ABSTRACT
                Discussions about the importance of technology have
permeated every area of the counseling field. How prepared are counselors for
changes in technology? How competent are counselors in the use of technology?
Who will provide the training? This study attempts to address some of these
issues. It is designed to assess how competent counselors are in the
technology skills they will require their students to possess. A survey based
on The Technology Interest Network of the Association for Counselor Education
and Supervision (ACES) set of 12 competencies that counselors should have
upon graduation was published in the Spring 1999 issue of "Spectrum." Because
persons other than counselor educators responded, the results may have
limited generalizability to the membership of ACES. Survey results indicate
that counselor educators and counseling students lack a uniformly high level
of technology competence. Given the likely possibility that primarily
"technology-interested" individuals completed the survey, the results
probably overestimate the actual levels of technology competence among
counselor educators and students. As the impetus for advanced technology
continues, it will be important to address both pre- and in-service
preparation that will enhance needed technology competence in the counseling
field. (Contains 7 references.) (Author/JDM)

Technology Competence of Counselor Educators

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Through the medium of his book, <u>The Counselor in a Changing World</u>, Gilbert

Wrenn (1962) revolutionized the counseling profession by emphasizing the need for

counselors to be trained to respond to the needs of the as-yet-unknown future. He noted

that change is certain, and that technological and industrial change were certain to occur.

Ten years later he noted the absolute necessity for counselors to know "the world of

reality outside of the school walls" (Wrenn, 1973, p. vi). His book, <u>The World of the</u>

<u>Contemporary Counselor</u>, addressed what Wrenn termed "a rapidly changing world" and

the need for counselors to see themselves and their work in a contextual realm. He

devoted one page to computer- assisted counseling, citing "faint beginnings" and

reflecting on the fear and reluctance of counselors to use computers, a fear he stated was

based on ignorance of the potential to use computers effectively as "supplements" to help

clients (p. 255).

Today the infusion of technology into counseling and counselor preparation is far

more than preparation for the future, as the technological future that Wrenn wrote about

is clearly our present reality. Yet, we have emerged into this present with relatively little

advance planning and preparation. For example, Hackney, in his 1990 book <u>Changing</u>

<u>Contexts for Counselor Preparation in the 1990s</u>, devotes no attention to the impact of

technological change. Similarly, Collison and Garfield (1990), in their presentation of

<u>Careers in Counseling and Human Development</u>, detailed responsibilities, salaries, and

philosophies of numerous jobs in the counseling field, with virtually no mention of the

salience of technology in our field. Walz and Bleuer's (1983) pioneering work in

defining how counselors can use computers to enhance their work was for years blissfully

ignored in counselor training programs, with the notable exception of career counseling.

Career counselors have been at the forefront in the use of computers in counseling, from computer-assisted career development programs to the use of the Internet (Walz, 1997). Walz (1997) recognizes the technology revolution in communication as a way of maximizing opportunities to provide career counseling and career development. However, he also notes that discussions of the use of new technology have not been led by counselors, perhaps due to anxiety related to learning new technologies, lack of or inaccessible resources, and/or limited computer competence.

As we enter the new millennium, the pace of technological change has acelerated, and discussions of the importance of technology have permeated virtually every area of our field. How prepared are we for technological change? How competent are counselors in the use of technology? How competent do we need to be? The answers to these questions will help determine needs for training in the very near future. We must also ask who will provide this training. How competent are counselor educators in the technology skills they will require their students to possess? This final question formed the basis for our study.

Methodology

The Technology Interest Network of the Association for Counselor Education and Supervision (ACES) developed a set of 12 competencies that counselor education students should have upon graduation. These competencies, as adopted by ACES, may be found at the Technology Interest Network website, which also includes standards for on-line instruction in counselor education (http://www.auburn.edu/ccp/acestin).

In the Spring, 1999, issue of the ACES Spectrum, the authors published a survey and asked ACES members to self-assess their technology competence. The availability of the survey was also announced to members of the CESNET listserv, which is used by counselors, students, counselor educators, and supervisors. Each competency was stated and readers were asked to respond using a Likert-type scale with the following points: 1 – no competence in this area; 2 - a little competence; 3 – about average competence; 4 - above average competence; and 5 – very competent. Surveys could be completed using a web-based form on-line, sent through e-mail, or the hard copy filled out and returned by "snail-mail." An opportunity was provided at the end of the survey for open-ended comments concerning technology competence in counselor education and supervision.

Respondents

Ninety-two individuals responded to the survey, including 62 counselor educators, 22 students, 13 professional counselors, and 7 supervisors. Among the counselor educators, 14 checked that they were assistant professors, 13 associate professors, and 23 full professors. The average years of experience by rank were as follows: assistant professors, 3.9 years (s.d. = 1.41), associate professors, 9.9 years (s.d. = 4.76), full professors, 22.5 years (s.d. = 7.07). Six of the students were entry-level and 19 doctoral level.

Because CESNET members were invited by e-mail to respond, and because the survey did not request identification as a member of CESNET or ACES, it is impossible to determine how many respondents learned of the survey through CESNET rather than the ACES Spectrum, and it is not possible to determine an exact response rate for ACES

members. However, if professional counselors and master's students are eliminated from the sample, as these individuals are the least likely among all those responding to be members of ACES, the resulting N of 73 counselor educators, supervisors, and doctoral students represents about 3% of the (then) total ACES membership of 2,492 persons.

Results

The means and standard deviations for all respondents for each of the 12 competencies are included in Table 1 below. For each item except competency number two, responses ranged from 1 to 5. For competency two, use of audio-visual equipment, responses ranged from 2 to 5. The mean competency ratings ranged from 2.95 to 4.55.

The table also shows the rank order of each competency based on the mean scores. The highest ranks, indicating the highest level of competency, were obtained for using e-mail (1), accessing listservs (2), and using audio-visual equipment (3). These were also the three competencies for which the least amount of variability in responses occurred. The modal response for each of these three competencies (that is, the most frequent rating), was 5.

The lowest competencies were reported for using computerized testing (10), knowledge of webcounseling (11), and using computerized statistical packages (12). There was a large amount of variability in responses to these items compared to the top rated competenices, as noted in the table. The mode for the first two competencies was 5, while the mode for use of computerized statistical packages was 2 (a little competence).

Table 1

Means, Standard Deviations, and Rank Orders of Competencies for all Respondents

ACES Technology Competencies:	mean	s.d.	rank
1. Be able to use productivity software to develop web pages, presentations, letters, reports, etc.	3.32	1.18	9
2. Be able to use such audiovisual equipment as video recorders, audio recorders, projection equipment, and playback units.	4.12	0.91	3
3. Be able to subscribe, participate in, and sign off counseling-related listservs.	4.16	0.96	2
4. Be able to access and use counseling-related CD-ROM data bases.	3.45	1.29	7
5. Be able to use email.	4.55	0.82	1
6. Be able to use computerized statistical packages.	2.95	1.19	12
7. Be able to use computerized testing, diagnostic, and career-decision-making programs with clients.	3.31	1.29	10
8. Be able to able to help clients search for various types of counseling-related information about careers, employment opportunities, education and training opportunities, financial assistance/scholarships, treatment procedures, and social and personal information.	3.67	1.08	4
9. Be knowledgeable of the legal and ethical codes which relate to counseling services via the internet.	3.41	1.15	8
10. Be knowledgeable of the strengths and weaknesses of counseling services provided via the internet.	3.20	1.18	11
11. Be able to use the internet for finding and using continuing education opportunities in counseling.	3.57	1.13	5
12. Be able to evaluate the quality of internet information	3.49	1.17	6

The mean responses of counselor educators to each of the competencies was examined separately. The three highest ranked competencies for the counselor educators as a whole were use of e-mail (1), subscribing to listservs (2), and use of audio-visual equipment (3). The three lowest ranked were use of computerized career decision making programs (10), knowledge of internet counseling (11), and use of computerized statistical packages (12). An analysis of variance by rank revealed no significant differences in reported competence between assistant, associate, and full professors.

MANOVAs for each competency computed between educators and students revealed three significant differences. Counselor educators self-rated as more competent than students for competencies 9 and 10 (F=7.09, df=35, p=.01 and F=8.21, df=35, p=.01, respectively), knowledge of ethical codes relating to counseling on the internet and knowledge of the strengths and weaknesses of counseling on the internet. Students rated themselves as higher on ability to use audiovisual equipment (F=4.84, df=35, p=.035).

Pearson Product Moment correlations were computed between years of experience for counselor educators and each of the 12 competencies. Significant positive relationships were observed between the number of years and competence using software (r=.28, p=.03), knowledge of ethics related to web counseling (r=.27, p=.04), and knowledge of webcounseling issues (r=.31, p=.02).

Eighty-eight of the 92 respondents indicated that they "actively seek opportunities to develop my technology skills" while 2 indicated that they "avoid opportunities to develop my technology skills."

Thirty respondents provided comments related to the survey or counselor education technology competencies. Three persons noted that responses to competency number 1 would yield questionable results due the diversity of software included. These individuals indicated that they felt very competent in using software for word processing, less competent in using presentation software, and not competent using web development software. Other competencies were not specifically mentioned, with most comments being directed toward the overall importance of technology, and technology training, for counselors.

Three individuals reported that technology competence was infused into the curriculum in their counselor education training program, and that a high level of competence was expected of students throughout their enrollment in the program. One individual noted that technology competence was required for school counseling students, but did not comment on students in other program tracks. Concern for lack of access to computers, especially by adult, commuter students, was noted as a barrier to instructor use of the web for dissemination of syllabi and other course materials. Several individuals noted that they were unaware of the competency levels of other persons, thus rating themselves in relation to other counselor educators was a difficult and possibly inaccurate process.

Discussion

The estimated 3% response rate to this survey, though small, exceeded that expected for a newsletter survey, i.e., about 1 percent. Those readers with the greatest interest in technology were probably the ones who responded, a conjecture supported by

the fact that only 9 individuals (10%) returned their surveys by mail. One used e-mail and the majority completed the on-line survey. Because persons other than counselor educators responded, the results may have limited generalizability to the membership of ACES. However, since 62 counselor educators did respond, some tentative conclusions may be discussed. In particular, if the suggestion of one respondent is accurate, and if those counselor educators with limited technology competence were those who did not respond, then it may be hypothesized that the mean ratings noted in the table are actually overestimates of the technology competence of counselor educators and students.

The relative ranking of the competencies was interesting, and not totally surprising. With the proliferation of e-mail and use of listservs for information dissemination both within universities and in the larger community, few counselor educators are able to escape the use of this medium of communication. The low ranking for use of software was not expected, however, the inclusion of web-authoring software in the same competency statement as word processing clearly makes responses to competency number 1 questionable.

The goals of the ACES Technology Interest Network include increasing competence in technology among counselor educators and students. The results of this survey provide some baseline data to help determine the present state of the field and thus suggest current and future directions for training and research. More research on counselor educator technology competence is needed to provide a basis for designing continuing education programs to increase technology skills. At present, continued dialog concerning the competencies is needed, as well as discussion concerning ways to infuse technology competence into counselor training. As part of this discussion, the

relative importance of the various competencies needs to be considered, as well as the desirability, feasibility, or necessity of being "very competent" in each of the 12 areas.

The number of professional counselors who responded to the survey is clearly too small to permit valid analyses, however, the responses of these individuals do raise the question of technology competence among practicing professional counselors. The extent to which technology is a part of the daily lives of professional counselors is not known at this time, though certainly school counselors work in an environment where technology competence is increasingly emphasized. The resources and utilization of technology may be different for professional counselors and supervisors in clinical settings and for those in K-12 and post-secondary education settings. The relative importance of the ACES technology competencies may vary for these counselors, and their needs for technology training may differ based on the requirements of various work settings.

Overall, technology competencies for counselors, supervisors, students, and counselor educators are quickly becoming a requirement in the information-age. As counselors gains attain certification and licensure, the need for continuing professional development becomes paramount. Easier access to professional development opportunities is made possible through long-distant learning via the Internet (Leary, 1998). In fact, it is possible for Nationally Certified Counselors to earn all 100 hours of continuing education credits for certification renewal in home study and web-based continuing education programs (Leary, 1998). Such opportunities may only be accessed given a modicum of technology competence.

Conclusion

As the impetus for advanced technology continues, counselor training programs are increasingly required to adapt. Results of the ACES survey on 12 technology competencies for counselor educators and counseling students indicate that counselor educators and counseling students lack a uniformly high level of technology competence. Given the likely possibility that primarily "technology-interested" individuals completed the survey, the results probably overestimate, by an unknown amount, the actual levels of technology competence among counselor educators and students.

Further research is needed to determine the relative importance of each of the technology competencies in the various settings in which counselors work. With this information, it will also be necessary to determine the extent to which the competencies are currently infused into counselor preparation programs as well as strategies for promoting technology training. It will be important to address both pre- and in-service preparation that will enhance needed technology competence in our field.

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