An age of opportunity: Education and employment in cyberspace

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AN AGE OF OPPORTUNITY: EDUCATION AND EMPLOYMENT IN CYBERSPACE

by

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ABSTRACT

An Age of Opportunity: Education and Employment in Cyberspace

by

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There are many trends in cyberspace that are directly affecting both universities' education systems and the current job markets. This research provides an overview of some of these computer mediated trends. The purpose of this work is to look at the current job market, examine some of the computer related jobs for recent college graduates, look at distance education as an educational opportunity for many different people, and look at future opportunities that computer mediation will continue to provide. Students will have better insight of these trends, while professors will have a strong appreciation of the importance of teaching and understanding telecommunications.
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CHAPTER I

INTRODUCTION

Telecommunications will provide the infrastructure every industry, company, and university will need to compete in a cosmopolitan marketplace (this marketplace includes the job market). There are many different aspects of computer mediation which are struggling to be realized among many people, including academics. According to John Naisbitt (1994), the blending of technologies is most important. Naisbitt (1994) writes, "As computers, telephones, and televisions each are endowed with the capabilities of the others, there will evolve a splendid array of telephone/television/computer hybrids" (p. 53). Secondly, there is a need for strategic alliance between academics in universities and the general work force. This means that strategies must be formed to meet the needs of the market. The third aspect Naisbitt points out is creating a global network. The global network usually refers to the information superhighway. This digital web of networks allows individuals to communicate with anyone anywhere on the planet, altering the old-fashioned methods of work, play, and overall function. Finally, Naisbitt points out that personal telecomputers are for everyone. This simply means that "all the communications capabilities we could possibly need will fit on our desk, in our car, or in the palm of our hand" (p. 55). If all of this is possible or will soon be possible, then we must learn to better employ new technology. Where better to learn this technology than in a university communication program? So what does a recent college graduate with a communication degree do when he or she hits the job market after graduation? The status of jobs in communication is important not only to the students within the field,
but for those already employed. Instructors of college programs should not misguide students in any way in preparation for the "real world." The Hank Greenspun School of Communication has a very fast growing Master's program, but why? This research examines the future of education and the job market as it applies to new communication technologies. Telecommunications plays a very important role. Paul Traudt (1999), Associate Professor of Telecommunications at the University of Nevada, Las Vegas, says, "computer systems are beginning to provide the integration [and] convergence of what we're hearing about in those areas [of telecommunications]" (personal interview, November 30, 1999). For those job seekers having difficulty in obtaining jobs in journalism, broadcasting, public relations, and other area of communication, the Internet will provide such means for employment.

In regard to the job market, one must look also at the educational market. It is true that most college students are unaware of the state and conditions of the job market. A college degree does not ensure a job. This study will help shed light on this situation through some explanations of the future trends in the communication field. Since our society integrates computers each day, educators can better integrate new technology into the college curriculum of communication studies. More students will have opportunities in computer mediated fields upon college graduation. Traudt (1999) mentions one very notable area of telecommunications is that "It's cheaper for us now, because of computerization, to begin to compete with industry, in terms of providing state of the art training to students. We can now begin to buy technology, the same technology that is produced by major networks and major production houses, and teach our people how to do various aspects involving electronic media" (personal interview, November 30, 1999).

I attempt not to force college students to enroll in online courses and get degrees in computer science; but to show which way the communication field is headed. The
The web makes a large impact on society, particularly for those job seekers. The web empowers people to a degree. People publish all kinds of material on the web, with a vast range of interest and reliability. Journals now appear on the web, and instructors teach college courses on the web. In principle, the web offers us many opportunities in publishing, teaching, advertising, public relations, and many other communication fields.

James Seguin (1998) believes that the jobs are out there, but students do not seem to consider all these opportunities. Seguin advises exploration not only in traditional communication fields, but the many related fields of corporate communication, education, public information, training and development, satellite communication, and video games/simulation. He takes into account fields related to computer communication and the Internet as well. Seguin (1998) says, "unless you widen your horizons, you eliminate at least half the opportunities before you even begin looking" (p. 9).

The purpose of this research is to demonstrate how technology transforms much of what we know and what we do, especially in terms of employment and education. The job market and the education market are changing. What is a job in computer mediation, and what does education have to do with the Internet? As Steinberg (1997) wrote, job titles for the Internet can confuse people because duties vary by employer. He says that educational requirements vary widely, and no established curriculum can prepare you. Many students graduating with degrees in communication should have experience in marketing, customer service, advertising, and/or writing of some type. All of these skills could be put to use, perhaps as webmaster or web developer. Utilizing one's customer service skills, advertising skills, and/or writing skills contributes to the design, development, operation, and maintenance of a website. According to Steinberg (1997), webmasters must check out and approve all materials...
before they are published on a website. Webmasters are also responsible for the performance of a site. Steinberg (1997) says, "a key responsibility of all webmasters is to ensure that the site advances the goals of the organization, and does so at an acceptable cost" (p. 6). Steinberg (1997) notes that entry level webmasters may start at $35,000 to $50,000. As Seguin (1998) writes in his book, "students seem to consider too few opportunities. The opportunities abound, but many are tucked away under job categories that don't fall neatly into the traditional communication/media job market" (p. 9).

The author of the article J-Files (1998) believes that "...content is the key to the survival of the news media - newspapers, magazines, television, radio, and on-line services - as they head into the next century" (http://saturn.vcu/~jcsouth/). This author also believes that the way to develop and utilize pertinent information is through computer assisted reporting and research. So how do students and/or job seekers prepare for this online market? Dr. Lynn Schrum's (1995) study on online education showed that students and faculty found online courses to be a strong method for education. Students appreciated the opportunities to move through lessons at their own pace, to interact with the instructor in a dialogue that helps customize their lessons and experience, and to work with their own resources. With this method of education, there exists instructional delivery that does not constrain the student to be physically present in the same location as the instructor. Historically, distance education meant correspondence study. Today, audio, video, and computer technologies are more common delivery modes. The term distance learning is often interchanged with distance education. However, this is imprecise since institutions/instructors control educational delivery while the student is responsible for learning. In other words, distance learning is the result of distance education. Another term that has experienced some recent popularity is distributed education. This term may represent the trend to
utilize a mix of delivery modes for optimal instruction and learning. Schrum's study is only the beginning of this new educational paradigm; however, she demonstrated helpful insight into online education. So, where does the future of communication education and employment lie? Research suggests, it lies in cyberspace.

Review of Literature

Surveys of Degrees, Jobs, and Education in the Communication Field

Becker and Kosicki (1998) provide an analysis of degrees awarded in the fields of mass communication and journalism. The authors project an increase in undergraduate enrollment and a decrease in graduate enrollments. In 1997, they surveyed the administrators of communication programs across the country, who answered questions about the students' gender, race, and sequence of study. The authors found support for their projections: Graduate enrollment declined 1.8%, and undergraduate enrollment increased. The authors concluded the following enrollment trends: They expect graduate work to continue to decline; however, the authors predict another short-term growth period at some point.

Becker and Kosicki (1998) co-wrote another article entitled "Job Market Looks Favorable for JMC Graduates." This article, from AEJMC News, reviews the "Annual Survey of Journalism and Mass Communications Graduates," which monitors employment rates and salaries of graduates of mass communications and journalism programs in the United States. In 1997, a survey was mailed to 5,008 individuals and 2,593 returned them by May of 1998. Women made up 66.3% of respondents, and minorities made up 18% of respondents. This increase of women and minorities is an interesting trend for further inspection. Overall, graduates who found jobs in web and online publishing did best in terms of salaries. These graduates earned approximately
$4,320 above the median salary earned by all journalism and mass communication graduates with full time jobs. A recent graduate with a Bachelor's degree and full time employment earned $23,000 a year (an increase of 1.7% from the last year). The authors found some progress in terms of salary of college graduates with degrees in communication.

So what do employers look for in recent graduates to attain that job and that salary? Collins (1996) reviews a survey of 259 employers conducted by the National Association of Colleges and Employers. This survey indicates that the job market for 1996 was better than from 1995. Service employers, manufacturers, and government employers intended to hire 23.5% more graduates in 1995 than 1996. According to Collins, the best candidates were those with oral communication, interpersonal, and teamwork skills. She says candidates should also possess analytical and leadership qualities. Unfortunately, even with these skills, Collins recommends getting a job in the public sector (for the government), as an engineer, or with a software company. Clearly the status of jobs seems questionable.

In "An Agenda for Graduate Education in Communication: A report from the SCA 1996 Summer Conference," (1997) the Speech Communication Association (now NCA) discussed employment for graduate students, education of faculty members, the demographics of graduate students, and the quality of these graduate programs. The conference reported that 80 doctoral programs and 275 master's programs have increased the number of graduate degrees granted during the same period but undergraduate degrees increased the most. Graduate degrees in M.A. programs increased from 2,640 to 4,754. Ph.D. programs went from 175 to 293 during this period. This suggests a healthy job market; however, job placement seems inconsistent at best. Some programs reported 100% success, while others suggested graduates took jobs they could get, rather than those they want. Other graduates were in a holding pattern,
teaching part-time and waiting for a better job to come along. The authors conclude that recent graduates with graduate degrees in communication find it difficult to get jobs. Regarding education, the authors believe that the education of faculty must change as scholarship changes. Graduate level programs continue to be an area of concern for future NCA meetings. The NCA aims to improve the state of graduate level communication education to meet the needs of new technology and the job market.

Journalism

Print journalism has always experienced popularity as a job field; however, an excess of labor exists. In a recent article, Becker, Stone, and Graf (1996), found an overabundance of labor in radio news, TV news, and daily newspapers. Supply and demand says that when supply goes up, demand (salary) goes down. Because of excess in these fields, the authors conclude salaries will continue to decrease, especially for television news journalists, as demonstrated by their abundance. So, if one's interests lie in journalism, where does one go? Again, research suggests one head towards the Internet.

Many journalists share the popular opinion that journalism is a very oversupplied and competitive field. In the popular opinion trade journal, The Quill, Natenberg (1993) writes that "every year the beginning journalists have a better chance of flipping burgers at McDonalds, than defending the public's First American rights. Each year the quality and quantity of jobs has further diminished" (p. 2). Another article by Balough, editor of The Quill, advises "master technology, be it print, broadcast, or on-line. Better yet, all three. They're coming together." She continues, "Learn computer research. Don't wait for the public embrace en masse the on-line world. The communications world has and won't let go" (p. 2). The advice of Natenberg and Balough formulate an argument that the future job trend lies in cyberspace.
In an article entitled "Cyberspace Journalism," Pogash (1996), former reporter and columnist for the San Francisco Examiner, examines the future of online journalism. Pogash writes as an on-line journalist for the San Jose Mercury News and Mercury Center. She explains, "The switch meant a departure from tradition, a new way of thinking, of editing, including the incorporation of audio and video into stories. It meant tossing out the AP stylebook...this field is growing with young enthusiastic cyber editors and producers" (p. 27). Pogash also believes that computers have been changing the way journalists do their jobs ever since newspaper newsrooms threw out their typewriters and television newsrooms went to digital editing. This change to computer assisted production quickly altered the way news is delivered. Computer assisted journalism is the umbrella term for the use of computers in newsgathering.

The job of a journalist can be broken into four R's: reporting, research, reference, and rendezvous. Computer assisted reporting produces the result of a special search or investigation. Computers can help reporters conduct these searches with spreadsheet programs for complex calculations, statistical programs, and database software to compile information. Computer assisted research is similar to reporting, as it requires a special search or investigation; however, the journalist uses different sources. Reporting relies on a primary source, while research utilizes secondary sources. Reporting and research help formulate a complete news report. Computer assisted references are dictionaries, almanacs, glossaries, and other items for simple reference. Computer assisted rendezvous refers to the virtual communities of cyberjournalists. Each of these aspects of computer assisted journalism require different software, skills, and knowledge.
Other Jobs on the Web

In an article from News Photographer (1998), the article's author reviews the impact that the web has on the job market. This author states that graduates with full time jobs received higher salaries in 1996 than in 1995. The author explained, "it may be that the 1996 class was the first that took seriously the possibilities of the internet and web publishing as an employment option" (p. 33). The author mentions statistics from the 1996 survey given by Kosicki and Becker. Nearly 7% of 1996 graduates looked for jobs in online publishing, and over half of these graduates reported being offered an online publishing job. The median salary in this area was $26,000 for graduates with a B.A. degree and $31,000 for those with an M.A. degree. Online employers seem to pay above the average salary in this field.

Gary Steinberg (1997), economist in the Office of Employment projections, reiterates that the growth of the Internet is incredible. He believes that the Internet has received a lot of hype - the kind normally associated with technology. He remarks, "you might think that printed newspapers and magazines will disappear, libraries will close, or everything we purchase will be bought online" (p. 3). Steinberg may exaggerate the influence of the net; however, there is a very strong demand for workers whose skills are related to design, development, and maintenance of web production. One may think that employers of these large production companies require employees with computer science degrees; however, they might not. Steinberg writes, "there is no typical internet staff because there is no typical website or typical organization using the Internet. Many different occupations are associated with the Internet: webmaster, web developer, network systems analyst, programmer, and customer service representatives" (p. 5). Steinberg notes that job titles can be confusing because duties vary by employer. Steinberg says, "the larger the website, the more Internet specialists there will be" (p. 5). If one wishes to prepare for a job on the Internet "no established curriculum will prepare
you" (p. 8). Basically, some employers desire a B.A. in computer science, while others prefer degrees in graphic design, management information systems, marketing, or English. Some jobs do not require a degree at all. Internet jobs take into account people with many different degrees, and many different backgrounds, and as such, it seems to be the wave of the future for many job seekers.

Distance Education

If the job market lies in cyberspace, then so should education. To prepare for this job market in cyberspace, students need to learn the process of searching and reporting valid research and information. Using a computer database, students would learn about important search engines, and consequently, learn to apply these Internet tools. As the NCA convention reported from 1996, faculty must change as scholarship changes. If this is true, then one must examine the future, which will be in online education and training. Rose (1996) questions the following things about online education: (1) "what is this new medium of communication," (2) "is it educationally sound," (3) "what skills and qualities will the virtual universities require," and (4) "how can teachers provide an interactive and supportive environment" (p. 65)? Rose (1996) believes that with online education, student bodies will expand and diversify. He says that "easy access to the internet enables more sectors of the community to engage in learning programs, and learning will become a more student centered focus" (p. 66).

The Internet is rapidly growing. At present there are around seven million computers connected to the Internet. This equates to 660 million telephones in use. The information superhighway has been precipitated by multiple industries, including telecommunications and broadcasting. This superhighway includes the use of CD-ROM, interactive video, satellite communication, and microwave and radio technology. With all of this technology, where does the future lie? Rose writes, "the current wave of
euphoria (and investment) surrounding the education superhighway would certainly suggest that its arrival is imminent. The logic would appear simple: if high quality, properly designed learning materials can be downloaded to anyone...then it would appear that the days of the traditional university ...are truly outnumbered" (p. 66). The Internet has the ability to revolutionize education and training.

Rose is not the only one who believes in the effectiveness of the Internet as an educational tool. Dr. Lynn Schrum (1995), at University of Georgia, believes that "nowhere is information technology more evident than in the explosion of on-line education" (p. 6). Using a case study of online professional development courses, Schrum explores information technology through electronic mail, teleconferencing, and database searching. Over three years, the author interviewed 95 students from online courses at the University of Georgia. The author found that online interaction does foster social and professional communities, and that distance learning is an effective and appropriate manner of instruction. Schrum concludes that the growth of the Internet, along with interviews with faculty, administrators, and students of these online courses at the University of Georgia, show insight into many issues involved with online education and computer mediation. The author's research leads to the idea that virtual universities may become the way of future education, with technology definitely changing education.

Overview

Chapter one is an introduction and preview of communication education and preparation for the job market. I believe that communication programs (at this point in time) do not prepare us for the wave of the future. Although rhetoric is "clearly the theoretical home" (Traudt, 1999) for study in communication, I believe we need to thoroughly integrate computers and the study of telecommunications into our
communication discipline, especially for those students who will be headed toward the job market upon graduation. Chapter two covers jobs in online employment. I will review cyberjournalism and computer assisted reporting. My research examines cyberjournalism, since this is a very large area of transition right now, as well as other jobs such as webdesigning, web authoring, marketing, and advertising (just to name a few) as it applies to the Internet. Chapter three discusses computer mediated college teaching or distance education as it is called. I believe that distance education is a very important aspect in regard to the future of the academic environment. Academia is changing. So, how can one prepare for this future education and future research as it heads into the technological age? How can one prepare to teach and research via Internet without the presence of classrooms? I hope to shed light to these subjects throughout these preceding chapters. Finally, chapter four provides an overview, conclusion, and discussion, as well as implications for future research.

Some of the more externalized research will come from personal interviews. I will interview a few outstanding leaders in our community, leaders in different fields of the communication industry. I will use a basic set of interview questions (found in appendix 1), composed of some basic queries regarding the interviewees' background, as well as questions of industry, employment, and computer mediation. I will interview these professionals at their convenience. All interviewees will receive a brief overview of the purpose of this research, and each will sign an informed consent sheet as well (found in appendix 2). I will interview Ms. Kris Foate, Vice President of News 13 in Las Vegas, for a broadcast journalism and sales perspective as it relates to the Internet and the use of computers. I will interview Mr. Danny Greenspun for perspectives in cyberjournalism and journalism. I will interview Dr. Paul Traudt, Associate Professor of Telecommunications in the Hank Greenspun School of Communication. Finally, I will interview Dr. Charlotte Farr, Director of Distance Education at UNLV. The
The purpose of these interviews is simply to inquire among working professionals on a personal and experiential level, to see what the current job market is like for recent college graduates with degrees in communication. It is my hope to provide insight for both students and professors of communication. I believe that students will appreciate insight into the job market, while professors will appreciate research into the importance of teaching and understanding telecommunications.
"News is a social construction rooted in journalistic routines and practices, and newspapers are central tools we use to construct our own individual and collective senses of reality" (Carrol, 1998, p. 137). So, what has changed about journalism if news is a "social construction," just a simple "routine and practice?" Well, the main differences lie in the methods of designing and deploying information. Ms. Kris Foate (1999), Vice President and General Manager of News 13 in Las Vegas, NV says that one of the main changes is the necessity to "provide information on demand. We have to provide our community with what they need" (personal interview, October 28, 1999).

Information is a term frequently used, but never really defined. According to Webster's Collegiate Dictionary (1997), information is defined as 1) "the communication or reception of knowledge or intelligence", or 2) "knowledge obtained from investigation, study, or instruction." Although there are a multitude of definitions for this word, the basis of these definitions lies in one word: knowledge. Knowledge is the key or result of information. It is also said that knowledge is power. If this is true, then the world wide web has a great deal of power. So, how do journalists gain that power? After all, it is the job of a journalist to collect and edit news for mass presentation through the media. For the most part, society depends on journalists for the knowledge of local, national, and international events. Journalists, in turn, must find ways to verify the factual accuracy of the information so as to come across as credible and believable. The verification process lies in computer assisted reporting and research.
According to Paul (1997) computer assisted journalism is the umbrella term for the use of computers in news-gathering. The term, computer assisted journalism, can be intimidating because so many different aspects of the journalist's job are lumped under it. Often, those hearing the term think immediately of expensive equipment, complicated programs and sophisticated analyses, used only in long-term, long-winded projects.

The traditional reporting techniques of CAR (computer assisted reporting) are gathering information through interviews, backgrounding, first-hand observation, working sources, and getting tips. Computer assisted reporting is a combination of the following: 1) spreadsheet programs that analyze large sets of records and perform calculations, 2) statistical programs that analyze complex datasets, 3) database software that builds original collections of records, and 4) mapping software to display data visually in a geographic context. The information revealed from these techniques provides a context for the data. The data that results from using these computer applications yields informational reporting, spots trends, uncovers the hidden information, and provides independent verification of information.

Paul (1997) best explains computer assisted journalism broken down into four Rs: Reporting, Research, Reference, and Rendezvous. Computer assisted research requires a special search or investigation. The distinction comes from the sources used by each. Generally, reporting relies on primary sources such as interviews, observation or self-conducted computer analyses. Research uses secondary sources such as reports, articles, and studies to contextualize the material being investigated. Together, reporting and research help form a complete news report.

Computer assisted reference looks for those quick facts, spellings, definitions, and statistics that add color or detail to the reporting. Reference works, such as dictionaries, encyclopedias, gazetteers, almanacs and glossaries, on the web or on CD-ROMs
provide quick access to these small but essential details. Computer assisted rendezvous refers to the "virtual communities" of the wired world. The electronic rendezvous provides journalists with the ability to hang out, listen in, seek advice and tap into other people's networks of sources is the newest and, perhaps, most exciting aspect of computer assisted journalism. These areas include discussion lists, newsgroups, forums and chat.

Cyberjournalism as a Career

Steve Outing, a twenty-one-year veteran of journalism, believes that online journalism is a great career choice. Outing comes from a fairly traditional print news background with the exception of the past five years in which he has been exclusively in the online news business. Outing (1999) explains one of the main differences between print and online: "If you choose a print or broadcast journalism career, you're likely to be practicing journalism in the time-worn manner...But if you choose an online journalism career, you're likely to be operating not only as a journalist, but as a business person and entrepreneur" (p.49). Online journalism is not just about practicing journalism, but figuring out how to craft a new media industry. This new media can be seen as part of the paradigm shift, the same shift to which Paul Traudt (1999) referred when he said that "computer systems are beginning to provide the integration [and] convergence of what we're hearing about in those areas" (personal interview, November 30, 1999). According to Draper (1995), "You can't be around info-junkies without hearing the phrase paradigm shift...[and] that it [the computer] provides the basis for a truly revolutionary change in the fundamental structure of our economy and society" (p. 728). Draper, President of the National Education Task Force, Inc., says that "the industrial age has now officially given way to the information age" (p. 728). This is the shift to which Steve Outing (1999) refers.
When Outing first became involved in online journalism, the field was not very respected, and there were not many jobs available. The problem was that the traditional media executives did not see any potential, and believed the Internet was simply a fad. This point of view among executives is widely spread, not only in the business of journalism, but in academia as well. Outing states that "if they [the executives] had understood it, their companies might have become the Yahoo!'s of today....Instead, that money is going to the pure Internet companies the Yahoo!'s, the Excites, the Amazon.coms, the companies that truly understand the potential and are not hindered by old-media business models that are difficult to throw away" (p. 1). Many of those traditional business executives are paying the price for their lack of attention and vision.

So, where do new journalism graduates head? Outing believes that the new, Internet-savvy companies offer the best opportunities. There are a lot of openings in online journalism, and from Outing's research, growth in online news jobs is growing at a steep curve, while job opportunities in old media are flat or growing very slowly. He says, "I have no doubt that online audiences in the next few years will surpass many of the largest traditional media entities, and thus new media job opportunities will boom in the coming years" (p. 1). Outing lists some top news sites and their visitors: ZDNet, a technology news site gets 5.9 million visitors a month; CNet, 3.3 million; Weather.com, 4.8 million; CNN's Web sites, 5.9 million, USA Today.com, 2.5 million; and The New York Times on the Web, 1.6 million.

For those interested in the field, Outing advises job seekers to check out companies like CNet, an online news venture that originated on the Web. He says, "pay scales for journalists at CNet are roughly equivalent to what journalists get at the major San Francisco newspapers." Overall, there are a lot of opportunities out there in the online world since online journalism is popping up in many different places these days.
Online city guides like Sidewalk, Digital City, and CitySearch hire journalists, and most of them hire journalists right out of school. There are an abundance of online sports sites, entertainment sites, financial sites, and other niche topic sites. Outing believes that the jobs are out there. Some tend to be editing content rather than creating original content, but more and more journalists are heading this way. E-commerce sites like Amazon.com want to offer contextual content to support the sales side. Amazon has a sizable staff of editors who write reviews and work with freelancers. Finally, "there are countless opportunities for journalists to help fill Web sites of corporations, advocacy organizations, political groups, education sites, government, etc. with content" (Outing, 1999, p. 2).

Marketing, Advertising, and the Internet

Research suggests that some of the hottest opportunities to explore right now involve the Internet, advertising, and the manufacturing of information. Mr. Danny Greenspun of Las Vegas, Nevada is in the long time family business of multi-media, information, and news. Mr. Greenspun deals a lot in the marketing aspects of these areas, and he is very successful in doing so. Perhaps Greenspun (1999) is successful in his field because he qualifies himself as a "very good strategic thinker, with a wild marketing side built in" (personal interview, December 2, 1999). He continues, "I preoccupy myself with startups - as many Internet startup opportunities as possible. The methods of reasoning and the ability to abstract are very important" (personal interview, December 2, 1999). These skills should come in handy for anyone seeking jobs in any of these areas, especially marketing. This is most important because the web is now crowded with sites in almost every category. A business, and those who market the businesses, must do all they can to attract the attention of the casual browser or "web surfer."
According to an article from the magazine *The Economist* (1999), "on the Internet, brand-building is out and straight selling is in" (p. 71). Like almost everyone else, advertisers are logging on to the Internet. Advertising is projected to rise from 3.3 billion in 1999 to $33 billion by 2004, according to predictions by Forrester Research, a high-tech consultancy.

Many marketers and advertisers understand the importance of the Internet as an advertising medium; however, *The Economist* (1999) believes that "throwing money at the web in the hope of reaching a mass-audience and building a brand, just as they did once before in the broadcast world" is not the best way to make use, since this ignores the Internet's most potent quality - interaction. While an organization's webmaster may consider designing simple logos and animations to be part of his or her job, a company that advertises extensively on the web is likely to need the help of a designer who specializes in interactive advertising. Eight years ago, G.M. O'Connen and Douglas Ahlers realized that advertisers would have to become more interactive. Today, they are helping giant corporations such as AT&T, CBS, and MasterCard International build roadside attractions on the information superhighway.

In 1987, O'Connen and Ahlers founded Modem Media, an interactive advertising agency based in South Norwalk, Connecticut. O'Connen states, "We knew that the digital technologies being brought to communications would make it more interactive" (1995, p. 48). Modem Media is known for a home page on the Internet (zima.com) created for Coors Brewing Co.'s Zima Clearmalt. It opens with a stream of consciousness episode of cyberfiction about Duncan, a Zima drinker. The ad allows Net surfers to write to Zima, get information about Zima, or join Zima's Internet only club. "Having the Internet address speaks volumes about the brand," says O'Connen. "It says, hey, we care about what you think. Talk to us; we're here" (p. 48).

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Modem Media's revenues increased 250 percent from 1993 to 1994 and were projected to double again in 1995, to between six million and seven million dollars. The growth has been matched by the boom in online advertising, which is most interactive.

So why does this happen? Why is the Internet becoming a better medium for marketing and advertising? The combination of interactivity and precision makes the Internet ideally suited to the hard sell. As selling comes to overshadow brand-promotion, advertisers will build ties to websites on which they appear, reducing the need for middlemen, such as Internet media-buyers or creative web agencies. As a result of all of this, advertising will come to bear no similarity to that of today.

Victor Hugo (1852) once said that "an invasion of armies can be resisted, but not an idea whose time has come" (p. 38). The underdeveloped frontiers of the Internet world are becoming inhabited, and as such, there are many other success stories similar to the one of O'Connen and Ahlers' company Modem Media. One of those other successful companies is Datavision Technologies Corp. This corporation has patented a software process that uses customer profiles to create personalized video and audio messages. Hitchcock, president and CEO of Datavision, explains "the technology allows for the automatic mass production of customized video and audio based on data profiles" (p. 47). So, how does this work? There are an infinite number of variations of this technology. The article in Success magazine gives the following example: You're the mother of two small children living in New York City. You're shopping for a car. You call Chrysler and are asked a few simple questions. The next day, you receive a videotaped brochure showing a woman packing her kids into a Plymouth Voyager minivan and driving across the Brooklyn Bridge. The video describes features that make this car right for somebody just like you. This video is marketed and produced to meet your needs, or anyone's needs for that matter since there are many different
videotapes targeted to one's profile. This is what Datavision does. It advertises based on what the individual wants, which is based upon the few simple questions asked by the retailer. This method of advertising is more interactive perhaps.

One of Datavision's clients (a company selling health risk assessment programs) has the potential to produce 7.8 trillion versions of its videotape. Today, many companies are using Datavision's technology to distribute customized videotapes, including Outplacement International Inc., a leading outplacement firm. It can offer 4.5 million customized versions of its award winning PowerSearch. Datavision revenues are expected to exceed seven million next year. And, once its technology is married to a set-top box, advertisers will be able to deliver individual, custom-tailored messages in real time to every television viewer.

How about an instant music maker? The following is another success story told in the article, "The hottest opportunities: New markets to explore now." Walk up to a NoteStation kiosk. From its touch-screen interface, choose a tune from thousands of titles on file. Listen to the song, then customize it to your desire. If you prefer, change the key and choose from different arrangements. Then download MIDI (Musical Instrument Digital Interface) file to a diskette and take it home, or print out the score on the adjacent laser printer. You are done in just a few minutes. This is a creation called NoteStation, the brainchild of record industry veterans Jon Monday and Larry Heller, who developed the concept in the early 1980s. Monday, president of MusicWriter, Inc. (which developed NoteStation) says, "It took about six years for the technology to catch up to the idea" (p. 51). MusicWriter has revenues of approximately five million dollars. The company operates 200 NoteStation kiosks in the United States and Canada. NoteStation kiosks are very cost effective for the retailers, since "it's virtual inventory. All you need to keep [as a retailer] are the raw supplies...a case of paper, some blank disks, and some audiocassettes" says Monday (p. 51). "Point of sale manufacturing is
an obvious avenue for any product that can be digitalized - from videotapes and music CD's to software and books. And that's exactly where MusicWriter is headed" (p. 51).

Yosi Amram is another excellent example of interactive selling and advertising via Internet. Amram built a twelve million dollar empire by providing time-famished business people with customized information, simply because some people suffer from information overload. In the mid 1980s, Amram suffered from this overload of trade magazines, journals, and newspapers; however, he was a venture capitalist trying to stay on top of new trends. So, he had an idea. He would create a newspaper packed with information custom-tailored to the needs of the individual readers. In 1988, Amram sought out the technology that would be needed for his venture. He went to Cornell University where he came upon SMART (System for Manipulation and Retrieval of Text).

With this knowledge in hand, he tried to find funding. He raised more than one million dollars from family, private investors, and other venture capitalists. By 1990, his Burlington, MA based Individual Inc. was running. The company has grown more than 100 percent each year and now has 35,000 subscribers. So, how does this service work? It is very user-friendly. Subscribers pay $29.95 a month and receive either a daily e-mail message or a one page fax containing twenty news briefs on selected topics. To retrieve full text stories, users dial an 800 number or send an email. The articles are delivered instantly. About 15,000 articles from 500 different sources are fed into the SMART system every night. It's built in feedback system allow users to identify which articles they like best. "All of our newspapers are personalized...That's why I called the company Individual," says Amram (p. 52).
Internet Advertising Designer

One other aspect of the Internet and advertising, which is profiled by Henderson (1999), is called Internet Advertising Designer or Interactive Advertising Designer. The job of this advertising designer is to create effective advertising features for websites, including animation, sound and text. Henderson (1999) says that a four-year college degree would be helpful, perhaps a liberal arts degree with some programming, writing, and graphic design courses. Those who break into this field usually start with basic web page design. Henderson (1999) also writes about certain personality traits which would benefit. He says, "one should be imaginative, a self-starter, and persistent in seeking opportunities" (p. 87). Designers' salaries range from $35,000 to $60,000, and advertising agencies are starting to hire such specialists to work with their clients.

The Internet Advertising Designer must combine traditional advertising techniques (like targeting an audience based on certain appeals) with the new medium. An important part of this job is to monitor the effectiveness of the advertising. These are the devices that may tell one how many "hits" a certain web page has undergone. It could also be getting readers to respond to surveys about what they liked and disliked. In some more sophisticated sites, the programming can actually tell the designer what part of the site a visitor frequents the most, as well as what type of products he or she may tend to purchase.

The duties of this job are not very well defined as of now; however, they do vary widely. Some advertising designers may have all the programming skills necessary to achieve their ideas, while others may create specifications for the programmers to use. Nevertheless, there are two main workplaces for the Internet advertising designer: 1) in advertising agencies, and 2) Internet based businesses with their own advertising staff.
Status of Jobs in Advertising and Marketing

According to Comiteau (1999), the job requirements are changing for those entering the advertising field. In the past, drive, determination, creativity, and charisma were enough; however, this is no longer true. Many jobs posted on Amazon.com's website require candidates to have a deep understanding of the Internet and e-commerce. Among the many positions J. Walter Thompson in Detroit is trying to fill, there is a position for an interactive account coordinator, whereby only "internet savvy, marketing wizards" should apply. The ad continues, "If you have a love for technology and a keen understanding of the cyberworld, this could be the opportunity you've been searching for" (Comiteau, 1999, p. 13). Bill Markell, a managing partner at New York based agency Interactive8 says, "three to five years ago, clients didn't understand what the Internet was." Markel continues, "We can't go on our God-given abilities anymore" (Comiteau, 1999, p. 13). Linda Taylor (1999), a senior recruiter at JWT in Detroit adds "There are enough people out there now who have experience, so you don't have to settle for a person who doesn't" (p. 13). Much like other media, the Internet is maturing, and so it attracts more skilled workers. Comiteau (1999) states, "Just a year ago, it was still considered gutsy to sacrifice a promising career at Procter & Gamble or a PepsiCo for an Internet job. You were considered a rebel. Now it's almost expected" (p. 14). Mark Breier (1999), president and CEO of Internet software store Beyond.com says

Traditional marketing executives need stamina to survive the fast paced process at Internet companies. They also need to be in tune with the existing corporate culture. If they try to call a seven a.m. meeting with programmers, they may get a revolt. Times are changing, and the traditional executives must be careful not to tame the new crusaders of the wild wild web who are also looking to make their mark in the new advertising world. (p. 2)
Other Careers on the Internet

According to LaPlante (1998), it is difficult to continually report what should be obvious to everyone. The demand for skilled information technology workers far outweighs the supply. The latest Computerworld employment survey shows that Internet will increase its staff by almost eight percent of current totals. LaPlante's article profiles some of the high-demand Internet jobs, as well as the desired qualifications and salary ranges. From her research, she begins by stating that all of the jobs require a bachelor of science or bachelor of arts degree and insists on excellent oral and written communication skills and team skills.

The first job she examines is a PC Technical Support Specialist. This specialist supports desktop applications used by employees, both technical and non-technical. This position also provides training for existing and new staff. The PC Support Specialist will keep client desktop software up-to-date. A few other duties include managing budgets for supporting end users, evaluating user needs, monitoring equipment purchases for PCs (hardware and software tools). In order to attain a job like this one should meet the qualifications as follows: 1) Have approximately four years of Internet experience, 2) A good understanding of basic PC hardware and software like Windows and Microsoft Office, and 3) Have a basic understanding of computer networks. The salary for a position like this ranges from $25,000 to $45,000. The qualifications for this job are quite basic computer skills mixed with positive communication skills. This job does not require a computer science degree, and many of these skills could easily be attained with perhaps a Bachelor's degree in Communication.

The next job LaPlante reviews is project manager. The project manager interacts with systems that achieve business objectives. The manager provides team leadership
and coordinates the projects, tasks, and initiatives. He/She manages staffing and status duration of projects. Finally, this job promotes standard processes and procedures across different locations and functions. The salary ranges from $80,000 to $130,000. The qualifications are as follows: 1) have at least six years of experience managing at least fifteen people and have demonstrated leadership skills, 2) have experience in specific methodologies and with project life cycles and technologies, and finally, 3) have experience in the phases of the systems development process. Surprisingly, detailed computer skills are not required for this job. Again, this job does not require a degree in computer science.

Another job LaPlante reviewed is webmaster. This is a very popular job these days. The responsibilities are as follows: 1) assists with designing and developing world wide web sites, technologies, and processes, 2) builds and modifies sites to work with current versions of major Internet search engines, 3) seeks out relevant portals and manages the process of making sure all posted corporate information is accurate and up-to-date, and 4) coordinates technical development staff with content providers in other areas of the business. The salary ranges from $45,000 and up. Although this job does require more specific computer skills, a degree in computer science is still not absolutely necessary. In an article by Miller (1997) "webmasters' backgrounds and professional experience are all over the map, from computers to marketing, and their Web skills are often self-taught" (p. 2). An MIT graduate, Cutler says that when he started the guild in 1995, he "expected a lot of technical people to come and talk about technical stuff" (p. 2). But he says that the majority were business people, those in information and artistic fields, students, and even senior citizens. All were involved in the Web, and "in different ways considered themselves Webmasters," he adds (p. 2). This very new field of webmaster is very diverse. Bob Weaver, director of application services at Southwest Gas in Las Vegas states, "Be willing to consider alternatives"
Weaver turns to the community college in some cases seeking recent graduate and skilled workers. There seems to be no specific type for the job.

One of the final employment opportunities reviewed by La Plante is Technical Support Manager. This position is more of a management position. He/She manages the team that provides computer hardware throughout the organization. The salary starts at approximately $55,000. The qualifications are quite simple: 1) Experience with software management, and 2) Expertise with Windows and Microsoft Office. Again this is a position requiring skills that a typical Communication or Business graduate could attain. A degree in computer science does not seem necessary.

In a book entitled "Careers Opportunities in Computers and Cyberspace," Henderson (1999) also profiles many of the up and coming jobs on the Internet, many of which require basic computer skills and backgrounds in communication, marketing, or business for maximum success. One of the first employment opportunities Henderson describes is an Internet service provider, also known as an online service provider. This is a career which operates as a business, providing access to the Internet, hosting for web sites, Internet commerce, and related services. Henderson (1999) says that no specific educational background is needed; however, training in business management, computing, telecommunications, or marketing would be helpful. Experience running a small business and familiarity with Internet services and features would be beneficial as well. Henderson (1999) also offers some advice on special skills and personality traits. He says that one must be a self-starter and a quick learner willing to work beyond a forty hour work week. One must have imagination and persistence to market services. Some of the basic tasks of the ISP operator include: 1) getting the right amount of phone capacity from the local telephone company, 2) arranging connections to nearby Internet operators, 3) setting up and configuring the Internet server machine and the modems that pick up the customer's calls, 4) setting up accounts...
for customers and providing them with technical support and instruction, 5) constantly monitoring the local connections and creating alternate routes to the Internet if there are blockages, and 6) creating "added value" features such as support for customer's web pages, consulting, Internet commerce services, and other resources. Henderson (1999) states, "The skills and traits needed are those common to all entrepreneurs: self-motivation, willingness to work hard, ability to learn many different skills, and the ability to judge people and supervise employees" (p. 80).

Another job Henderson (1999) profiles is called an Internet or web consultant. The growing desire of businesses and other organizations to get on the Internet has led to strong demand for Internet consultants. The main objective of this job is to help with the design of Internet sites and configurations of Internet software and connections. The salary ranges from $45 to $60 an hour. The employment prospects and advancement prospects are very high as well. Some of the prerequisites might include college programming, networking, graphic design, and multimedia courses; however, Henderson (1999) says that most clients look at the consultant's skills and recommendations from previous clients rather than the formal education. Some experience in designing small web sites might be beneficial as well. Henderson (1999) suggests that imagination and motivation are very helpful too. The consultant must be able to communicate well, finding out what the client wants to do and discussing the advantages and disadvantages of alternative approaches. After the consultant and the client come to an agreement, they normally draw up a contract. A consultant may also enter into a long-term agreement to provide technical support for an Intranet or an Internet web site. Consultants generally advance by mastering skills that are in high demand, and thus being able to charge higher rates. According to Henderson (1999), "an Internet consultant may be in a good position to get a job as a corporate webmaster with a good salary and benefits" (p. 82). The Internet consultant is heterogeneous, and

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can include many ways in which one can help people access the Internet or help businesses on the Internet attract and serve their customers.

A web page designer creates linked pages of text, graphics, and animation for display on the web. This job is also called web author. A graduate of the arts or liberal arts would seem to fit well into a job like this. Although no formal education or training is needed, courses in programming, composition, typography, and graphic arts/multimedia can be helpful. Some experience in the preparation of documents (desktop publishing) and the use of graphics programs can be advantageous as well. Henderson (1999) recommends taking an artistic approach, having good composition skills, and possessing the ability to work with a variety of tools and resources. Simple web pages consist of text, graphics, and links that the reader can click on to go to other pages. These simple web pages usually bring an entry-level salary. The ability to write original text with complex layouts brings a higher salary. Henderson (1999) says the salary range is $25,000 to $35,000. The best way to get experience for one who wishes to break into this field is to start designing web pages, beginning with simple headings and text, and then gradually mastering graphics, link organization, and interactive features.

One of the most well-known and popular jobs on the Internet is called webmaster, also called web site administrator. The job of a webmaster is to create or maintain a site on the world wide web. The webmaster provides content and programming or supervises writers and programmers. The webmaster monitors the performance and popularity of the site. This job provides secure forms and transactions for Internet based businesses as well. A web site usually consists of a home page, a document that serves as a kind of table of contents and index, which in turn is linked to many pages of text and graphics. The contents of these pages depends on the purpose of the website. Webmasters administer and oversee this content.
Henderson (1999) says that the salary ranges from $35,000 to $60,000, although Miller (1997) says that salaries of $45,000 or more were reported by 84% and 10% percent of webmasters reported making $95,000 or more in some cases. This is profiled as a high paying career. Also, employment prospects are good. Many webmasters advance to Internet consultants, application programmers and web page designers. Some of the prerequisites Henderson (1999) lists are a few years experience designing web pages or helping to maintain a web site. Undergraduate degree in a computer related area may be preferred, but is not always required. Some special skills that may help include, writing, graphic arts, programming, administration, flexibility, and quick learning. The ability to be a quick learner seems to be important in all computer related careers, as computer technology is always changing and advancing. Henderson (1999) states, "The demand is strong for people who have the variety of skills needed to manage a large web site. The ability to create simple web sites using word processor-like software may reduce the demand for people with limited skills" (p. 86). This research suggests for webmasters to keep in touch with as many aspects of the evolving Internet. Henderson (1999) says, "The Internet Society is one of the most prestigious groups for people concerned about the future of the Net" (p. 86).

Computers and computer skills are used in almost every profession today. The Internet has radically changed the networking environment since the mid-1990s. Many of the hottest, most exciting jobs have been created by the explosive growth of the web and Internet. Research suggests that there are a growing number of traditional professions that are appearing in new forms on the Net. Henderson (1999) states, "Graphics and design skills, along with writing and marketing ability, are the keys to utilizing this new medium" (p. 1).
CHAPTER III

DISTANCE EDUCATION

Peter Drucker (1993), Professor of Social Science and Management at Claremont Graduate University, stated this in an interview with Forbes Magazine on March 10, 1997:

Thirty years from now, the big university campuses will be relics. Universities won’t survive... Do you realize that the cost of higher education has risen as fast as the cost of health care?... Such totally uncontrollable expenditures, without any visible improvement in either the content or the quality of education, means that the system is rapidly becoming untenable. Higher education is in deep crisis... Already we are beginning to deliver more lectures and classes off-campus via satellite or two-way video at a fraction of the cost. The college won’t survive as a residential institution. (p. 126-7)

There are many challenges facing universities these days. Throughout the world, the post-secondary learning market has become one of today’s growing markets, both in developed nations (Ghazi and Irani, 1997) and in developing ones. Increasing competition, the need to keep up-to-date professionally, along with a rising standard of living and more leisure time, have combined to make studying an ongoing process called lifelong learning (LLL). The studying population has not only grown larger; it is becoming older, on average, and has additional obligations, mainly work and family. As a result, there is an increasing demand for a flexible learning framework, one that does not tie the learner down to a specific time or place. This paves the way for distance education. The purpose of distance education is to provide learning opportunities that are less restricted by time and place than are courses and programs.
scheduled on campuses. Dr. Charlotte Farr heads the department of Distance Education at the University of Nevada, Las Vegas. Farr (1999) believes that distance education "provides educational opportunities to people who wouldn't have them normally, and distance education or technology is a wonderful tool for that because it obviously expands the possibilities" (personal interview, November 29, 1999). Distance education allows for an adaptable pace and mode of study, suited to personal abilities and distinct learning styles. The adult learning market is becoming increasingly competitive and full of opportunities, both for existing institutions and for new entrants. Hanna (1998) claims that: "throughout the industrial era, the system has focused upon serving the educational needs of youth to prepare for a lifetime of work. Today it is clear that the future will involve a lifetime of learning in order to work." According to a UNLV pamphlet (1999), "Learning is lifelong. It begins early and lasts a lifetime. Formal education should always be an option for adults whether they are at the secondary or the post-secondary level. Now it is available at a time and place convenient to the student." Distance learning provides answers to the problems of availability (accessibility and cost) and the demand for flexibility (time, place and pace) of learning.

Now, what is it about the tools of technology that help? As a result of these conditions, combined with the beginning of computer technology in the 1980s and developments in communications technology in the 1990s, the potential for improving the quality and effectiveness of distance learning has grown. Farr (1999) of UNLV says, "I see it [computers/technology] as a complex phenomena in terms of how you interact with that tool and how it actually affects us" (personal interview, November 29, 1999). She continues, "perhaps the technology actually interacts with us in a way that we don't fully understand." This has resulted in the development of a variety of learning technologies and the incorporation of a number of new elements into distance learning: video films, multimedia courseware, and live lessons delivered to remote
classrooms. Until the mid 1990s, the integration of such educational technologies was only partly successful, for methodological reasons, and due to considerations of cost and accessibility. Today, we are at the threshold of a new era in which technological learning solutions are developing into effective applications: The Internet has become an essential communications platform; private Intranet networks are providing specific organizations and populations with higher levels of Internet service; technological learning environments are being developed; a wide range of improved graphic means of presentation are available; and simple, user-friendly means of desktop production are providing solutions which, until recently, required large, expensive facilities. Continuous improvement in Internet capabilities, both in terms of applications and transmission rates, is transforming it into a vehicle for the delivery of an ultimate learning environment for distance learning in the twenty-first century.

History of Distance Education

Much of the research involving the history of distance education has been reviewed by Dr. Bizhan Nasseh of Ball State University, and can be found on his web site at the following address: http://bsuvc.bsu.edu/~00b0nasseh/index.html. His research area lies in distance education and telecommunications in education.

In the years between the World Wars (1918-1946), the federal government granted radio broadcasting licenses to 202 colleges, universities, and school boards. With all the demands and popularity of instructional radio, by the year 1940 there was only one college-level credit course offered by radio and that course failed to attract any enrollments. Still, the concept of education by radio was a major reason for development of educational television by the mid 20th century. More and more association and social support developed for distance education around the country. There developed a need for a correspondence study of learners’ characteristics,
students' needs, effectiveness of communication, and value of outcomes in comparison with face-to-face study became public interests (Nasseh, 1997). The interest in finding answers for these questions of communication was the reason for many new research studies which have contributed to the growth of the knowledge-base of distance education. After World War II, television was considered as another delivery option in the correspondence study.

In 1982, the International Council for Correspondence Education changed its name to the International Council for Distance Education to reflect the developments in the field. With the rapid growth of new technologies and the evolution of systems for delivering information, distance education with its ideals of providing equality of access to education, became a reality. Today there are distance education courses offered by dozens of public and private organizations and institutions to school districts, universities, the military and large corporations. Direct satellite broadcasts are produced by more than 20 of the country's major universities to provide over 500 courses in engineering delivered live by satellite as part of the National Technological University (NTU). In the corporate sector, more than 40 billion dollars a year are spent by IBM, Kodak, and the Fortune 500 companies in distance education programs (Keegan, 1980).

According to Nasseh (1997), although leaders in the field tried to popularize this communication, correspondence was not easily accepted. During the fifth International Conference on Correspondence Education (ICCE), in Alberta, Canada, delegates from universities, governments, and proprietary institutions reflected a growing interest in the research of correspondence study (National University Education Association of 1957). During the 1960s and 1970s, a number of alternatives to traditional higher education developed in the United States. The major reasons were: 1) the cost of conventional residential education was rising, 2) an interest in informal education was becoming
more popular, 3) the American population was on the rise, 4) career-oriented activities were on the rise, and subsequently, 5) there was a necessity of learning new competencies, and finally 6) there was public dissatisfaction with educational institutions (Nasseh, 1997). Plus there was a great success of Britain’s Open University, which was an initial change towards distance education from the traditional one.

The establishment of the British Open University in the United Kingdom in 1969 was the beginning of the use of technology, supplementing print based instruction through well designed courses. Learning materials were delivered on a large scale to students in three programs; undergraduates, postgraduates and associate students. Although course materials were primarily print based, they were supported by a variety of technologies. No formal educational qualifications have been required to be admitted to the British Open University. Courses are closely monitored and have been successfully delivered to over 100,000 students. As a direct result of its success, the Open University model has been adopted by many countries in both the developed and developing world. The International Centre for Distance Learning, at the British Open University, maintains the most complete set of literature in research and practice.

As the university's website (http://www.open.ac.uk/frames.html) expresses, this university is the UK's largest university, with over 200,000 students and customers in 1997/98. The OU represents 21% of all part-time higher education students in the UK. The University is ranked amongst the top UK universities for the quality of its teaching. Courses are available throughout Europe and, by means of partnership agreements with other institutions, in many other parts of the world. Over 24,000 learners are studying OU courses outside the UK. Around 70% of OU students successfully complete their courses each year. Two thirds of students are aged between 25 and 44, but students can enter at the age of 18. Nearly all OU students are part-time and about 70% of
undergraduate students remain in full-time employment throughout their studies. More than 40,000 students study interactively on-line with the OU, at home and in the workplace.

The first United States open university was New York State's Empire State College (NYSES), which started in 1971. One of the main purposes of the NYSES was to make higher education degrees more available to learners who were not able to attend traditional on-campus courses. Nesseh (1997) wrote that "in the late 1970s and early 1980s, cable and satellite television came into use as a delivery medium for distance education courses. During the 1980s, many quality teacourse offerings were available by using cable and satellite delivery" (http://bsuvc.bsu.edu/~00b0nasseh/index.html).

As time goes on, advancements in telecommunications and computer will only enhance our technology with distance education.

Some of the goals and objectives of distance education at the University of Nevada, Las Vegas include increasing the number of degree recipients from all the institutions within the region and also instituting an early awareness of post-secondary expectations among elementary, middle, and high school students. Distance education at UNLV seeks also to increase options for credit deficient high school students to earn a diploma. As distance education grows, UNLV expands its course offerings, especially in the more rural areas. This program aims to increase the use of technology in general in Nevada, and to increase opportunities for teacher training and staff development at all educational institutions. According to this UNLV pamphlet on distance education, there are many technologies which are available to maximize courses as well as other UNLV programs. Currently, UNLV has satellite up-link communication and transmissions, instructional TV Fixed Service transmission to rural, urban, and suburban sites, and a network of interactive video classrooms with two way video and audio capabilities. UNLV also offers Internet/Web access, prerecorded video
in association with e-mail, Internet and/or audio conferencing as a means of interacting, audio teleconferencing, and broadcast television. So, the question still remains, does distance education really work? Research suggests, the answer is definitely yes. The Nevada Distance Education Consortium says, "Distance education is every bit as effective as face to face delivery. When appropriately implemented, distance education courses produce the same student outcomes as courses provided on campuses" (UNLV pamphlet, 1999).

Distance Education Theory and Philosophy

According to Desmond Keegan (1986), there were three questions that theoreticians needed to answer before developing a theory of distance education. First, is distance education an educational activity? Keegan's answer was that, while distance education institutions possess some of the characteristics of business, rather than of traditional schools, their educational activities are dominant. Distance education is a more industrialized form of education. The theoretical bases for distance education, Keegan pointed out, were within general education theory. The second question asked whether distance education is a form of conventional education. Keegan believed that, because distance education is not based on interpersonal communication and is characterized by a privatization of institutionalized learning (as is conventional education), it is a distinct form of education. Therefore, while the theoretical basis for distance education could be found within general education theory, it could not be found "within the theoretical structures of oral, group-based education" (p. 116). The third question asks: is distance education possible - is it a contradiction in terms? Keegan points out that if education requires intersubjectivity, "a shared experience in which teacher and learner are united by a common zeal," then distance education is a contradiction in terms. Distance instruction is possible, but distance education is not (p.
He believes that "the intersubjectivity of teacher and learner, in which learning from teaching occurs has to be artificially recreated. Over space and time, a distance system seeks to reconstruct the moment in which the teaching-learning interaction occurs. The linking of learning materials to learning is central to this process" (p. 120). This can be attained in two ways. First, "learning materials, both print and non-print, are designed to achieve as many of the characteristics of interpersonal communication as possible" (p. 122). Second, when courses are given, replacement of teaching is attempted by many different techniques such as "communication by correspondence, telephone tutorial, on-line computer communication, comments on assignments by tutors or computers, teleconferences, etc." (p. 122). This process results in five changes to the normal structure or oral, group-based education. The five changes are as follows: 1) the industrialization of teaching, 2) the privatization of institutional learning, 3) change of administrative structures, 4) different buildings, and 5) change of coasting structures. Again, these five changes are a result of the reintegration of the teaching act of which Keegan writes.

Computer networks require and enable new forms of teaching and learning. This truth creates the foundations of how education will be conceptualized and practiced. According to Harrasim (1996), "one of the basic requirements for education in the twenty-first century will be to prepare students for participation in a knowledge-based economy in which knowledge will be the single most critical resource for social and economic development. Students need new and different information resources, skills, roles, and relationships" (p. 209). One of the most important points Harrasim (1996) makes is that the conventional model of the school as independent from society, and the concept of education as internal to the school, is "being recognized as outdated, inappropriate, and incorrect" (p. 209). This point is key to both teachers and learners,
something that many deny, but should not ignore. So, how will communication differ with these theories in mind?

According to Sherri and Morse (1995), the theoretical basis on which instructional models is based affects not only the way in which information is communicated to the student, but also the way in which the student makes sense and constructs new knowledge from the information which is presented. Currently, there are two opposing views which impact instructional design: symbol-processing and situated cognition.

Until recently, the dominant view has been the traditional, information processing approach, based on the concept of a computer performing formal operations on symbols (Seamans, 1990). The key notion is that the teacher can send a solid text of information to students by way of an external illustration. The teacher represents a theory as a concrete image and then presents the image to the learner via a medium. The learner, in turn, perceives, decodes, and stores it. This is exemplary of the typical transactional model of communication. Horton (1994) modifies this approach by adding two additional factors: the student's context (environment, current situation, other sensory input) and mind (memories, associations, emotions, inference and reasoning, curiosity and interest) to the representation, closely related to the transactional model of communication. The learner then develops his own image and uses it to construct new knowledge, based on his own prior knowledge and abilities. The alternative approach is based on constructivist principles, in which a learner actively constructs an internal representation of knowledge by interacting with the material to be learned. This is the basis for both situated cognition (Streibel, 1991) and problem-based learning (Savery and Duffy, 1995). According to this viewpoint, both social and physical interaction enter into both the definition of a problem and the construction of its solution. Neither the information to be learned, nor its symbolic description, is specified outside the process of inquiry and the conclusions that emerge from that process. Prawat and
Roden (1994) state that, to implement constructivism in a lesson, one must shift one's focus away from the traditional transmission model to one which is much more complex, interactive, and evolving. Though these two theories are totally different in nature, effective designers usually start with empirical knowledge: objects, events, and practices which mirror the everyday environment of their designated learners. Then, with a firm theoretical grounding, they develop a presentation which enables learners to construct appropriate new knowledge by interacting with the instruction.

To quote Herbert A. Simon (1994), "Human beings are at their best when they interact with the real world and draw lessons from the bumps and bruises they get" (p. 85). Schlosser and Anderson (1994) refer to Desmond Keegan's theory of distance education, in which the distance learning system must artificially recreate the teaching-learning interaction and re-integrate it back into the instructional process. This is the basis of their Iowa Model: to offer to the distance learner an experience as much like traditional, face-to-face instruction, via intact classrooms and live, two-way audio-visual interaction. In contrast, the Norwegian Model has a long tradition of combining mediated distance teaching with local face-to-face teaching (Rekkedal, 1994). Hilary Perraton (1988) defines the role of the distance teacher. When, through the most effective choice of media, she meets the distance students face-to-face, she now becomes a facilitator of learning, rather than a communicator of a fixed body of information. The learning process proceeds as knowledge-building among teacher and students. Distance education systems now involve a high degree of interactivity between teacher and student, even in rural and isolated communities separated by perhaps thousands of miles. The Office of Technology Assessment stresses the importance of interactivity: distance learning allows students to hear and perhaps see teachers, as well as allowing teachers to react to their students' comments and questions (US Congress, 1988). Virtual learning communities can be formed, in which students
and researchers throughout the world who are part of the same class or study group can contact one another at any time of the day or night to share observations, information, and expertise with one another (VanderVen, 1994; Wolfe, 1994).

**Distance Education Delivery Systems**

According to the Web site from Nova Southeren University in Florida (http://www.fca.e.nova.edu/~olmstead/nursesanimated/tsld017.htm), there are two categories of distance education delivery systems, synchronous and asynchronous. Synchronous instruction requires the simultaneous participation of all students and instructors. The advantage of synchronous instruction is that interaction is done in "real time." Forms of synchronous delivery include Interactive TV, audiographics, computerconferencing, IRC, and MOO. MOO stands for Multi-user Object Oriented, and a MOO allows real-time communication over the Internet. These forms of delivery are thoroughly explained on the University of Arizona's website at http://www.coh.arizona.edu/inst/EDA663F97/mmi.html. MOOs work on the idea of a virtual, text-based world. With a MOO, you Telnet to a host and land in a virtual room, and you can converse with anyone else who has connected to the same host and who shares that room with you. You can also move from room to room, and you can page people who are in other rooms. Interactive Relay Chat, or IRC, is Internet software that allows "real time" electronic conversations between hundreds of users. IRC has different channels and each channel contains a separate conversation. You can move from channel to channel, and you can send messages to people who are on other channels.

Asynchronous instruction does not require the simultaneous participation of all students and instructors. Students do not need to be gathered together in the same location at the same time. Rather, students may choose their own instructional time frame and gather learning materials according to their schedules. Asynchronous
instruction is more flexible than synchronous instruction. Moreover, in the case of telecommunications such as email, asynchronous instruction allows and even may encourage community development. Forms of asynchronous delivery include e-mail, listservs, audiocassette courses, videotaped courses, correspondence courses, and www-based courses. The advantages of asynchronous delivery include student choice of location and time, and interaction opportunities for all students.

Communities and the Information Society

Byron and Gagliardi (1998) of the International Bureau of Education (IBE) for the International Development Research Centre of Canada (IDRC) have examined some of the current uses and future possibilities of Information and Communication Technologies (ICTs) in education in both the industrialized and developing world. They also studied some of the policies and strategies which have been adopted by different countries for the introduction of these technologies into the formal and informal education regions.

According to the European Commission, Industry Research Task Force on Educational Software and Multimedia (web address: http://europa.eu.int/index-en.htm), there has been much progress in the field of information and communications technology since the early 1980s, including the quick spread of the PC (personal computer), the development CD-ROM and CD-I, and the convergence of telecommunications with television and computer technology. The Internet has also been contributory to the progression of technology during the 1990s. The Internet has allowed an international network of information to be available to the public. This Internet communication has remodeled thinking about how information can be processed, dispersed, and used in every aspect of human operations. Nowadays, it is almost bombastic to use terms like the "information society", the "information age" or
the "information revolution" when referring to the impact of information and communication technologies (ICTs) on today's socio-economic and cultural development. Many of these changes are seen as positive, creating a sort of "global society," in which the conventional obstacles to communication, time and space, have been overcome by the affected "virtual worlds." This "virtual world" can be explained by almost anything involving computers, cyberspace, and new technologies. Many people see these technologies as a possibility of creating an increasingly positive quality of life for people, particularly in distance education. Farr (1999) of UNLV says, "The technology will actually relieve us from some of the tasks that we don't like as instructors... and enable us to have better interaction with our students in terms of spending time actually discussing things and reflecting on it, what I would call a dialogue" (personal interview, November 29, 1999).

Interest in telecommunicated distance education is rising. It is rising so quickly that Barker, Frisbie, and Patrick (1993) said that it was impossible to accurately document exactly how many projects were underway or being considered in the United States. Telecommunications-based distance education is definitely an extension beyond what was once called correspondence study. New Master's degree programs are even being implemented for those who are ready to embark on this new teaching adventure. Those looking for a new avenue to pursue their studies should look to distance education as well. The criterion of distance education is clear now. Conventional students attend the schools, colleges, and universities of the world.
CHAPTER IV

AN AGE OF OPPORTUNITY

John Pavlik (1998), author of New Media Technology, offers the best advice. He says that "anyone planning a career in new media should be prepared for change, adaptation, and convergence" (p. 358). It should be obvious new media are not settled, and are ever evolving. Pavlik believes that those job seekers who have a good, firm understanding of the concentration of technology will benefit the most. Furthermore, he recommends that students take courses "both in the liberal arts and in all aspects of human communication" to best prepare for new media careers (p. 358). Pavlik says that any course or degree that is too medium-specific can be a disservice, as technology and new media are always changing. He believes that "the next generation of students will need to combine basic skills in thinking and writing with new media coursework emphasizing all aspects of human communication, from interpersonal and group communication to mediated and networked communications" (p. 359). Dr. Pavlik is not the only one who points in this direction.

One man who understands the advantage of computer technology from the start of mainframe computing is Lawrence Ellison, Silicon Valley's newest billionaire. Ellison is the CEO of Oracle Systems. He sees the Internet as "ultimately rewriting the nature of all mediated communication" (Pavlik, 1998, p. 177). Ellison believes that all media including, books, music, television, movies, and more will be digitalized and available via computer networks. Ellsion's goal is to create a tellurian consumer electronic emporium, whereby anything goes. He imagines the consumer making purchases on all types of items from Korean vases to silk pants in Japan (p. 177). This would be
possible with a multimedia database, one which Ellison's company could create. This may sound impossible and to some perhaps it is frightening; however, Ellison is simply a man who has a vision as Bill Gates once did and still does. It is this type of critical thinking and analysis which produces positively on the Net. This thought process is exactly what Pavlik says students need to have before entering a career in new media.

If a job seeker were to visit any random job site on the Internet, he or she would probably see an advertisements as follows:

If you are looking for a challenging work environment and the opportunity to create your own niche in a business that is poised for future success, consider a career with Gibson Greetings. Gibson Greetings is committed to the future, and the future depends on hiring people with an eye on success. We are as committed to developing and challenging our people as we are to expanding our business. We are rapidly moving into the global marketplace with our new product licenses and accelerated approach to business. This will require special people to keep up with us: people who are entrepreneurial leaders, risk-takers able to manage their part of the business as if it were their own. It will require innovative thinkers who can take hold of new concepts and run with them. We are looking for bold, energetic, independent, and creative people who are able to step forward and seize the opportunities that are out there waiting for discovery at Gibson Greetings. (http://careers.gibsongreetings.com/career.cfm)

This advertisement for employment uses words and phrases such as future success, rapidly moving, global marketplace, entrepreneurial leaders, risk-takers, innovative thinkers, new concepts, and opportunities. This company's advertisement for employment applies almost all of the words Pavlik mentions in his book New Media Tech.
nology, and some phrases that cyberjournalist Steve Outing (1999) used in his article "Why online journalism is a great career choice." These words and phrases are familiar to many of the current employment ads on the Internet. Also, many of the companies that are hiring are not computer software or hardware companies, which is why a degree is computer science in not always needed. For example, Gibson Greetings began by lithographing labels for packaged medicines, and entered the communications field by printing the first postage stamp. Using their small lithograph and engraving business, they started a company with a preference for producing printed products to be sold at retail, rather than for commercial printing. In the 1880s for example, they were one of the first companies to print Christmas cards. Gibson Greetings is the second largest publicly-traded greeting card company in the world, and in 1997 the companies' annual revenue was approximately $400 million. This is another example of a company that went global via Internet, thus the large revenue.

Another pioneer of the new media is Bill Ziff, Jr., founder of Ziff-Davis Publishing Company, whose seven magazines bring in $700 million a year in annual advertising. The company's publications are viewed by more than three million readers in the United States alone, while worldwide revenues are estimated at about one billion (Pavlik, 1998, p. 177). Some of Ziff's publications include PC Magazine, PC Computing, PC Week, MacUser, MacWEEK, Computer Shopper, and Computer Gaming World/Kids and Computers. PC Magazine brings in about $281 million a year. Clearly, Ziff-Davis Publishing is one of the leading publishers in the computer industry. According to Pavlik (1998), Ziff-Davis Publishing Co., has entered online communications quite rapidly. David Armstrong of the San Francisco Examiner says that Ziff is "second perhaps to only Bill Gates as a prime mover in the $70 billion personal computer industry that has changed the way we work, think, and communicate" (p. 178). Ziff is a respected and admired business man, and has been in
the business of media for many decades. Ziff has been a major part of what will be the history of the new media industry.

So, how is it that new media and its technology has yielded such great power? Doesn't anyone fear all this technology and information? According to Naisbitt (1994), there was once a primitive fear that machines with superhuman abilities to analyze, interpret, and reason would conquer the world; "alarmists said that someday we would all become slave to machines-big brother would have human-like qualities, without the humanity" (Naisbitt, 1994, p. 55). In actuality, the exact opposite has happened. Individual computer users have become sanctioned with a certain power, power of personal access and touch. Naisbitt (1994) makes the argument that "the greater the capacity of computers to handle the complexities of modern life, the freer the individual to think of creative ways to exploit complexities" (p. 56). This is exactly what Bill Gates, Bill Ziff, Lawrence Ellison and many other new media pioneers have done. Ellison exploits the complexity of purchasing and consuming all material items. Ziff exploits knowledge, knowledge that is most important to an avid computer user. And Bill Gates has created and exploited the entire communication process that was once quite familiar to people. Gates has created this new medium that has changed almost everyone's lives, not only in the United States, but in all the world. All of these people, and many others, have contributed to the vast change in the global socio-economic landscape of the communication process.

The Future of Jobs in Communication and Information Technology

According to Harry Henderson, the top jobs in demand are in the computer industry. Henderson (1999) says that "between 1996 and 2006 the number of people needed in each of these [computer] positions is expected roughly to double" (p. vii).
This means that employment opportunities will be rampant. Recent graduates entering the workforce will have opportunities to work in all different fields of computer mediation. In addition to mastering new skills, Henderson (1999) states that "the young workers of the twenty-first century must also prepare for a work environment that will be very different from that of their parents" (p. vii). Employees do not raise through the ranks as years go by. With the new computer industry, new multimedia and design companies are being created every day. Many of the jobs that once were do not even exist anymore, as technology has replaced them. Henderson suggests that today's professionals manage his or her own career, and keep up with the evolving technologies. Today's job market also requires there to be independent contractors. This could be a good way for employees to make money, provided that the employee is keeping up with the new technology. Henderson encourages those interested in multimedia and the Internet. He feels that this is the place for young employees and recent graduates to make their mark. His advice is to master technology, and be a versatile quick learner.

Gary Steinberg, an economist in the Office of Employment Projections, feels that there are many ways to prepare for a job on the Internet. Steinberg (1997) says that "educational requirements vary widely for Internet jobs... many current webmasters have a degree in noncomputer fields like graphic design, management information systems, marketing or English..." (p. 8). Leslie Miller (1997) says that "webmaster's backgrounds and professional experience are all over the map, from computers to marketing, and their Web skills are often self-taught" (p. 2). Leslie Goff (1997) spoke with Jim Hall, Director of media integration for Pseudo Programs, Inc. Hall explains the versatility of working in this field as he says,
the job is more of a production manager role. I'm in a funny place in the company because I deal with everyone on a daily basis - the 3-D animators, the art department, video graphics production, the Netcast engineers, the sound designers, the executive producers of the shows, the network administrators, the business development people, the software developers, and the president [Josh Harris]. Basically, if we have a medium- to long range project to be managed, it's my responsibility. (p. 73)

Hall's success is a result of many experiences in theater, film, radio, and digital video. He (like all the others) feels that "you must have a voracious appetite for learning, and you have to think of [the job] as play...you must be able to communicate well with the creative, technical and business people" (p. 73). Hall feels that the position of webmaster is going to become so large that it will take a multitude of people to do what he presently does.

David Belson, Internet sales engineer at GTE Internetworking (a corporate and consumer Internet service provider in Cambridge, MA), is a liaison between the customer and sales, engineering and operations divisions. Belson works both in sales and service of the Internet. When asked what the future holds for this job he replied, "As Internet service providers widen their service offerings and as connectivity and security get more complex, they will need more people who can speak to customers about how the services fit their needs. You can't expect salespeople to know all the bits and bytes and protocols" (Goff, 1997, p. 3).

Barbara Jessen-White, Director of electronic commerce at Tech Data Corp. has an MBA and started as a computer analyst in 1991. She also speaks about the future of this job as she says, "There will be significant demand, especially in industries where margins are shrinking and the cost of doing business needs to be better managed. E-commerce will be critical and companies will need a strong person to lead their
initiatives. Also, it's growing globally, so the position will grow worldwide” (Goff, 1997, p. 4). The jobs of the Internet are numerous. The possibilities of success are infinite.

The worldwide web is changing not only how individuals locate jobs, but how jobs are performed. Individuals seeking work will need to know how to use the web as a tool for bettering their job performance. The enhanced global communication made possible through Internet technology has increased the job market in sales, marketing, and public relations. Research suggests that there are a growing number of traditional professions that are appearing in new forms on the Internet. The web has also lead to the creation of many new jobs. From cyberjournalism to Internet advertising designer to webmasters, and producers and designers, there is a whole world of employment in this new place called cyberspace. Many of the hottest, most exciting jobs have been created by the explosive growth of the web and Internet. It is up to that recent graduate and that job seeker to find his or her place in this market.

The Future of Distance Education and New Emerging Technologies

Of course, if the job market lies in cyberspace, then so should education. Distance education is definitely in the middle of great change. Dr. Marina Stock McIsaac and Dr. Charlotte Nirmalani Gunawardena (1996) have written the following: The directions that distance education takes will depend on such factors as the development of new media and computing technologies, different methods of group learning and information gathering, and the development of government telecommunications policies. While the phenomenal growth of electronic networks (exemplified by recent public attention to the Internet) has provided the primary technological thrust, several other emerging technologies also promise to
drastically change the landscape of education in general, and distance education in particular. (p. 430)

According to McIsaac and Gunawardena, the future of distance education is in the CD-ROM. A good example of success involving the CD-ROM is through the creation of a graduate media design course developed by the College of Education at Arizona State University. Through a grant from the Intel Corporation, this course was reproduced and transferred to CD-ROM. The entire class and all supporting materials are now available to students and Intel trainers to learn at their own pace and in any setting. If it is now possible to offer a graduate class completely packaged on one CD-ROM, then almost any other scholastic class be planned and produced for this medium.

Currently being tested are a range of new technologies such as V-SAT (Very Small Aperture Terminal), a two way satellite communication used to access remote servers and obtain world wide web information without direct telephone connection. Also on the horizon are new, faster and more reliable communications networks such as (ADSL) and (ATM). Another technology that may revolutionize the way we receive our data traffic is NOR.WEB (sometimes referred to as Nor.Tel). This system uses existing main cable to deliver computer data at very fast rates. All of these technologies have education applications.

In addition to print materials, audio/video programs and satellite broadcast, Internet and CD-ROM delivery is poised to become the largest medium for distance learning. Postsecondary institutions plan to increase their delivery of distance education. A variety of media would be used and it is no surprise that the Internet, interactive video, and pre-recorded video delivery are among the chosen favorites (National Center for Education Statistics, 1999).

By providing instruction via the world wide web or on a CD-ROM/Internet hybrid, even business travelers or students in isolated areas can enjoy interactive, virtual
classrooms no matter where they are or what time zone they may be in! With the introduction of affordable digital communications and cellular handheld devices, our world now has an abundance of distance learning opportunities for anyone, at anytime, at anywhere in the world.

We are already seeing the next generation of distance education. With the speed that technology is advancing and the abundance of personal computers and web technologies, people have already begun to embrace distance learning in a digital world. Combining new technologies like animations and streaming video with older online media like e-mail, listservs, and chat rooms, a distance education instructor can build a successfully interactive course. A student in such a course would have options for both synchronous and asynchronous learning environments. What will the future hold? We can only guess, but as long as education exists, and employees need training, distance learning will be a healthy and vibrant field.

Research suggests that traditional institutions must transform themselves in order to prepare for tomorrow's students and the lifelong learning process. As Socrates once said, "The only good is knowledge, and the only evil ignorance" (http://esc.net.au/~conpapa/socrates_quotes.html). For a long time, colleges and universities have been bound to buildings, classrooms, teachers, and students. With the landing of this new plane in cyberspace, education becomes an interactive, global learning environment. The rules of education are changing as we see schools without walls, universities reticulated together with electronics, and new paradigmatic learning systems in place. These things cannot be denied in the twenty-first century. Although the Internet will not totally replace schools and universities, those institutions which are not meeting the needs of lifelong learning, will decline into immateriality.

As new technologies develop, distance instruction is delivered through such media as audiotape, videotape, radio and television broadcasting, and satellite
transmission. Microcomputers, the Internet, and the world wide web are shaping the current generation of distance learning, and virtual reality, artificial intelligence, and knowledge systems may be next. Some define distance education as the use of print or electronic communications media to deliver instruction when teachers and learners are separated in place and/or time. However, others emphasize distance learning over education, defining it as getting people into the same electronic space so they can help one another learn or a system and process that connects learners with distributed resources. The simplest change will be the removal of space and time. Learning materials can be downloaded any time and to any place. As Rose (1996) has said, "Part of this development will be a change in emphasis as learning becomes a more student-centered process. Instead of the learning process revolving around the university, the student will become the focus of the experience" (p. 3).

Conclusion

Today, society is standing at the doorway of a new age where technology transforms much of what we know and do, especially in terms of employment and education. The Internet has become an essential communications platform; private Intranet networks are providing specific organizations and populations with higher levels of Internet service (employment) and technological learning environments are being developed (education). A wide range of improved graphic means and desktop presentation are available, and much more is out there. Continuous improvement in Internet capabilities, both in terms of applications and transmission rates, is transforming it into a vehicle for the delivery of an ultimate professional environment for the twenty-first century.

The tremendous growth of the Internet has led to a critical mass of consumers (universities included) participating in a global online marketplace. The rapid adoption
of the Internet as a medium has given much popularity to what is now known as computer-mediated communication. Developments on the Internet are expanding at unbelievable rates, creating a new market for employment and education. The world wide web has totally changed the way people interact. The web empowers its' users, and gives them much greater control over information. Finally, Internet users are able to become active participants in this land called cyberspace.
I. Background Questions

1) How many years have you been operating and working in Las Vegas?
2) Why did you come to Las Vegas?
3) What attracted you to this area of the industry (p.r., advertising, teaching, broadcasting, journalism)?
4) What is your educational background?

II. The future

5) Where is the industry headed in your opinion?
6) Will computers eventually take over in your field? Are they already a very large part?
7) What do you find to be most important in your industry?
   a) writing skills?
   b) oral communication skills?
   c) computer skills?
   d) interpersonal skills?
   e) task oriented leadership skills?
8) Does this field ensure good job security?

III. The people in the industry

9) What types of people break into your field?
10) Is a college degree necessary? If yes, what type of degree - Bachelor's, Master's, and what discipline?
11) What is more important - education or experience, and why?
12) What types of people do you typically hire? (this question differs from question 7 because I am asking a personal point of view, rather than a general response, although interviewee may have already answered this in question 7)

IV. Salary

13) What is the standard starting salary in your field (a close estimate is fine)?
14) What is the standard starting position in your field?
15) How long does one stay in the area? Is salary a reflection of why people either leave or stay, or is it something else?

IV. Recommendations: What are some of the recommendations you would make to recent graduates of communication programs that are looking for a job in the field?
APPENDIX 2

INFORMED CONSENT SHEETS
Informed Consent

My name is Rachel Friedman and I am conducting this interview as part of my thesis written within the School of Communication. The purpose of this interview is to find out about the status of jobs in the communication field for recent college graduates. I am inquiring among working professionals, to see what the current job market is like for recent college graduates with degrees in communication. My thesis is directed by Dr. Larry Mullen.

Please understand that your participation in this interview is voluntary and you are free to stop answering these questions at any time during the interview. This interview should take approximately one hour of your time.

By consenting, you give me your permission to do the following: use your name and the information you provide as part of my Master's thesis to gain a personalized, but universal perspective of the job market and environment in the communication field.

If you have any questions regarding this study, you may contact Dr. Larry Mullen at 895-3274 or the UNLV Office of Sponsored Programs at 895-1357.

[Signatures]

Participant's Signature
Date

Signature of Investigator
Date

Greenspun College of Urban Affairs
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(702) 895-3325 • FAX (702) 895-4605

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[Signature]
Participant's Signature

[Date]
Date

[Signature]
Signature of Investigator

[Date]
Date
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REFERENCES


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Web begins to have impact on job market: Salaries for graduates are higher. News Photographer, 53(1), 33-34.
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