The technology revolution not only brings new channels of global communication, but also brings unprecedented changes that can impact America's workforce. This paper highlights the impact of technology and knowledge-based economies to career development and the new concept and strategies that need to be developed. The technology revolution brings dramatic change to the workplace in that job security may no longer exist, and lifespans of companies have become shorter overnight. These changes have impacted the career counseling field. The career information delivery system has shifted to online methods. E-mail provides instantaneous transmittal of job listings and resume exchanges. The paper states that the linear, predictable procedure for career development no longer exists. Counselors need to stress to clients that continuous learning and life span education are keys for employability, career satisfaction, and to ensure adaptability to rapidly changing conditions. Since job security has now been changed to constant job changes, a perspective on the future must be integrated into career development. The paper concludes that the success of a career counselor will be the counselor's ability to assimilate changes into practice. Technologies such as therapeutic use of video, computer related tools, videoconferencing, and distance learning are now available to counselors to help with the transitions of their jobs. (JDM)
Career Development and Counseling Strategies

In An Age of Technology

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In the transition from the 20th to the 21st century, we march forth during an upheaval in technological advancement. The technology revolution not only brings new channels of global communication, but also brings unprecedented changes which impact America's workforce. The technology revolution creates a new critical condition for career development of the masses as well as career development professionals. This new challenge requires Americans (as well as persons nationwide) to develop a new vision and strategies essential to managing successful career development and career satisfaction. Career professionals are in the frontier in this new age. This paper highlights the impact of high technology and knowledge-based economies to career development and the new concept and strategies need to develop.

Challenging Times for Career Development

The current state of technology has created an integrated global economy relying more and more on instantaneous introduction of faster communication and the creation of new careers, which never existed before. Technology is being integrated into almost all phases of the workplace including jobs, which were never thought to involve technology before. Some have even coined the current condition "the digital economy" because the use of rapidly evolving telecommunication technology.

The new technology brings people from all over the world together to live in a "global village". The major characteristic of the knowledge-based global economy is rapid growth of human knowledge and access to knowledge. However, some have felt that the current
condition may be separating people into two distinct categories – those who are able to catch the wave and those who resist new technology and may fall be the wayside. For example, CNN has always been considered as “skewed to a more wealthy, older audience” (Haar, 1996). When they expanding its reach to a younger audience, they hired a 12-person staff to write news headlines that fit the web site at cnn.com. They revert itself for interactivity (Haar, 1996). However, while computers barely reached the home market just five years ago, current surveys now claim that access to the Internet has reached 25% of the population.

The technology revolution brings dramatic change in the workplace. The traditional view of job security and job satisfaction may no longer exist in the contemporary workplace. Computers replace more and more human labor. The Information Superhighway links business to other businesses and the consumer to provide better service with less need for human interaction. Companies frequently go through reorganization, downsizing, and mergers as well as develop new avenues of communication to rapidly produce new products and reflect the technological advancement.

Lifespans of companies have become shorter almost overnight. Where in the past, one might expect to work for the same company for a lifetime, the technological revolution has resulted in a more “perfect market”, enhancing competition and forcing companies to adapt or go out of business. All of these have resulted in what some have termed “permanent whitewater” – a continual churning with or without any real movement. One of the outcomes of this turmoil has been the “new employment contract,” which theoretically allows for maximum organizational productivity through the creation of a career self-directed workforce.

In the technology age, a highly educated workforce is critical social condition. Skilled workers and highly educated professionals are always in demand. Although they may need to upgrade their knowledge constantly, transferable learning skills empower them to obtain the new technology and knowledge and stand at the crest of the technology wave. Continuing education and life-long learning is an important strategy for everyone to be successful. In contrast, people with less education have less job opportunity.
New technology changes career information delivering systems. Employment listings that used to be the exclusive domain of newspapers, trade magazines and other print publications now lead towards the information superhighway. Employment listing are routinely posted on the World Wide Web, via college and commercial job boards and company Web sites. Resumes that were once sent through the mail (now a.k.a. "snail mail") are now sent by facsimile and E-mail providing instantaneous transmittal. Even resume review may be performed electronically bypassing initial review by human hands. The trend of online methods has made a significant impact on the world of recruiting and job seeking. More and more people get jobs through company Internet postings. As companies get bombarded with job applicants trying to get in the door of the lucrative high-tech industry, recruiters are looking for new ways to sift through the job seekers more quickly and inexpensively. For example, computer maker Silicon Graphics Inc. in Silicon Valley hires about 20 percent of its employees off the Internet. The company's Web page (http://www.sgi.com) lists some 900 openings. The San Jose Mercury (March 5, 1997) states that nationwide, more than 600,000 job openings are posted on the Internet, up from 15,000 two years ago. Today, online recruiting becomes the prevalent method of finding quality job candidates. The Internet is no longer just for the tech professionals. Busy phone lines notwithstanding, the general public has easy access. Companies can post job positions on Internet and people can forward their resumes in response. Many magazines and mass media have developed special columns focusing on career development.

Creating a New Vision About Career Development

The rapid development of technology has touched almost every aspect of life. Career development is no exception. Working in contemporary society, to develop a new vision for career development is essential in achieving career satisfaction and success. The following are a few examples of new ideas, which need to be embraced.

1. Career development is a complex, dynamic and multidimensional process.

Career development is no longer a linear course. Traditional career development theories have viewed career development as a rather linear, predictable procedure.
Today's labor market and workplace is highly dynamic yet clouded with uncertainty. Employability is a concern for everyone. People now work in a world where there is a fear or at least a realization that the company they work for today may not be in existence tomorrow. Witness the Apple or IBM of yesterday compared to the Apple or IBM of tomorrow. Even Ma Bell has been split up with new mergers and ventures appearing at increasing rates. People go through constant job changes and many have different jobs at the same time. People also may change careers several times in a life span. Career development is comply with not only finding and getting a job, and achieving job satisfaction, but also maintaining employability, continued learning, self-fulfillment, and advancement of one's self with new social and technical skills.

2. **New knowledge and upgrade skills provide job security.**

Security of job and life is no longer just from having a job, but from having knowledge and skills which are transferable to other jobs. Traditionally if one has a job and performs well at that job, the company would reward the employee with job security. However, since business corporations and companies have to go through constant changes themselves, those employees who have the most updated skills and advanced knowledge are the most desired labor force in the job market. Therefore, continuous learning and life span education are keys for employability, career satisfaction, and to ensure adaptability to rapidly changing conditions.

3. **Career skill is essential for everyone to survive in a changing world.**

Because people constantly change jobs, a futures perspective must be integrated into career development. Everyone has to learn new job search skills, obtain the knowledge of job market, and be familiar with current and emerging resources of career information. Utilization of new technologies is needed and critical for effective job searches. Since Internet is the premier information technology for the 21st Century, we all need to be familiar with online searching, job postings, and ways of preparing the electronic resume.
Examples of New Technologies for Career Counselors

New technologies available to assist career counselors in providing services to career concerned individuals are developing faster and faster. The success of a career counselor will be the counselor’s ability to assimilate these new changes.

1. Therapeutic Usage of Video

Television and Videocassette Records are readily accessible to all career professionals. In 1992, the report of the “Video Usage in Career Development Project” was made available through the Educational Resources Information Center (Feller, 1992). This report contains the title, publisher, publication date, cost, length, recommended audience, and evaluation of 98 videotapes relevant to the career development field. Some of the videos evaluated highest include Are You Ready (J.C. Penney Company, Inc.); Negotiating Competitive Salaries and Benefits (Administrative Management Society), Planning A Successful Job Hunt (Administrative Management Society), Got a Job Interview, Learn the Skills (Sunburst Communications), From High School to Brilliant Careers: Jobs for the Future Program (Guidance Associates). A complete address list is included in the report, along with evaluations, rating questionnaires and the names of evaluators.

There are many advantages to using videotapes during the career counseling process. Videotapes can be a very efficient use of time when groups of clients can view them at the same time. For both the client and counselor, videotapes provide a great deal of flexibility in scheduling, including viewing tapes at home after business hours. Tapes can also provide a professional presentation of the material. An advantage for the client can be a realization that they are not alone, others (often depicted as clients on the tapes) may have similar career dilemmas. The one main disadvantage, lack of counselor contact, can be remedied if client and counselor view the tape together.

2. Utilization of Computers

Career counselors have access to a vast array of computer related tools. Most counselors are familiar with computer-assisted career guidance systems such as SIGI (System of Interactive Guidance and Information; 1985) and DISCOVER (1984), but with
the rise of popularity in home computers, career guidance software is now available through local bookstores. One such career guidance and assessment software package which includes Myers-Briggs (Myers & McCaully, 1985) and Holland (1973) typologies is *If You Knew Who You Were, You Could Be Who You Are* (Sturman, 1994).

Career counselors now have the technology to easily access up to date career counseling resources online. Of particular value to the counselor are the various job market sites. These postings may be job specific, such as the Online Listings with the Chronicle of Higher Education (http://chronicle.merit.edu) to more general postings, such as the American Job Bank (http://www.ajb.dni.us/) and government listings. It has also become possible to offer career counseling resources and guidance to anyone in the world via web sites or E-mail.

3. Videoconferencing and Distance Learning for Counseling

A third category of technology available to career counseling is videoconferencing or distance learning. This technology makes it possible to provide counseling to a career client anywhere in the world. Videoconference equipment allows the counselor to sit in their own office at a television screen and do live counseling with a client they can see and who sees them. The connection between counselor and client is made over a telephone line.

One of the obvious advantages of videoconferencing is the ability to provide services to a larger geographical area. Another advantage is that videoconferencing closely simulates actually being in the room with the client. Documents, such as interest inventory results can be displayed on the video screen for discussion. Equipment is now readily available with inexpensive camcorders, computer equipment, and ISDN telephone service allowing two way audio/video services, and upcoming PCS services may substantially increase the popularity of videophoen functions.

In conclusion, by our willingness to use technology with our clients, we can model the skills and resources our clients will need in the job market. Career development theories and interventions have stood the test of time and now we have the opportunity to adapt those practices to our times.
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