although some of the web pages depicted in the book have probably changed, the discussion of basic Web concepts is unlikely to change in the near future. The book fulfills its stated purpose to help social workers in gathering information from the Web, critically analyzing it, and incorporating it into professional practice. The authors faithfully follow the theme of the Web and social work throughout the book by giving applicable examples, case studies, and discussing relevant issues for social work practice. The book is written with the assumption that the reader has at least a basic familiarity with personal computers. I highly recommend this book for use in introductory ''Social Work and Technology'' courses on an undergraduate and graduate level. It is also an excellent guide for individuals to obtain some ''just in time'' information.

The authors have written primarily for the IBM type PC and have chosen Windows '95 as the operating system. They have written for ''typical-use'' so readers may have to adapt or get help with their specific situation. The book is also written for the two most common browsers–Netscape Communicator/Navigator Version 4.0 and Microsoft Internet Explorer Version 4.0. The authors address many ''how to do'' for both of these browsers. The book shows pictures of the computer screen with specific instructions on how to perform various operations such as how to explore a Web ring, setting security options, or saving all or part of a web page to a word processor, etc. Although some of these operations may change, the reader should gain the ability to utilize critical thinking skills to figure out what to do and adapt to changes on the Web. Since most of the chapters use a practical ''how to do'' format, the authors suggest that the readers sit at their computer and follow the instructions. At the end of each chapter there are ''exercises'' for the reader, questions for discussion, references, and additional readings. The reader should feel free to skip around the chapters and use the book as a guide. However, this

reviewer found that each chapter had useful tidbits of information unknown to her before. It seems like the authors have thought of everything!

The book is divided into three major parts: (I) Basic Concepts, (II) Using the Web, and (III) Beyond the Surf. Basic Concepts includes the basic concepts about the Web and its relationship to social work, browser basics, and security and confidentiality. Part II focuses on actually ''Using the Web'' with information on how to use search engines and directories, finding URLs, and evaluating and using Web information. In Part III ''Beyond the Surf'' the authors discuss basic issues on designing an agency website. In the last chapter the authors reflect on the ''Future of Social Work Practice and the Web.''

One of the more important chapters is ''Security and Confidentiality'' in Part I. The authors warn that the workplace can be ripe for breaches in confidentiality ranging from outside hackers invading the system to the tech people who may view your electronic transactions while maintaining the system or other agency employees who do not have the same social work standards. Although security requirements will depend on variations in the computer systems and the need for technical sophistication, the book gives information on what readers themselves need to do to maintain minimum technical security. First, the authors warn never to disable the security warnings on the computer and emphasize that anonymity on the web is an illusion. The author's note that an entire history of computer browsing, since the moment the computer was turned on, can still be in one's computer. They give step-by-step instructions on how the reader can erase browsing records including the temporary history, session history, and permanent history file and then ''take out the trash.'' In addition the authors suggest that the agency purchase a basic security firewall and have a virus-checking program installed.

In Part II, ''Using the Web,'' the authors present a quick table of search engines to use based on the type of information that one needs. The authors admit that there is a lot of ''cybertrash'' in cyberspace and devote the entire chapter 6 on ''Evaluating and Using Web Information.'' The authors detail how the reader can turn into a web sleuth by pursuing a number of steps to determine authenticity, objectivity, accuracy, currency, organizational mission, etc. The authors warn about secret hidden agendas and disguised mission statements by many websites. They urge readers to examine the website sponsor's external

links, citing their rule that ''By their links ye shall know them!'' The authors also give details on how to track down a Web author to determine legitimacy and background.

In Part III, the authors dispel the myth that developing websites is easy. Although the actual nuts and bolts of developing a website is beyond the scope of the book, the chapter on ''Designing Websites for Agencies and Practice'' gives the reader a good overview of the issues. The authors acknowledge the importance of a Web presence and warn that a website should not be equated with an agency brochure. Although the authors give many caveats, they encourage agency staff to learn HTML and develop their own website, engaging consultants only at specific points in the design, implementation, and maintenance process. They are especially concerned that consultants will not be able to develop a design that is representative of a social service agency and emphasize design development by the social service staff.

The chapter on developing websites is where the authors and reviewer part company. The reviewer agrees with many issues expressed by the authors surrounding a web presence; however, the authors are obsessively concerned that a design by a professional webmaster will not fairly represent the social service agency. This reviewer believes that hiring a professional webmaster does not negate the agency's responsibility to be active in planning and directing the development of the website. The development of a website by inexperienced agency staff most likely will not serve the agency well. Unfortunately, many agencies do not understand the value of the Web in conducting education and public relations. An agency website is an excellent vehicle to educate the public, constituencies, and funders regarding the agency's mission, programs, and current activities through online newsletters, chats, etc. A website literally puts the agency's ''best face forward'' for the world to see. The website presentation may be the impetus for a client's call, a professional's referral, a volunteer contact, or a potential funder's interest. Therefore designing and maintaining a website is a job for a professional webmaster, not for novice agency staff. An agency may want to weigh the cost-benefits of hiring a professional to work in-house or contracting out. A viable website will cost money, but the agency should also reap the benefits.

The last chapter on ''Future Social Work Practice and the Web''

explores a ''view'' of the future and predicts trends. While the authors speculate that the nine core areas for studying social work will remain, they predict a paradigm shift through distance education and communication technologies in social work practice. Some of the future predictions are currently becoming a reality. These include working at home, changes in the dimensions of human communications, issues of access, and empowerment. One prediction is the online processing of topics for the NASW Delegate Assembly so that members may be more resilient to emerging issues. The authors end by warning that technology can seldom fix social problems and we must remain vigilant even as we adapt to new technologies.

In summary, this book is chocked full of practical advice and ''how to's'' and will make an excellent classroom text as well as a practical guide for both inexperienced and newly experienced Web users.

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TEACHING ONLINE, William A. Draves. *River Falls, WI: Lern Books, 2000, 127 pages, ISBN: 1-57722-016-1.*

The increasing popularity of online education means that more people will be both experiencing and developing on-line courses. The author predicts that during this century, fifty percent of all learning will be conducted on the Internet. This text directs itself to assisting readers to teach online courses successfully, including how to structure, prepare, teach and promote these offerings. Adult trainers and educators, interested in lifelong learning and exploring online teaching, are the target groups for this text. This is clearly not an academic

text with detailed referencing and bibliography. It is based largely on ''oral, anecdotal and experiential'' evidence and reflects an easy-to-read, ''How To'' format. Rather than offering technical details and explanations, the book emphasizes teaching issues in an online environment. While failing to incorporate the growing body of research findings in online education is a considerable limitation, the details and suggestions offered are worth the easy read.

The author's perspective reflects a lifelong learning specialty with an adult emphasis. His 25 years of experience in adult learning are referred to, but there is no mention of the extent of his direct experience with online learning. He is the President of the Learning Resources Network (LERN), which is dedicated to lifelong learning program and supports a website at <www.lern.org>. The text is divided into four parts: Learning in the 21st Century; Planning Your Online Course; Developing Your Online Course; and Teaching Your Online Course. Within these four parts, fifteen chapters are located with the following headings: Lifelong Learning in the 21st Century; How the Internet Will Change What We Learn; How Education Will Change; Learning Online; Learning in Person; How Adults Learn; The Economics of Online Courses; What An Online Classroom Looks Like; Planning Your Online Course; Building Online Content; Creating Online Interaction; Designing Online Assessment; Teaching Your Online Course; Promoting Your Online Course; and Summary.

The content is very clearly expressed and easy to read. Although framed with some folksy context, the details are structured and expressed in a useful way and are quite appropriate for teachers and trainers who are just getting into online delivery. Some of the detail would also be useful to professionals already involved in online education. Having just completed and evaluated my first online course (MacFadden, Dumbrill and Maiter, in press), I was pleased with how much our development followed some of the precepts within this text. On the other hand, I could see how some features were missing. As an example, in our experience some knowledge of the technology for developers and facilitators was crucial. Using tools (e.g., PowerPoint with audio) that cannot be accessed easily or used simply and effectively by all participants can lead to early failure that can be fatal in an online course. We had to offer more options and deemphasize some of the more dynamic technologies to avoid disenfranchising and frus-

trating some learners. The author of the text states (p. 64) that ''. . . you do not have to know much of anything about technology in order to teach online . . .'' This was not our experience.

The pragmatic focus, enriched with tips and caveats, would be welcomed by new developers and those considering exploring this process. The author views the interaction within online courses as the ''heart and soul'' of the experience. This includes interactions between the teacher and learner and among learners. A section on stimulating interaction contains some tips for stimulating discussion and moderating such as: get one or two learners to make initial comments; never let a comment go unnoticed; avoid authoritative statements; look for ''door openers'' (e.g., ''Tell me more''); find connections between comments and questions; offer rewards; have expectations for participation; and encourage shy and frustrated learners.

The author envisages a future where online education will be pervasive. Learning will be of three types: totally online (10%-20%), totally in-person (10%-20%), and a mix of online and in-person (60%-80%). Teaching will change dramatically. A few teachers will become worldwide authorities, commanding an average of 1,000 or more participants per class. Most teachers will become experts in in-person teaching that focuses on the integration of learning, including emotional, experiential, and group experiences. The need for expensive infrastructures will diminish and courses will be less expensive and extremely specialized. The notion of one course instructor (i.e., world authority) for thousands of learners with the expectation of increased interaction and discussion with the instructor should prove challenging. The author predicts that around fifty percent of the curriculum for colleges and universities will be purchased from another college or university.

In summary, the book achieves its goal of educating the reader about teaching and developing online courses in a simple and readable fashion. While the content would have been strengthened through referencing the growing literature, the good detail and suggestions make it worth reading. A useful companion text that would add considerable depth in the theoretical, empirical, and pedagogical areas is *Web-Based Instruction* by Baudrul Kahn.

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HOW TO USE COMPUTERS AND CYBERSPACE IN THE CLINICAL PRACTICE OF PSYCHOTHERAPY, Jeri Fink. *NJ: Jason Aronson, Inc., 1999, 328 pages, ISBN 0-7657-0173-1*

Dr. Fink's book, *How to Use Computers and Cyberspace in the Clinical Practice of Psychotherapy,* takes the reader on an extensive, scenic trip through the winding highway of information technology. The author has put together a collection of chapters that are relevant for the novice and the technologically experienced reader. For the novice, this book provides a vocabulary building experience and for the more knowledgeable reader, Dr. Fink provides an intelligent discourse of the use of ''technology'' in psychology. The author presents the audience with a succinct history of the use of computers in the helping professions. Dr. Fink and the contributors provide a strong argument for not ignoring ''telepresence,'' the concept that contemporary computer and information technology is offering the field of psychology. The reader, however, should not be fooled by the title. This book is not a ''how to'' manual for the use of technology and computers in clinical practice. Rather, it is an eclectic collection of writings provid-

ing the reader with an understanding of the vast array of possibilities associated with cyberspace and its use with psychology. The book does offer the reader a few chapters of useful anecdotal experiences and the contributors' personal insights into the use of computer and Internet technology in delivering psychological services. Even though ethical concerns related to psychology and cyberspace are addressed by the author in two separate chapters, these topics seem to lack in depth coverage. The author has put together a well-researched book that would appeal to the practicing professional as well as the graduate student who is interested in computers, cyberspace, and psychology.

The author, in Part 1, *The Online Couch*, takes the reader on a journey of exploration providing a vocabulary building experience and, at times, an esoteric and provocative discourse on technology and psychology. The author's comparison of the use of the telephone in psychotherapy in Chapter 1, *Will the Real Illusion Please Stand Up*, to the modern use of computers and Internet is both a provocative and enlightening discussion, especially for the more dogmatic and/or traditionalist reader. Chapter 2, *Climbing On Board the Couch: Specific Phobias and Virtual Reality Intervention*, and Chapter 3, *Cyberspeak!: Psychotherapy and Computer-Mediated Communication*, take the reader into virtual reality therapy with case examples and discussion. The concept of "Virtual Ego" is introduced and explored later in subsequent chapters. Dr. Fink continues to take the reader on a cerebral excursion into the individual's realities and the alternate realities related to computer, cyberspace, and a modern Internet-society [Netizens]. In chapter 11, *Dr. Rob's Story: A Day in the Life of a Virtual Clinician*, contributor Rob Bischoff provides a very readable view into the cyber-therapist's clinical day. Bischoff's account of his early introduction into the use of a computer for clinical practice is sure to bring back memories to the computer literate reader.

In Part II, Questions and Answers for Emerging Treatments In Psychotechology, Dr. Fink helps the reader continue the journey in Psychotechology. In "*Where is Noosphere?*", Dr. Fink engages the reader in a look at Carl Jung's collective unconscious and its relationship to cyberspace. The author continues to help the reader explore cyberspace by providing short essays addressing chat rooms, email, and newsgroups. Dr. Fink further utilizes these chapters to explore the psychology of cyberspace and gender, equality, interaction, love, ADD, etc. This is exemplified in the chapter *What Is a Disembodied*

*Gender?* The reader is invited to look at sexual identity and communication styles via the chat room and the reader is provided with research information and anecdotal information. The author, in Part 2, provides the reader with a vast number of references and enlightening discourse, from cyber self-help groups to managed care. For the reader who is concerned about telemedicine, Dr. Fink, in *What Is Virtual Healthcare and How Does It Work in a Managed Care World,* provides an informative view of how managed care companies are paying attention to the growing arena of electronic medicine and care.

Dr. Fink concludes this book in Part 3, *Internet for Clinicians*, by providing a very extensive and relevant list of resources that cover Internet, email discussion groups, self-help groups, computers and Internet glossary.

In summary, Dr. Fink provides the reader with broad-based knowledge that both the novice as well as the computer literate and Internet savvy reader can find useful. The more philosophically inclined reader will also enjoy the intellectual examination of reality and virtual reality. The author's use of cyber-speak or the new vocabulary of the techno age may be somewhat confusing for the novice in the beginning but the explanations should help, along with the excellent glossary. As stated earlier this book is not a how to manual for providing clinical psychotherapy but rather, a well-documented book introducing the reader to the concept of mental health treatment and the possible use of the tools such as Internet, email, etc., for the possible delivery of some services.

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CYBERSEDUCTION, REALITY IN THE AGE OF PSYCHO-TECHNOLOGY, Jeri Fink. *New York: Prometheus books, 1999, 308 pages, ISBN: 1-5739-2743-0.*

Dr. Jeri Fink, probably known to readers of this journal from her other book, *How to Use Computers and Cyberspace in the Clinical Practice of Psychotherapy* (see review, this issue) has ventured into the intellectual kitchen and started making dishes using some less conventional combinations of ingredients. As a starting point, she has combined (evolutionary) psychology and technology resulting in the ''radical new concept'' of psychotechnology (see the author's personal website at http://psychotechnology.com/). This is, however, only an intermediate result for it is mixed with Dr. Fink's amazement by people being seduced with virtual reality. The latter is broadly defined, ranging from more traditional media such as television and telephone to the latest technology. This results in ''cyberseduction,'' yet another new concept meriting a 300-page book. Cyberseduction is, however, not defined. Rather, it is the question (why are people seduced by virtual reality) that the author seeks to answer throughout the book.

In order to provide these answers, Dr. Fink provides the reader with 25 short chapters, organised in three parts. In the first part, the author relates the distinction between virtuality and actuality to the old philosophical categories of mind and body. As such, the whole notion of virtual reality is unveiled as not being a revolution but something with a long history. In the second part of the book, the conceptual framework of ego psychology is used to reflect on technology. As such, chapters in this part focus on ''self,'' ''narcissism'' or ''presence.'' Finally, the last part of the book is ''about exercising your consciousness and taking control of cyberspace . . . it's about learning the psychological implications of disembodied space.''

To be frank, I did not enjoy digesting this result of Dr. Fink's cooking. This was due to both the format and the contents. In terms of format, I believe that a good text reflects the structure of a good meal: an appetiser, the main course, followed by some lighter dessert. Or, in terms of writing: an introduction to set the scene and grasp the reader's interest, a main section with the writer's ideas in full detail, and a concluding section that both summarises and reflects on the main results. Not so in Dr. Fink's kitchen. You just get the main course,

without any preamble, without any digestive. Both the book and the three parts lack both introductions and conclusions. In terms of overall structure of this book, Fink has not attempted to make it easy for the reader. The same goes for her style of writing. The chapters do not develop clear lines of thoughts. Instead, initial ideas form the starting point for sidesteps and branching after branching on the lines of thoughts. Readers hoping that all these sidelines will be brought back together at the end of chapters are in for a disappointment. In terms of content, the book did not manage to present new ideas. Spending several hours reading it and being eager to pick up new ideas, my conclusion unfortunately comes down to still having neither a clear description of cyberseduction nor being able to relate any of the abundant statements of this book to my own work. Moreover, the ideas provided by Dr. Fink do not seem to have been scrutinised by empirical validation or critical reflection. For example, when writing about virtual communities, Fink states that because of the constant rise and fall of communal spaces, loyalty is not particularly strong. This statement neglects to take into account the relation between ''real'' and ''virtual'' communities, nor does it match the few empirical data that we have on loyalty or reciprocity in virtual communities (e.g., Wellman, 1999).

Being confronted with such a book (and as a committed reviewer, not being able to put it aside), there are only a couple of options. The initial reaction is to doubt one's own intellect and consider the possibility of not having enough knowledge to be able to understand the publication. On second thought, given my professional background, this is not a serious option.

Therefore, the second reaction is to doubt the author's capacity to bring together many new strains of thought into a coherent book. One is reminded of the Dr. Fox phenomenon as described by Scott Armstrong in the early eighties (Armstrong, 1980). This Dr. Fox was a distinguished looking actor with an impressive but fictitious background description. He was asked to give a lecture on a subject he knew nothing about: mathematical game theory as applied to physician education. Although the lecture was full of double talk, false logic, contradictory statements, none of the audience realised the lecture was pure nonsense. So Armstrong stated that: an unintelligible communication from a legitimate source in the recipient's area of expertise will increase the recipient's rating of the author's competence. In other

words, if nobody understands what you're talking about, it's probably a proof of your intellect. But surely, Dr. Fink can't be a disguised Dr. Fox! Surely, a critical publisher would have done their work and checked the validity not only of the author but of the message as well. You can doubt the capacity of the author to bring together new technology concepts into a coherent whole within the context of sociology and social psychology, but I am not sure you should paint the author as a complete fraud in the field, as in Dr. Fox's case. This is a little harsh and would require reading the author's other works.

Consequently, I see only one reasonable explanation for my struggle grasping the message of this book. The professional worlds of evolutionary psychology (Dr. Fink's background) and that of sociology and social policy (my own background) have drifted so far apart that we are not able to talk to each other anymore. Although we both research and reflect on the same realities (e.g., digital neighbouring), we construct our own virtual realities and those do not meet each other. This is a sad conclusion in a time when interdisciplinary academic work is needed.

In summary, Fink has taken an unconventional but intriguing mixture of technology, psychology and seduction to cook up a book full of ideas, none of which managed to get through to me. As is clear from the above, I have not been seduced by this book, but hope Jeri Fink has enjoyed writing it and others might find it appealing.

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SOCIAL DIMENSIONS OF INFORMATION TECHNOLOGY: ISSUES FOR THE NEW MILLENNIUM, G. D. Garson. *Hershey: Idea Group Publishing, 2000, 362 pages, ISBN: 1-878-28986-1.*

This book is an anthology of twenty articles that originally appeared in the journal *Social Science Computer Review.* Each contribution has been revised for the book and assigned to one of five distinct parts. The first part examines information technology in terms of several social dimensions. The second part takes up political issues. The third part probes into higher education and information technology use. The fourth part explores selected personal dimensions of information technology. The final part discusses global implications. Each part contains between three to five individual contributions.

The book's purpose is to raise issues and frame questions about the monumental growth of information technology in our world. It is not intended to be comprehensive. Towards this goal, the author has selected articles that provide contrasting ideas and different perspectives within each part. The articles range from rather general discussions of issues to more focused research inquiries. While no intended audience is described, the articles are relevant to professionals and academics interested in information technology and any of the following six areas: Social workers, educators, engineers, sociologists, political scientists, and psychologists.

Anthologies are often weakly cobbled together around a vague theme and offer little beyond the merits of the individual articles. This book is a most delightful exception. The author has carefully selected engaging and provocative articles that acquaint the reader with some of the problems that surround social, political, educational, personal, and international use of information technology. The interdisciplinary strength of this book–learning about different perspectives from disciplines other than one's own–is remarkable. Most of us work within professional boundaries and seldom venture away from our own perspective. Reading this book allows us to sample the thinking from others in a straightforward and convenient way. Finally, some of these articles provide very helpful overviews and citation resources that invite the reader to go beyond the individual topic for more in-depth exploration.

## *BODY*

Each of the five sections can be read independently from the others. One can randomly skip between each of the five parts yet there is a subtle ordering and intent for the whole work. As a result, reading Garson's introduction to the book is very helpful.

The opening, "Part I, The Social Dimension of Information Technology," presents four different yet related articles. The first and second examine community participation and the creation of social capital. Each handles this issue from a different perspective. The first provides an excellent overview and explores virtual community issues while the second, rather speculative, is more a cautionary polemic. The remaining two articles take up the problem of predicting the social impacts of information technology. One provides a close-range snapshot of contemporary issues and the other criticizes the weaknesses of solely relying on a technological deterministic approach for predicting social change. This last article then advances a tiered model for framing issues and forecastive research. Unfortunately, a key figure is missing but the reader can intuitively gain a sense of the model through attentive reading.

In "Part II, The Political Dimension of Information Technology," the opening case examines the 1996 national election in the United States, the first in which the web played a part. Multiple factors appear to have marginalized the web's impact and suggest that technology is no "fix" for social and political problems. The second, another case study, explores digital divide issues in terms of internet access and concludes that wealth and civil participation are important variables for predicting use. The third, more philosophical, examines the role that the rhetoric of technology plays in defining political issues and making them become salient. The last article tests whether or not online discourse in a newsgroup is egalitarian or actually dominated by small but chatty factions. On the whole, this part of the book elucidates basic issues surrounding the political dimensions of information technology and how these may affect us in the future.

"Part III, The Educational Dimension of Information Technology," probes basic issues in academe. The first article examines the changing role of the library in higher education. It clearly frames questions that should be asked beyond the simplistic "How do we integrate this new technology into the Library?" (p. 143) and directly confronts the

greater question of ''How does the WWW cause us to change what is *meant* by a library?'' (p. 143, reviewer's emphasis). This question applies to many dimensions of higher education well beyond the library. The next is a sobering discussion on virtual learning and how information technology may be eroding the core mission of pluralistic education. The third, a cautionary history, further examines the limitations of online methods in fostering critical thinking. The final paper examines a case that has a fascinating paradox: student evaluations plummeted when a seasoned professor upgraded an online course from an older DOS version to a graphic interface that was easier to use. What is most refreshing is that these articles have not been crafted by the usual Luddites but instead written by experienced explorers and adopters of information technology.

''Part IV, The Personal Dimension of Information Technology,'' takes up how people actually use computers and towards what ends. The first, a survey, looks at how people use the internet and its impact on leisure. Several counterintuitive results are reported. Blue-collar workers appear to spend more time at the keyboard than their white collar counterparts. Heavy Internet usage is associated with greater use of other media such as print, instead of detracting from them. Personal computers may have more in common with time-enhancing innovations such as the telephone than with time-draining inventions such as television. The second article looks at how the monopolization of technical expertise and its symbolic manipulation can restructure work. This case study examines how paper mill workers became disempowered through information automation and calls for further study into how information technology changes organizational cultures. The final article in this section discusses some of the complex methodological dilemmas we face when attempting to research the nature of computerization in the workplace.

Finally, ''Part V, The International Dimensions of Information,'' has five articles that examine selected global dimensions of the information revolution. The first addresses our greatest digital divide: how the use of shared information may evolve as developing countries come online. The choices include: an apartheid world clearly divided between the haves and have-nots; a world of cultural imperialism in which developed nations continue hegemony; or a more egalitarian global village. The article lucidly frames these choices and subtleties many readers may not have considered. The next article examines

three factors: connection issues in developing countries, the nature of content, and the capacity for internet connectivity. An integrative discussion follows. The third gives an historical analysis of the telecommunications infrastructure in Africa and the effect on the west's leverage on information control. The writer suggests that this continent's ability to control and share information is mixed at best. The writer concludes that technology itself does little to empower third-world countries towards sustainable development. The fourth article calls for international communications policies that will not result in disempowering developing nations. The final article envisions an international network for integrating the study of the social sciences. The writer depicts how an Internet-mediated global network for sharing survey, geographic, and experimental data may evolve and discusses the need to foster interdisciplinary and international research collaboration.

## *OPINION*

The book fulfills its purpose: to help the reader become better acquainted with the issues and dilemmas we all face when trying to comprehend the vast changes information technology is creating in this new millennium. While the editor clearly is not attempting to be comprehensive, the selections he has chosen provide a wide sampling of diverse thought. As a result, the book lends multiple perspectives on information technology very effectively and very well. As with all compendia, the writing styles considerably vary. Some articles are all too brief while others elaborate beyond necessity. Yet all are worth consideration. The organizational scheme of presenting them in social, political, educational, personal, and global contexts works very well. Any reader wishing to gain an interdisciplinary vision of how information may be transforming our ways of life should find this book worthwhile. It may be especially useful for collaboration between administrators, researchers, practitioners, educators, and others who seek a wide perspective on information technology's effect. In this respect, the book makes a significant contribution to the field at this time. Reading this book is like attending a conference where, instead of being forced to choose between scattered sessions and departing with a fragmented experience, one can instead attend and enjoy everything. The book certainly raises

salient questions about how we are to conduct research and understand information technology. It also raises uncomfortable and disconcerting issues in the process. Thoroughly reading this book may well help shape our frameworks for inquiry.

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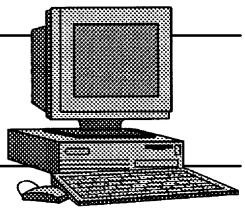

Depression-Screening.Org at http://www.depression-screening.com/index.htm

*Overview*: As stated on the web site, *"The depression-screening. org (http://www.depression-screening.com/index.htm) web site is sponsored by the National Mental Health Association (NMHA) as part of NMHA's Campaign for America's Mental Health. The mission of this web site is to* educate people about clinical depression, offer a confidential way for people to get screened for symptoms *of the illness, and guide people toward appropriate professional help if necessary."* There is no cost to access the Web site.

Overall, the Web site is visually attractive, well designed, and easy to navigate. The homepage provides a brief introduction to depression, introduces the depression-screening instrument, and provides National Mental Health Association sponsorship information. The homepage also provides links to sub-areas and these are further separated into well-organized sections. Each site area will be discussed separately.

### *SYMPTOMS AND TREATMENTS*

This section provides a brief statistical overview of the number of persons in the U.S. with depression, the proportion that seeks treatment, and notes the encouragingly high percentage with depression that can be effectively treated. The information throughout this section is presented in a clear and easy to read manner with a minimum of professional jargon. Further subsections include:

- Symptoms of depression
- Causes of depression
- Treatment options
- Who can diagnose and treat depression
- Making the most of your treatment
- Paying for treatment
- Depression occurring with other illnesses

*Suggested improvements*: Further information and documentation might be provided in the ''Treatment Options'' sections. For example, the site states, ''Research has shown that a combination of psychotherapy and medication is often most effective,'' but no citation is given for this statement. A graph is presented about the extent to which depression is co-occurring with other illnesses, but there is no citation for the source of the data. Similarly, information about medication, psychotherapy, and electroconvulsive therapy (ECT) should be referenced.

It might also be useful to have links to further information about each topic and/or an annotated bibliography for further reading. For example, since side effects are often a common problem for people taking antidepressants, further information (or links) about medication and their side effects might be useful.

The site notes that joining a support group is often helpful and provides links to a number of national organizations that can help someone find a local support group. It would be useful to include a link to sources of online support groups as well (e.g., Psych Central-http://www.grohol.com/news.htm) or specific newsgroups such as *alt.support.depression.recovery.*

## *DEPRESSION CAN AFFECT ANYONE*

This section notes that, *''One of the most common myths about depression is that it is 'normal' for certain people to feel depressed-such as women, older people, employees with work-related stress, or people with chronic illness. The truth is clinical depression is never a normal part of life.''* Subsections then provide more specific information about the following groups:

- Depression and Women

- Depression occurring with other illnesses
- Depression and older adults
- Depression and African-Americans
- Depression and Hispanics
- Depression and the workplace

*Suggested improvements*: Providing specific information about depression for diverse groups is commendable, and a good start has been made to be inclusive. The section might benefit from further content that more completely addresses issues of cultural competence in diagnosis and treatment of depression. The section on African-Americans, for example, has some basic information that might apply to any group and then contains some quotes from an author related to African-American women and depression. (The name of the book is given, but there is no reference to the source of these quotes.) The information is very limited. Links to further information and research related to depression and African-Americans could be provided. In addition, given the many diverse cultures in the U.S., other groups might be added. For example, the rate of Native American suicide is relatively high. Information and resources about Native Americans and depression is much needed.

The section on *Depression and Hispanics* notes that, ''People from different cultures express symptoms of depression in various ways.'' It might be useful to have a more general section related to *''Depression and Culture''* that makes this statement, and describes ways in which various cultures experience depression. Links to culturally sensitive resources for many groups might be provided.

## *PERSONAL STORIES*

This area provides four brief personal accounts of people who have suffered depression and who have been helped by treatment. This area also provides brief audio/video clips that can be played with a RealPlayer™ plug in. Each ''story'' provides one to two screens of text and a picture of the storyteller. The audio/video clip provides the voices of the storyteller with the same information that is written in text on the site. The video clip window shows a few additional still pictures. The stories describe some of the feelings during depression, the causes or

related events, and the feelings of relief as a result of treatment. They add a personal touch to the Web site. The audio/video clips may be of some interest to those who learn or are inspired by other than written means. They do not add any new information to the Web site. Stories are from:

- Phyllis (Older Euro-American female)
- Dan (Older African-American male)
- Stephanie (Older Euro-American Female) Note: this clip only played the first paragraph.
- Stuart (Middle-age Euro-American Male)

*Suggested improvements*: Interactivity is a major strength of the Web. Additional stories from a variety of people might add interest and information to the site. Visitors might be encouraged to share their stories and their resources through a guest book. A section of Frequently Asked Questions from visitors might also be developed. Other visitors could be encouraged to provide their experiences in relation to these frequently asked questions.

## *CONFIDENTIAL DEPRESSION SCREENING TEST*

This area briefly describes the Confidential Depression Screening test. The Screening Test is an 11 item test in which one rates the frequency of symptoms on a 4-point scale: ''None or little of the time,'' ''Some of the time,'' ''Most of the time,'' and ''All of the time.'' It asks how often during the past two weeks have feelings or behaviors such as ''feeling worthless,'' ''difficulty falling asleep or staying asleep'' occurred. One item asks about thoughts of ''wanting to commit suicide.'' A single item is presented on each page and the user clicks one of four radio buttons to submit an answer. Overall, I found the depression screening test to be clear and well-written, easy to use, and to have ''face validity.'' It also presents additional resources for more comprehensive screening and diagnosis. It explains that the HANDS™ Screening Tool is a test to identify symptoms of depression, and is not intended to provide a *diagnosis* of depression. The site states that taking the screening test is anonymous and confidential. The site also states that it is not meant to address problems requiring emergency help. It does, however, provide both telephone and online

sources of help for emergencies. The site provides two links for help with suicide: American Association of Suicidology and the American Foundation for Suicide Prevention. In addition, the site states that the test is not appropriate for anyone under 18 years of age and provides a link to the American Academy of Child and Adolescent Psychiatry (*http://www.aacap.org/about/index.htm*).

I took the test several times trying various combinations of intensity regarding the symptoms presented. When the user responds with few symptoms of depression, the test returns: *"Your screening results are not consistent with clinical depression. However, this screening is not a substitute for a complete clinical evaluation. If you are still concerned about some of your symptoms, see your doctor or a mental health professional for a complete evaluation."*

In one instance, I answered, "Some of the time," to all of the symptoms. Moderate levels return the following response: *"Your screening results are consistent with clinical depression. Your answers also show you might be at risk for harming yourself. You are advised to see your doctor or a mental health professional immediately for a complete evaluation-or dial "911" or go immediately to the nearest hospital Emergency Room for an evaluation. This screening is not a substitute for a complete clinical evaluation. The good news is clinical depression is a very treatable illness. Almost everyone who receives appropriate treatment can soon feel better."*

Very severe symptoms, for example, answering "All of the time" to every symptom returns the following result: *"Your screening results indicate a high likelihood that you are suffering from clinical depression. Your answers also show you might be at risk for harming yourself. You are advised to see your doctor or a mental health professional immediately for a complete evaluation-or dial "911" or go immediately to the nearest hospital Emergency Room for an evaluation. This screening is not a substitute for a complete clinical evaluation. The good news is clinical depression is a very treatable illness. Almost everyone who receives appropriate treatment can soon feel better."*

*Suggested improvements:* The nature and extent of privacy/confidentiality is not explained. During the test, there is no icon to indicate that a secure server is in use or that the responses are encrypted for the user's protection. Further information about the nature and extent of privacy would be useful in light of the many recent news articles describing privacy violations on the Internet.

The results for moderate levels of depression and for severe levels provide essentially the same response. The program might be modified to more strongly encourage visitors to seek emergency treatment when high scores are encountered.

Any answer other than ''None or a little of the time'' to the ''thoughts of suicide'' question returns the following bolded text after the initial assessment of symptoms of depression: *''Your answers also show you might be at risk for harming yourself. You are advised to see your doctor or a mental health professional immediately for a complete evaluation–or dial "911" or go immediately to the nearest hospital Emergency Room for an evaluation."* It might be useful to differentiate between ''some of the time'' and ''all of the time'' responses. The former response might lead to information that many people think about suicide at some time, and it is not necessarily a symptom of clinical depression, while the latter response might present a more urgent appeal to get help immediately.

No information (or link to information) is presented about the development, validity, and reliability of the screening instrument. The extent of false positives or false negatives might also be discussed. (I found this information at the Screening for Mental Health, Inc. Web site–*http://www.nmisp.org/dep/dep-hands.htm*. This link might be included in the Depression-Screening site.) The extent to which the test is valid and reliable for various cultural and ethnic groups would also be useful information.

The screening inventory provides choices that are also consistent with other forms of mental illness, for example, someone with schizophrenia or an eating disorder might also score high on the depression-screening test. Information might be presented about other illnesses that could return similar results.

Following the assessment, the site presents a link to local healthcare professionals that offer one-on-one depression screening as part of the National Mental Illness Screening Project's screening site locator service. I used the state drop-down box to locate New Hampshire and was presented with name, city, and phone number of three sites. One site listed as ''Durham, NH'' was actually a site located in ''Durham, NC'' and listed a North Carolina phone number. Since these kinds of errors are easy to make on a complex and comprehensive site, it would be helpful to have a link on each page to the site Webmaster in order to report such mistakes.

The link to the American Foundation for Suicide Prevention site returned a 404 (not found) error. I was later able to find the correct link to the American Foundation of Suicide Prevention (AFSP) through a search engine and found the AFSP to be a very useful site.

This section is the only place on the Web site that Children and Adolescents are addressed. It might be useful to add this group under the "*Depression Can Affect Anyone*" section of the Web site.

## *EDUCATION AND ADVOCACY OPPORTUNITIES*

This section describes and provides links to a number of organizations that seek to promote mental health. There are also drop-down lists that link with state and local affiliates of the National Mental Health Association and with the Campaign for America's Mental Health. In addition, there is information and links to *The Bell* and the *State Advocacy Update,* two newsletters that focus on Mental Health advocacy.

*The Participating in the Campaign Locally* section provides an online form through which people can request information about becoming an advocate for healthcare reform or a patient/consumer advocate as well as request general information about mental health and managed care issues. The subsections are as follows:

- What is the Campaign for America's Mental Health
- Local Campaign Organizers
- National Campaign Partners
- Participating in the Campaign Locally
- Tips on Effective Advocacy

## *NATIONAL MENTAL HEALTH ASSOCIATION*

The National Mental Health Association (NMHA) is the sponsor of the Depression Screening Web site. As stated on the Web site, NMHA has 350 affiliates nationwide that provide education, advocacy, and direct services to their communities. This section provides information about the NMHA and links to their national website. The subsections are as follows:

- MHA Affiliates
- Mission and Vision

- Public Education
- Mental Health Advocacy
- Support the MHA

*Suggested improvements*: I tried to make an online ''donation'' to the MHA through their secure server. The first link, ''click here'' did not take me to the server, but rather to the NMHA Web site *(http://www.nmha.org/fund/index.cfm)* with information about many ways to give. There was a ''Donation'' link that link led to another page that provided a ''click here'' link to a secure server as well as an 800 number and a printable donation form. In trying to access the secure server, I received a warning message, ''*The name on the security certificate does not match the name of the site.''* I continued in spite of the warning message. The link to the secure server, however, returned a blank page and I was unable to donate online.

## *SOURCES OF HELP*

This area provides the names, Web site, and sometimes telephone numbers of twelve national advocacy and professional organizations that can provide helpful information about depression and/or referrals to healthcare professional's services and support groups.

## *INFORMACION EN ESPANOL*

This area provides information in Spanish about depression. It is more than just a translation of other materials. It provides quotes from Hispanics about their depression and links to a number of Hispanic Heath and Professional organizations. There are three subsections:

- Síntomas et tratamientos (Symptoms and Treatments)
- Para mas informacion (For more information)
- Compaòa contra la depresión clinica (Campaign against Clinical Depression)

My Spanish is not good enough to judge the quality or usefulness of the information. It appears to be as well-written and consumer-friendly as the rest of the site. This section and the links to national Hispanic

organizations are clear signs that the Mental Health Association strives to be culturally relevant and inclusive. I asked a colleague (Dr. Sara Alemán, University of Northern Arizona, who is Hispanic and a Social Work faculty member) to comment on the Spanish sections. She reported, ''This is very good . . . all of the resources are included that Latinos would feel comfortable with.'' She also suggested that the site could note some slang words that Latinos might use when being interviewed about depression.

*Suggested improvements:* This is an excellent beginning at meeting some of the mental health needs of the diverse groups that make up the United States. The site might consider additional sections for other groups in their own language.

## *RELATED SITES*

Many sites provide mental health information and information related to depression. A number of them also provide links to depression screening instruments. These sites vary greatly in quality, type of depression screening instrument, advice given based on the results of the depression screening, and information about the validity and reliability of the depression screening test. A full review of these sites and depression screening instruments is beyond the scope of this article. The sites are presented to provide examples of the range of depression-related sites and screening instruments on the Internet.

Screening for Mental Health, Inc. *(http://www.nmisp.org)* formerly the *National Mental Illness Screening Project*) is a nonprofit organization developed to coordinate nationwide mental health screening programs and to ensure cooperation, professionalism, and accountability in mental illness screenings. The site includes information about depression and depression screening, but does not provide the test online.

Mixed Nuts *(http://www.mixednuts.net/depression-screening.html)* provides an online supportive community (with a sense of humor) through information, message boards and chat rooms for those with depression. They provide a list of symptoms and suggest that if a person has five of these symptoms for two weeks, they may be suffering from depression. They also link to the Goldberg Depression Inventory.

The Goldberg Depression Inventory (*http://mentalhelp.net/guide/*

*dep2quiz.htm*) can be found on the *Mental HealthNet* Web site (*http://mentalhelp.net/*). This inventory uses an eighteen-item test with items scored on a 6 point scale from ''Not at All'' to ''Very Much.'' All items are on one page. The results provide a score that places depression in a range: No depression, Possibly Mildly depressed, Borderline depression, Mild-Moderate, Moderate-Severe, and Severely depressed. (Note, however, that when I answered ''Very Much'' to *''I spend time thinking about HOW I might kill myself,''* but ''Not at all'' to other items, the program did not advise me that this was a dangerous sign and to seek help). In addition, many mental health and depression-related resources are provided.

The New York University Department of Psychiatry provides an online depression-screening test (ODST) (*http://www.med.nyu.edu/Psych/screens/depres.html*). It is a ten-item test in which items are scored on a five-point scale from ''Never'' to ''Most of the Time.'' None of the items query suicidal ideation. Even with relatively low scores this site returns, ''Your answers reflect the presence of depressive symptoms. It is advised to seek a psychiatric consultation, Click here for referral information.'' The referral in New York City is to the NYU Behavioral Health Programs. There is also a link to the American Psychiatric Association for referrals outside of New York City. The relatively conservative nature of the scoring may result in a number of ''false positives'' for clinical depression. In addition, the sole referral for New York City residents to NYU Behavioral Health Programs leads one to wonder to what extent this is a marketing tool.

Psychmeds (*www.psychmeds.com*) provides information and consultation (for a fee) about psychiatric medication. In addition, it provides the Zung Depression Inventory (free) that is scored online. This is a twenty-item scale that has good validity and reliability studies. The test returns a score that is interpreted as Little or No symptoms, Mild, Moderate, or Severe symptoms. No advice is given based on the score.

Recovery Services (*http://www.recoveryservices.org/html/depression%20screening.html*) of Lebanon, Ohio, provides the Beck Depression Inventory, another scale with good validity and reliability studies. The site provides guidelines for scoring and interpreting the results, but the site does not score the test online.

Covenant Health (*http://www.covenanthealth.com/home.cfm*) an East Tennessee health care provider, provides a fifteen item ''Yes/No''

depression screening form and guidelines for scoring the test. Results are interpreted as Mild, Moderate, or Severe depression. The test is not interactive and cannot be scored online. The primary purpose of the site is not depression related.

Internet Mental Health (*http://www.mahidol.ac.th/mahidol/ra/rapc/mooddx.html*) offers a *Mood Disorder Diagnosis* program that can be downloaded. It diagnoses the following: Bipolar Disorder, Mixed; Bipolar Disorder, Manic; Bipolar Disorder; Depressed Cyclothymia; Major Depression; Dysthymia; Organic Mood Disorder, Mixed; Organic Mood Disorder; and Manic Organic Mood Disorder, Depressed. The site states that each disorder is diagnosed in strict accordance with the diagnostic rules laid down by the American Psychiatric Association (in the DSM-III-R). Currently, this program is only available for MS-DOS.

One site, located on the Xerox Palo Alto Research server, offers a 10 item check box depression screening instrument (*http://www.bozotron.com/pair/cw/testing.html*) that can be scored online. The site provides the depression inventory with little or no information about the person(s) or organization that sponsors the ''depression screening.'' If five or more items are checked, the site suggests talking with a mental health professional or doctor and provides the phone number of the National Mental Health Association and other crisis lines. However, with only four items checked it states that, ''*According to the National Mental Health Association, this determines that you are not suffering from clinical depression*.'' This is a strong and possibly misleading statement from such a simple tool.

PlanetPsych (*http://www.planetpsych.com/depresstest/index.htm*) provides a ten-item screening test. Items are scored as ''yes or no.'' I could not get results from my test. There was an ''error on page'' message from the browser.

*Wrap-up*: Given the range of Websites from professional/well-documented to unknown author/undocumented, it is extremely import that consumers have access to a well-designed, accurate, reliable, and trustworthy site. *The Depression-Screening.Org* site from the Mental Health Association, a well-known and highly respected mental health consumer organization, is well on its way to filling this requirement. It is a well-designed, consumer-friendly site that covers a wide range of information about depression and provides a user-friendly depression-screening instrument. Furthermore, it offers resources and links to obtain help

throughout the United States as well as providing useful information about becoming involved in advocacy activities. The Web site is to be commended for its efforts to be culturally relevant to a variety of diverse groups. While the Web site might provide additional information and fix a few very minor glitches, overall it can be highly recommended to professionals and consumers alike as a useful mental health resource.

I have also recently reviewed a CD-ROM, *Understanding Depression,* which presents similar information in a somewhat different format (see the Software Review section of this issue). Each medium has its advantages. The CD-ROM can be used off-line without the need for an Internet connection. It may be a less expensive alternative for distribution to mental health clinic waiting rooms or to provide to consumers as an educational resource. It also provides much greater use of personal stories and audio/video clips. Having sufficient bandwidth for long audio/video clips is still a problem faced by many Internet users. On the other hand, the website can be accessed online from any computer with Internet connection, thus providing greater information to a much broader audience. It can link to a plethora of other online resources. It can also create interactivity and community as well as be more easily updated to provide the most recent information. There is no additional cost to the user other than the cost of the Internet connection. At this time, these should be considered complimentary mediums. In the future, as bandwidth increases for the average Internet user, the best of both mediums can be delivered online, at little cost. Indeed, consumers will access CD-ROMS over the Internet for entertainment and education, and to meet some of their mental heath needs.

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