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INTEGRATION OF THE INTERNET IN CAREER EXPLORATION IN EDUCATION

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Education:

Instructional Technology

---

by

James Wayne Asher

June 2001

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Dr. Sylvester Robertson

ABSTRACT

For decades, most public high schools have offered some approach to career exploration; however, with the emergence in the '90s of an approach to career exploration generically referred to as "Career Pathways" as well as computer-based learning resources such as CD-ROMs and the Internet, students find they must be able to navigate their way through a sea of technology teeming with "technological behemoths" which they must overcome and that their exploration may, in fact, lead to many smaller pathways fraught with more technological challenges. As many CD-ROM -based programs give way to Internet-based "programs," it seems that students' greatest challenge may prove to be how to use the vast world of the Internet to explore careers, and teachers must know it well in order to facilitate such learning.

The basis of this thesis is a discussion of the pros and cons of incorporating the Internet as an educational tool for exploring career pathways. A review of the literature will summarize the evolution and role of Internet technology in career exploration. To compliment this written project, an on-line web site has been created as an example to show how teachers can help students use

Internet-based learning to enhance their career exploration (http://www.webandgraphicdesigns.com/careers). The power and shortcomings of this sample web site will be discussed. By using this Internet site, teachers can:

- provide learning environments where students are interactively involved in career development which addresses the current employment environment.
- help students to focus and drive their career interests and goals by taking responsibility for conducting and managing their own career exploration.
- help students learn to create their own online career portfolio, including their resume, to market themselves in today's competitive employment world.
- show students how to practice problem-solving skills in collaboration with others.
- show students that the Net can provide students with complete, timely information and allow for communication with peers and experts on career-related topics.
- teach students how to interview using a virtual environment
- introduce students to Internet terminology

- show students how to follow links to download free Internet browsers
- learn helpful tools and tips to aid students in their career exploration and job search.
- view a list of resources for Internet books, educational links, and links for help in creating Web pages.
- read about tips and resources for web page construction and how to use it in a teaching environment.

The on-line tutorial was evaluated and the results and modifications are justified. The discussion and conclusion will cover the ramifications and future use of Internet-based career exploration.

Finally, the appendices will contain the following: a before-and-after structural schematic with rationale and modifications of the on-line tutorial web site as well as a navigation map of the Tutorial accompanied by screen shots of the Tutorial, including the on-line evaluation survey form; sample Internet-based lesson plans designed by this writer which deal with career exploration; a sample list of expected student and teacher outcomes of technology and Internet integration which is extracted from a technology plan—co-authored by this writer and another peer teacher,

Cindy Miller; and groupings of popular Internet resources for teachers and students dealing with various aspects of Internet integration and Internet-based career exploration and development ranging from writing a resume to interviewing in a virtual setting.

ACKNOWLEDGMENTS

The philosophical dictum "Teach the way one learns" was posited in one of the education classes I took within this Master's Program. It gently resonated with truth when I first heard it, and now tolls louder than ever as I write this thesis. As I continually reflected upon my learning process throughout this Program, I gradually came to more clearly identify not only my kinesthetic style as a learner, but that of another learner, a phantom "everyman" who must realize that learning comes when, where, and how it will, sometimes with fanfare and other times without the slightest regard. Over time, I became this modern everyman and somehow ended up the more-flexible learner that our technological times require. Words will never adequately describe the range of feelings I've encountered in my journey throughout this Program, precisely because they are mere words, "virtual feelings," and not my actual feelings. I wish I could impart to the people to whom I am indebted my actual feelings as I near my educational goal, but I cannot simply because they are *my* feelings, whose boundaries of meaning inevitably shift as they fall upon the mind of the reader. Simply put, my sincerest "thank you" will have to suffice.

I would like to thank *all* of the students, and especially my friends, in the Program with whom I've had the honor of working. Their dedication and knowledge constantly served as a benchmarked where I had none. I would like to thank Professor Gehring for making me more deeply realize the moral and social mission inherent in educational traditions and theories as well as for validating the importance of a critically honed essay. Professor Robertson taught me to always look for the "better way" of using technology in the classroom and beyond, and facilitated a learning environment suited to my learning style. Professor Lane gave me the confidence to venture forth into research with the knowledge of how to gather, organize, interpret, and synthesize information. Professor Walker made me realize that I have to "kick it up" a few notches. Professor Monaghan made the process of writing this thesis seem attainable and demonstrated the gift of understanding that teachers who are also students in a master's program are a breed in need of special consideration. Peers inside and outside of this Program coalesced like morning dew to water me when I felt like a withering vine trailing in too many directions at once. John Frakes, an inspirational teacher, encouraged me to

pursue a master's degree to better myself, and for that, I will always be indebted to him. Charles Helsper was always there to fill-in the missing pieces of the master's puzzle. Without his enthusiasm and insight, this thesis wouldn't be. Beau Baker gave unconditionally of his time and energy in helping me to learn various computer programs ranging in application from desktop publishing to web page construction. My mother, Catherine Asher, altruistically gave of her time and energy so I could devote my time and energy to studying. The person to whom I owe the greatest debt of gratitude is Jack Linehan, my friend, with whose unconditional support and positive outlook on life I met this challenge. Through constant encouragement, he helped me to understand the purpose inherent in learning not just technology, but in learning anything. Pieces of all these inspiring people are found between the lines of this thesis. Through my invaluable liaison with all of them, I learned the why's and how's of instructional technology. More importantly, however, I developed a technological mission to carry with me beyond these university walls: to help others understand and use technology to enhance their lives and the lives of others.

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TERMINOLOGY

Bandwidth: How much data, expressed in bits per second, you can send from one computer to another in a given amount of time (Vaughan, 1996).

BBS: (Bulletin Board System) Used in networking to refer to a system for providing on-line announcements, with or without provisions for user input. Internet hosts often provide them in addition to Usenet conferences (Serim & Koch, 1996).

Bitmap: (BMP) In computer graphics, an area in memory that represents the video image. Each pixel on a video screen is controlled by bits that set color and intensity (Heinich, Molenda, Rusell and Smaldino, 1996).

Bookmark: To mark a document or a specific place in a document for later retrieval. Nearly all Web browsers support a bookmarking feature that lets you save the address (URL) of a Web page so that you can easily re-visit the page at a later time (Clark, 1995).

CAI: (Computer Assisted Instruction) Computer-based systems designed to help students learn subject matter of all kinds (Poole, 1995).

CD-ROM: Compact disc-read only memory. Digitally encoded information permanently recorded on a compact disc. Information can be accessed very quickly (Heinich et al., 1996).

Chat: (Internet Relay Chat IRC) A service that allows large group conversations over the Internet (Serim & Koch, 1996).

Client: A piece of software used to access the Internet that acts on your behalf. Gopher is client software that retrieves information from the Internet for you. It can also be a computer system that uses the resources of another computer on the network (Clark, 1995).

Clip art: Artwork that has been prepared, captured on magnetic disk (or compact disc), and made available to computer users to incorporate (cut, copy, and paste) into documents that they produce (Poole, 1995).

Download: To transfer files from one computer to another. When the file is coming to your computer, you're downloading it. When it's moving from your computer to someone else's, you're uploading it (Clark, 1995).

Ethernet: A kind of local area network. There are several different kinds of wiring, which support different communication speeds, ranging from 2 to 10 million bits per second. What makes an Ethernet an Ethernet is the way the computers on the network decide whose turn it is to talk. Computers using TCP/IP are frequently connected to the Internet over an Ethernet (Serim & Koch, 1996).

Electronic mail (e-mail): Transmission of private messages over a computer network; users can send mail to a single recipient or broadcast it to multiple users on the system (Heinich et al., 1996).

Graphical Interchange Format (GIF): Developed by CompuServe on-line services, this graphic file format allows images to transfer over telephone lines more quickly than other graphic formats (Serim & Koch, 1996).

Hypertext: A system by which users can jump from site to site around the Internet by means of hyperlinks. Using these links, a user can hop around the Internet connecting to a variety of sites around a topic of interest. The World Wide Web is the Internet's best example of a hypertext based system (Clark, 1995).

Hypertext Markup Language (HTML): The language in which World Wide Web documents are written (Serim & Koch, 1996).

Information superhighway: Popular name given to the concept of an international information network of extremely high carrying capacity. Also refers specifically to the fiber optic network being constructed in North America (Heinich et al., 1996).

Listserv: It is not an acronym, but rather an abbreviation for List Server. Listserve is a set of discussion groups that meet through e-mail on the Internet. Listserve also refers to the UNIX software that manages the discussion (Clark, 1995).

Modem: A contraction of Modulator/Demodulator; the equipment that allows a computer to send and/or receive data over phone lines. It is used to convert computer signals (digital) to phone signals (analog), and visa versa. The modem may be built into a computer (internal modem), or a separate piece of equipment connected to a computer by a cable (external modem) (Armstrong, 1995).

Networking: The interconnecting of multiple sites via electronic means to send and receive signals between locations (Heinich et al., 1996).

Search engine: A Web-based tool that finds Web pages based on terms and criteria specified (Serim & Koch, 1996).

Service provider: An organization that provides connection to the Internet (Armstrong, 1995).

Telnet: a) A terminal emulation protocol that allows you to log into other computer systems on the Internet. b) An application program that allows you to log into another computer system using the protocol (Serim & Koch, 1996).

UNIX: An operating system important in the development of the Internet and widely used today. Requires that the user knows commands to operate this text-based system (Armstrong, 1995).

URL (Uniform Resource Locator): The combination of letters and numbers that uniquely identifies a Web resource (Serim & Koch, 1996).

Web browser: A software program that allows you to view, search, and download items from the Web. Common browsers are Netscape and Mosiac (Serim & Koch, 1996).

World Wide Web: A graphical environment on computer networks that allows you to access, view, and maintain documents that can include text, data, sound, and video (Heinich et al., 1996).

CHAPTER ONE: INTRODUCTION

When the Swiss scientist Tim Berners-Lee created HTML (Hypertext Markup Language) at CERN, the European Laboratory for Particle Physics, to communicate and work cooperatively across a computer network with other scientists around the world, little did he know that his model of communication would be embraced with a fervor that would radically alter the history of mankind and propelled us into the Information Age. The Department of Defense was the first to seize upon this new kind of text-based communication language and quickly established the experimental ARPANET (Advanced Research Projects Administration Network), which allowed the military the ability to reroute communication to a different network if the one in use was disabled (Understanding and Using the Internet, 1995).

Quickly, many other networks were established and linked to the ARPANET, all which added flexibility and eased the burden on the ARPANET. One such network, was UNIX, a joint venture between AT&T and the University of California, which was provided free to schools for easier networking, yet could not bear the burden of so many new users (Levine & Baroudi, 1994). NSFNET, was created in the

late 1980's by the National Science Foundation for the exchange of research and education, but proved too costly and complicated to operate (Williams, 1995). The federal government furthered the evolution of the Internet with the passage of the High Performance Act of 1991, which linked all level of education to the government on one network known as WREN, the National Research and Education Network. However, it was not until Berners-Lee designed the graphic-friendly framework known as the World Wide Web and the commercial sector placed their graphic-based demands on the public that schools readily embraced it as an integral part of their teaching (Levine & Baroudi, 1994). Currently, 80% of Internet subscriber use graphics in their information exchange, which some believe is evidence that the Internet has clearly altered forever the way we communicate, teach, and learn (Quittner, 1999). This new twist on information has led to a popularity which has prompted the dubbing of the Internet as "the embodiment of all human knowledge" (WC3, 1998).

With the powerful, decentralized desktop environment of the Internet, students today have been freed from the shackles of book-based career exploration and are now allowed to interactively determine their career-oriented

aptitudes and construct their own career exploration through a world of hypermedia bound to capture their interest. While technology, in general, characteristically accelerates, getting to this current state of educational technology has been a labored change. The result of many seemingly unrelated efforts which coalesced into a multimedia and multi-technological approach, career research today thrives in schools, and where teachers once fought to maintain the dichotomy between career research and academia, many teachers now readily design curriculum which incorporates career research to reinforce their academic curriculum.

Despite its popularity among students and teachers alike, several questions remain about the integration of the Internet in career exploration:

- Will the integration of the Internet in career research lead to a restructuring of the teaching process itself?
- Will the integration of the Internet in career research lead to a restructuring of the learning process itself?
- Do the endless sources accompanying the integration of the Internet in career research contribute to learning?

- Does the Internet offer an effective learning environment for career exploration?
- Is the integration of the Internet in career exploration distracting?
- Must a change in philosophy occur if the Internet is to be embraced by teachers of career exploration?

It is believed that the integration of the Internet in career exploration has radically changed the way teachers teach because it offers them unlimited resources and connections to those resources, but that, perhaps more important, it has changed the way that student learn because they are able to use a variety of learning modalities in their career exploration that were heretofore unavailable.

Integrating the Internet within career exploration may subtly induce students to venture into realms they may otherwise never have encountered, where they can discover the inherent fascination within any career. Through multimedia experience, *all* students are provided an equitable, interactive learning environment which makes careers live and breath in a way not possible in books. They are provided structure through which they can

proactively explore and collaborate on multiple levels and, thereby, hone their critical thinking and problem-solving skills more quickly and more meaningfully (Willis, 1996). As teachers are slow to embrace the Internet and its integration within their curriculum, evidence shows that the impetus for change may be coming from other sources, namely the students themselves, who are, in turn, fueled by commercial interests of personal computer-based companies such as IBM and Macintosh. In general, the mindset of teachers, as a whole, is changing to accept the use of the Internet in the classroom, but integration of technology into tried-and-true teaching pedagogy which has been in place for decades is slow and still met with healthy fear. Teachers are concerned that their struggle to learn and incorporate technology may not improve their students' test scores and that use of the Internet may, in fact, prove to be more of a hindrance than a help, leaving them even further behind than where they were before their struggle with technology began. Clearly, teachers are facing an educational revolution of sorts--not of their own making--and more meta-analysis studies are required before we can say with certainty that this technological revolution will result in more effective teaching and learning. Some argue

that the use of technology, particularly the Internet simply displaces other reliable sources of information and fosters a different set of skills instead of increasing knowledge. Exploring the reticence of teachers to incorporate technology and assuaging their fears is the main purpose of this thesis. If teachers are shown that students *can* utilize the Internet to critically and collaboratively work on projects to proactively solve problems and, thereby, construct their own meaning (Ornstein & Levine, 1997), there is hope for a shift away from the traditional educational model in which students passively receive information with little critical thinking and long-term benefit.

In conjunction with this written thesis, a web site titled "On-line Tutorial for Educators of Career Exploration Using the Internet" was created and posted on the Internet and is currently found at {http://www.webandgraphicdesigns.com/careers}. The Internet Tutorial was evaluated with an on-line survey which was incorporated into the web site. A sample of this on-line survey is included with other Tutorial screen shots at the end of APPENDIX A, which includes a structural schematic explaining the web site and indicating pre- and

post-modifications therein, as well as a navigation map of the web site. The respondents who visited the web site were given the opportunity to complete the on-line survey after viewing the web site and to submit their feedback to my America-On-Line e-mail account. Based on their constructive criticism, the on-line survey form was modified to clarify a few of the questions.

The results of the on-line survey provided the following regarding the respondents: their identification information; their permission, if 18-years-old or older, to use the survey results in my master's thesis; their level of experience using computers, the Internet, and web site design; their level of experience using the Internet for various aspects of career exploration and development such as searching for a job, writing and posting resumes, helping student create an on-line career portfolio, and practicing interviewing skills in a "virtual" on-line environment; and their perceptions about the visual and informational content and appeal of the web site. Dialog boxes were incorporated into the on-line survey to allow for open-ended responses about what they enjoy and what they would change in the web site. The respondents'

feedback was used to modify the web site and is analyzed in this master's thesis.

The appendices offered in this thesis have integral functions. While APPENDIX A explains, justifies, and indicates the structure of and modifications to the Tutorial web site, APPENDIX B offers original sample lesson plans integrating the Internet into career exploration and development. Because this writer found that sources for lesson plans about career exploration and development using the Internet are scare, a choice was made to contribute to the field five new sample lesson plans designed for educators which illustrate the effectiveness of the connection between career exploration and development and the Internet. Each lesson plan lists the title, appropriate grade level, time frame, resources, major objectives, summary, and assessment. APPENDIX C lists expected student and teacher outcomes extracted from the Yucca Valley High School Technology Plan co-authored by this writer and Cindy Miller, Chair of the Business Department at Yucca Valley High School. These outcomes can be used as a benchmark for integration of technology and the Internet with the curriculum. APPENDIX D offers teachers and students grouped Internet resources for career

exploration and development. These appendices are not simply supplemental. Rather, they are functional, and it is hoped that they will be used by other teachers to help integrate technology and the Internet within the curriculum, particularly that concerning career exploration and development.

Through the overall process of writing this thesis with accompanying appendices and creating the on-line Tutorial, insights were gained and a product was created which may help other educators to more effectively structure lessons which integrate the benefits of computers and the Internet in the classroom. This is the main goal of this project.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Computer Integration in Education: The Rise of Computer Technology in Education

Before government decreed high school compulsory, the majority of Americans did not bother to get post-high school education because there was an abundance of well-paying industry-related jobs waiting for them at any time. A model was established which, until the advent of computer technology, remained relatively unchanged: a dichotomy of stigmatized vocational education pitted against revered academia. However, as technology advanced and many manual jobs were eliminated, more students found themselves looking at a future filled with technology-based work. While lower-level students were traditionally tracked into vocational education, higher-level students took rigorous course work with the assumption they would move into more intellectually challenging and financially rewarding careers. One could infer that the general educational philosophy was that career exploration was not the domain of public education. Consequently, it was relegated to "career centers" where students could browse the *Occupational Outlook Handbook* and learn about vocational

programs in trade schools, the military, or colleges with vocational programs.

Military recruitment done through career centers used vocational training as an incentive. Vocational education teachers addressed jobs in specific career areas, but counselors did so in limited fashion. One could argue that before the advent of computer technology, and the Internet specifically, career exploration and development was intrinsically part of vocational education and diametrically opposed to academia. Isolated teachers pioneered career exploration and with the help of programs such as ACOTs "Apple Classroom of Tomorrow," which designed, examined, and promoted the use of technology in exchange for a school being made a model site for other schools to examine (ACOT, 1997), the beginnings of a concerted effort to provide on-going technology training were rooted. While such efforts were limited to certain schools, the positive effects of computer technology slowly began to show: high levels of satisfaction were expressed by ACOT students (Franklin & Kinnell, 1990); it was quickly realized that computer use for administration allowed more time for teaching (Gianocavo, 1996); more cooperative learning and project-oriented activities were seen in the

classroom (McMillan, 1993). Improvements in student performance across the curriculum were also seen. Math classes began using simulations to exploration (Char, 1993), English classes experienced better spelling (MacArthur, Haynes, Malouf, Harris & Owing, 1990), and science classes were engaged in more logical thinking and problem solving (Kirkwood, 1995).

However, at this point in the evolution of computer integration in education, the stigma of vocation education continued, and it was clear that the prevailing attitude was that the integration of technology into career exploration and development and was not an obligation of academic education in general. Counseling still addressed it in limited fashion and students were still tracked into the dichotomous system of vocational education and academia. The curriculum remained largely centered on itself, rather than on the student, and there was little communication with different levels within the career world. Teachers were slow to embrace the challenges of integrating computer technology. Computer illiteracy remain high in schools, and multimedia computer-based learning programs were relatively unsophisticated and fostered little motivation to use computers, much less to

learn. Without budgets in place, computer networks were found costly to operate and maintain.

The results of these shortcomings on the integration of computer technology in career exploration and development were clearly evident. Students remained unaware of the power of computers and lacked the insights that come from computer-based research which can addresses multiple learning modalities. Those "tracked" into vocational education classes continued to feel the prevailing stigma, often resulting in low self-esteem. The growth of computer literacy remained slow, and students were not motivated to explore using technology to construct their own meaning, which as Markwood (1995) pointed out, is only possible where high levels of computer proficiency and motivation are present. Of course, in such an atmosphere student remained largely unaware of their career options and seldom were allowed to make connections between their academic classes, which were considered a weakly-related domain, and career exploration and development. It was this negative perpetuation that kept career centers at the forefront of career exploration and excluded it from the classroom.

Internet Integration in Education: Advantages and Hindrances to Integrating the Internet in Education

It was not until the mid-1990s that schools would proficiently be able to use technology to act upon Ryder's (1997) assertion that "students learn best when using a variety of sensory learning modalities to interact with their learning environment." The incorporation of the Internet in education made this possible. The realization of this Internet-based potential was a slow evolution from a centralized host system (Benson & Fodemski, 1996) to shared workstations to relatively powerful individual workstations networked via a UNIX operating station (Levine & Baroudi, 1994) to the National Science Foundation's sophisticated yet cumbersome educational network NSFNet (Williams, 1995) to the National Research and Education Network NREN, spawned by the federal 1991 The High Performance Computing Act, to Berners-Lee's visionary World Wide Web (WWW) with user-friendly Internet browsing capabilities. It was the last step in this evolution that finally made the integration of the Internet in education easy for educators and, thereby, feasible. The educational contribution of this innovation to contemporary society is comparable in stature to that of the Guttenberg printing

press. Perhaps it is even greater, because it brought an information-retrievable order to the seemingly chaotic, infinite world of cyberspace and made it accessible not just to the few, but to the masses (Quittner, 1999). The theretofore mundane-appearing, text-based Internet, with its complicated commands, was simply too difficult for educators to embrace and connect to their teaching, and it was precisely this difficulty that slowed the pace of Internet integration within the classroom. However, the WWW propelled educators from their status quo into the present, where they are finally offered a relatively easy way to incorporate the powerful hypermedia potential of the Internet into their classrooms and feel its effectiveness. As a result of this new technology, a shift began away from the curriculum-centered classroom to a student-centered environment in which a new emphasis was placed on learning modalities (Kulikowic & Lawless, 1998), resulting in an intense excitement about discovery in the limitless world of the Internet.

According to Dias and Sousa (1997), the hypermedia environment of the Internet facilitates a "perceived control" which "promotes the user-driven processes of interaction and navigation in a nodal network." In a

learning environment such as the Internet, students are able to use whatever hyperlinks mean the most to them to follow their quest for understanding, and it is precisely this freedom that allows for the ease and power with which to construct meaning (Ornstein & Levin, 1997). Furthermore, each hyperlink in an Internet environment is oriented toward a specific learning modality which, in turn, allows the user to select cross-references, choose the best-suited style of learning and, thereby, maintain control and structure over the learning approach (Liao, 1998). Whether students prefer to generate educational artifacts such as journals, portfolios, videos, PowerPoint presentations, or web pages, they do so in a manner that best characterizes their learning style of learning, and that can be resourceful (Ryder & Hughes, 1997).

Also fostered by Internet integration in education is the uniquely social process of cooperative problem-solving in which students are guided to actively explore resources, develop questions, gather information, weigh diverse points of view, and construct their own meaning with mutual support from individuals or resources beyond the classroom in such global communication forums as chat rooms and bulletin boards found anywhere in the world. The passive

student of old, a metaphorical slate waiting to be written upon with predetermined details for memorization, is contrasted with this new active learner (Ryder & Hughes, 1997).

These benefits of the Internet and the WWW are available to all students and have created, as close as ever, an equitable learning environment where students can naturally use their search skills to locate current information in a way which they, themselves, determine. This forum of telecommunications, which allows for not just search-and-find, but for storage, can be particularly helpful for instruction that involves problem solving, decision making, and other critical thinking skills (Barron & Orwig, 1995), and this interaction can instill good study habits and skills.

Students learn in different ways, and they learn better when they can relate their personal experiences and perceptions to the learning task. Hypermedia can help their cause because, essentially, it offers an "implementational and representational framework" for students, which, as Davalos (1997) points out, is an information system which provides understanding support for the underlying factors

of prior knowledge, knowledge structures, and associative access.

The Internet also allows for the demands of the real world by allowing for authentic contexts of discovery (Ryder & Hughes, 1997). For example, students are much more likely to benefit from an on-line job interview with a company president than they would from a list of the same questions offered in a classroom handout.

Students can do numerous activities on the Internet that can enrich their learning experience. Some of these include the following:

- Touring in a virtual context
- Viewing real-time perspectives from cameras and satellites
- Teleconferencing with other students and experts at all levels anywhere
- Watching and listening to streaming video and audio clips
- Exploring databases at remote locations
- Using programs that reside on computers anywhere in the world

As Berners-Lee intended, the Internet allows for navigation, location, accumulation, and dissemination of

information through an interlinked network of networks. Given this potential, educators can break new ground for themselves and overcome the constraints of past technology and its accompanying staff development efforts, all too often incomplete. Far West Laboratory scientist John Cradler (1999) points out that research shows that technology integration has helped teachers do the following:

- Teach in a more student-centered, less directive style
- Use more individualize instruction
- Use more time to advise students
- Increase their own interest in teaching
- Increase their interest in experimenting with emerging technology
- Use multiple technologies in the classroom
- Increase administrative and teaching productivity
- Increase collaboration with colleagues
- Revise curriculum and strategies
- Increase participation in school restructuring
- Form business partnerships with schools to support technology
- Increase educational involvement with the community

- Increase their communication with parents

The shift of students to "life-long learners" is an important one in our Information Age. Students need to be independent learners who can function in the cognitively demanding environment of the Internet. As Davalos paraphrases Furman (1989, as cited in Davalos, 1997), "effective understanding can result in an increased ability to incorporate new information into existing frameworks, in a greater ability to perceive or interpret information, and in a greater ability to organize gathered and encountered information." Effective understanding of how to make "metadecisions" is critical as one navigates throughout the growing body of complex information on the Internet, and without this skills, users may encounter a sort of "information overload" similar to the "cognitive overload" described by Dias and Sousa (1997). Public and private schools in the United States should not be left behind during this technological revolution which is sweeping all areas of society from government to business to education. As our society experiences a widening chasm between the socio-economic upper and lower classes, it is also experiencing a corresponding chasm between the

technological elite and the lower class. Grabe and Grabe (1998) report that inequities in technology are prevalent in our schools. While students attending schools in poorer neighborhood have fewer opportunities to use technology, so do girls, in general, as do "lower-able" students. This large segment of our education population needs to be addressed or they will miss the challenges and opportunities that our technology-rich Information Age offers.

It is very difficult for schools to keep pace with the growth of technology and the Internet. From the moment the theretofore graphically-mundane WWW was altered in the early 1990's by such forces as Mosaic and Netscape to become a graphically-rich medium, it grew at exponential rates. By 1996 Internet users had reached 40,000,000 users, and today over 150,000,000 consistently use the Internet (Quittner, 1999). In fact, it is difficult to accurately estimate the growth of the Internet because it is accelerating so rapidly. Gianocavo et al. (1996) reports that the Internet grows by at least 10% per month. Schools across all 50 states of the country are completely "wired" to the Internet, and Internet access continues to grow by 15% per month. This phenomenal growth presents a challenge

to teachers to leave their role of "sage of the stage" behind in favor of "guide on the side." Internet technology itself can open a world of learning to students, yet teachers are still required to facilitate navigation and define context for learning, particularly for students who are not capable of doing so themselves. Alluding to a quote by Feurstein and Feuerstein (1989, as cited in McNabb, 1999), McNabb points out that "children at risk, however, are often unable to learn from direct environmental stimuli and need the intervention of skilled professionals to mediate the development of their self-regulatory processes." If teachers are not properly trained and supported to integrate technology, this needed guidance is not possible. Staff development to integrate the Internet in the classroom remains a challenge. Grabe and Grabe (1998) report that in 1996, with schools efforts to stock their campuses with technology, only 5% of technology funding per pupil went to staff development, a gross oversight in this writer's opinion. This inadequate funding manifests itself in the ongoing attitude of many veteran teachers who, as previously mentioned, are slow to embrace technology, particularly the Internet, and are often afraid that they will lose control if they allow

their students to delve into an learning environment which remains foreign to the teachers themselves.

Despite claims that hypermedia in education is a Godsend, in a meta-analysis of 35 researchers' findings, Liao (1998) points out, "research results comparing the effects of hypermedia and traditional instruction are conflicting" and that many researchers "have found no significant differences between hypermedia and traditional instruction." Interestingly, this meta-analysis found that students' scores were higher when hypermedia was used as a supplement, rather than a replacement, in teaching. Hailey (1998) reported in a less-extensive meta-analysis that most students learn less easily in a hypermedia environment than they do in a traditional setting, while Beerman, Brown, and Evans (1998) report that introducing new technologies can cause a significant "displacement effect" in the learning process in which one learning skill, such as text book reading, is supplanted with another, such as Internet navigation, with little significant difference in students' test scores.

Career Exploration Using the Internet: Internet Integration Brings Career Exploration and Development into Academics

The value of Internet integration is education is strongly supported by industry, which has made it clear that computer literacy, which encompasses the ability to incorporate the Internet, is critical to success in today's business market. Of the ten fastest growing jobs, four require a high level of computer literacy (Ornstein & Levine, 1997). Business partnerships in education have sprung up largely to facilitate the powers of the Internet. One such example is "Business Solutions," a unique program from Horizons, a San Bernardino County School-to-Career partnership, which, while promoting teaming with schools and businesses throughout the County, allows student to work in groups to use the Internet to solve problems for businesses (Business Solutions, 1998). Another such program is "Future Connections," an industry-based, nonprofit organization to promote professional development of educators through one-day corporate job shadowing at companies such as Lockheed-Martin as well as to facilitate Internet-based partnerships with companies and help educators better prepare students for the work world (Future Connections-IISME, 1999).

Businesses have made themselves Internet-available to all levels of education, in hopes of fostering the development of Internet-literate students who will be valuable to the future work place. It is now believed that without an "Internet presence," most businesses of the future are doomed to failure.

Because the multimedia and hypermedia information system of the Internet facilitates learning that provides information through multiple sensory channels, allowing students on all levels with various learning styles to absorb and apply timely knowledge accessed from an infinite number and type of sources, ranging from databases and video-conferencing (Barron & Orwig, 1995), mainstream academia has begun to see it as a legitimate teaching tool. With that acceptance also has come the integration of career exploration and development into academic learning. Teachers have discovered that connections can easily be made between the curriculum and the work world. On-line communication, whether it be video-conferencing or e-mail with professionals in the work force, can transcend the limits of job shadowing and interning at businesses. Virtual reality and simulations within the classroom can help immerse students in the work place environment for

longer periods under the direction and guidance of work world professional and the teacher (Husain, 1998) who can cooperatively reinforce the connection of the academic curriculum to the work world. Learning the "why" of what one is learning is powerful, and academia is coming to realize this. The career center is slowly become an adjunct to the classroom for career exploration and development rather than the other way around, as in the past. Also fueling the acceptance of Internet-based career exploration and development within academia is the realization by educators that Internet literacy is a necessary component of success in the present and future job market (Gianocavo et al., 1996). In fact, as educators pay more attention to work-based learning strategies, academics are beginning to be driven, in many cases, by students' work world experiences, whether virtual or actual (Litvin, 1998).

An irony resulting from this trend is that, as schools incorporate more career exploration and development into their curriculum and team with the work world to offer work-based experiences to their students, schools also replace their traditional vocational classes such as woodshop and electronics with computer labs. If this trend

continues, students will be forced to seek vocational exploration through the curriculum of the academic classroom. Litvin quotes Santoro (1997, as cited in Litvin, 1998): "When a school is really thought about as something totally intertwined with what a kid's hopes and aspirations are, it becomes very, very meaningful…In many cases [more traditional vocational teachers] will look at this in disbelief and disgust, and they won't understand what's being done here…The thing that's worrisome [to them] is that…there'll be no reason for a traditional vocational education system in this country. And if so, then I say, so be it." Modular tech labs such as CHEC Systems, Pitsco/Synergistic System, Lab-Volt Systems, Inc., and Paxton/Patterson ((Barryman, 1998) have begun to supplant traditional vocational classes because they allow students to use computers and the Internet to maintain digital portfolios containing highlights of their school work, in addition to presentations, research papers, photographs, interviews, resumes and business letters, all saved on one high-capacity storage medium such as a CD-ROM or Zip disk.

Technology In-servicing: Guidelines for Teacher Technology Training

Clearly, staff development is critical to the integration of effectual technology-based teaching, and such training is relatively new to education. Yet while the practice of developing and training staff members to implement new methods into the classroom has been part of the educational process for years, literature reveals a general consensus that incomplete staff training remains one of the main obstacles to integrating technology and the Internet in the classroom. Rogers (1996) points out that not preparing educators sufficiently to integrate and implement new technology is a primary hindrance to this integration. Not surprisingly, most teachers have little training about how to integrate related career research and development within their classroom. Research shows that over 50% of new teachers feel unprepared to use technology (Grabe & Grabe, 1998).

Those who have had adequate training to implement technology have done so admirably. Internet integration has allowed teachers the opportunity to obtain "tried-and-true" lesson plans, download all types of software, peruse informational articles, remotely access libraries and

distance learning, locate Internet-based opportunities for their students, share with supportive peers, and tutor on-line, among other opportunities. Furthermore, it has reduced the need for special hardware and software, minimized staff training time, and most important, offered *one* manageable technology to teachers who are already pressed for time and energy. For changes to occur on a wide scale, traditional schools must be restructured and educators need to be properly trained to implement new technological tools into their classrooms. Grabe and Grabe (1998) outline the desired characteristics of a properly restructured school:

Teacher role:	- Guide student discovery
	- Model active learning
Content:	- Emphasis on thinking skills and application
Curriculum:	- Depth
	- Multidisciplinary themes
	- Knowledge integration
Social:	- Collaborative learning
Technology role:	- Facilitate exploration and collaboration
Assessment:	- Knowledge application

- Performance

- Projects

- Portfolio

However, these characteristics must be translated into some specific, basic conditions to assure that technology is available to learn: each school building should be equipped with a lab, and every teacher should have access to a personal computer for administrative and personal use. Perhaps most important, proficient teachers should be recruited to train their peers.

Another important aspect to consider in technology training is that teachers' beliefs and pedagogy "often determine how they will use or not use technology (Zhao, 1998)." An intelligent, practical approach to this dilemma is "to develop applications that support a wide range of pedagogical beliefs, from traditional teacher-centered transmission models to progressive learner-centered constructivist pedagogies (Zhao 1998)."

In any event, technology should never be disrespectfully forced on teachers, because they will resist. It has to be easy enough and quick enough--in short, inviting enough--to allow them to incorporate it within their classrooms. If computer integration is not

carefully and respectfully handled, teachers will resist it, and everyone will be shortchanged.

CHAPTER THREE: INCOPORATING CAREER EXPLORATION USING TECHNOLOGY AS A LEARNING DEVICE

Applications of the Internet in Career Exploration: Current Use of the Internet as a Career Research Tool

The Internet is used by teachers for career research in many effective ways. Their lesson plans, supplemented by those found across the Internet, reflect a shift in the learner from passive to active. Where students once received knowledge, they now productively locate, interpret, analyze, and synthesize information into a carefully honed product, and construct their own knowledge in the process. Where they engaged in isolated rote memorization, they now solve problems in supportive social contexts, making links between the culture of the classroom and other cultures anywhere in the world. Where they were once offered whatever learner domain the teacher chose, they now chose their own style of learning, often kinesthetic, and make their own connections as they navigate through the hypermedia environment of the Internet. Where they once settled for short-term memory, they now make connections that ensure long-term retention.

But how do these abstract changes manifest themselves concretely in career exploration and development? One classic example worth examining is that of eWeb, inspired

by "collaborative knowledge construction" computer applications such as CoVis Collaborative Notebook and Knowledge Integration Environment (KIE). While these applications remained intra-classroom, eWeb breaks those boundaries and helps students reap the "benefits of collaborating with partners beyond [the classroom] (Zhao, 1998)." It is a comprehensive web-based program that melds the following design principles to create a telecommunications network that supports both teachers and students:

- full integration
- universal access
- ease of use
- provides for both traditional and alternative ways of teaching and learning
- facilitates construction and refinement of knowledge
- uses a common technology (web-based environment)
- a system that reduces and manages data

While companies such as Cisco, through their network and troubleshooting training, promote networking across school campuses and, thereby, allow for the integration of the Internet in career research, they offer to students a

potentially cumbersome "cyberworld" which requires defining. eWeb helps teachers and students define this "cyberworld" with an interface between all of its five components, including a threaded discussion forum, a bulletin board, a chat room, a test/exercise builder, a material development kit, and a web page builder using templates. eWeb has been successful because it "tapped into" the one technology which teachers have embraced the fastest, the Internet. Dribble files, computerized banks of data automatically collected from a transparent program embedded in text (Lawless & Kulikowic, 1998), indicate that users tend to favor one component, rather than several, and the easy-to-use bulletin board component is the most popular (Zhao, 1998). This suggests that cognitive overload is a very real factor in a comprehensive information system, and needs to be addressed in future studies. Nevertheless, this program, with its Internet interface, has encouraged teachers to use the Internet.

eWeb can be used in career exploration and development to link students to threaded discussions regarding the work world. Students and teachers can address employers in real time in a private chat room or share a question-and-answer session with a CEO in a public chat room. They can post

comments and question to student with similar career interests on the bulletin board, or construct a web site to share their findings with other students on the Internet. They can leave e-mail messages to employers at their convenience, allowing them time to pursue other avenues of exploration. They can create tests and formulate question for research. They can incorporate multimedia hyperlinks into their text documents and link them to anywhere. And, perhaps most important, they can monitor and manage their tasks and, thereby, eliminate information overload. To increase student productivity, their files can be accessed from any of the components, speeding access to information and increasing flexibility.

As jobs become increasingly technological, students and teachers who function in this interfaced environment, will develop the generic Internet-based skills required of the work world, but more importantly, they will develop the faculty to become life-long learners who, like technology, are always in the state of development (Merideth, 1997).

Educational Web Site: Creation and Purpose of Educational Web Site

An educational web site titled "On-line Tutorial for Teachers of Career Exploration Using the Internet" was

created using several software tools. It was begun using *HTML Builder*, which is an HTML "drag-and-drop" editing program which can be downloaded free of charge from the Internet. *HTML Builder* allows the user to automatically add HTML tags to an opened HTML file by simply clicking on one of the desired buttons in the program's toolbar. Dimensionality was added to the web site through the incorporation of bolded, sized, and colored text as well as topic-specific images--some animated--lists, and tables containing categorized hyperlinks. All of this was accomplished by clicking a toolbar button in *HTML Builder* and then adding the desired content. This function was efficient and allowed the writer to quickly assemble the web site. It was later edited in two familiar WYSIWYG (What-You-See-Is-What-You-Get) programs, Claris *Home Page*--now Filemaker *Home Page*--and, finally, Microsoft *FrontPage*. The latter proved to have a much higher learning curve for the writer, but was ultimately easier, particularly in light of four built-in features: one, a file "explorer" for file management; two, a diagnosis checklist for monitoring errors; three, a task list to ensure completion of duties; and four, a variety of ready-made components such as a counter, search form, and marquee.

Another efficient software tool used in the Tutorial's creation was the shareware program, *Multimedia Explorer*, which allowed the writer to sequentially view and manipulate graphics listed within a directory on the computer. It provides for the sampling of sound files too. However, this writer chose not to incorporate sound within the Tutorial because research shows that among users, sound, more often than other form of dimensionality, is least preferred in combination with text, and may, in fact, filter or contradict the meaning of the text (Wu & Martin, 1997). Easy manipulation, particularly sizing, of graphics was also possible within both above-mentioned WYSIWYG programs.

The purpose and goal of the Tutorial is to offer teachers a simple introduction to the Internet, to provide tools and tips, and to rationalize how the Internet can be used in career exploration and development in the classroom. While it is aimed specifically at teachers, it was developed as a resource which students can also use. The Tutorial explains some basic Internet terminology used in career exploration and development, including such features as e-mail, bulletin boards, chat rooms, listservs, newsgroups, and web pages. Beyond this basic introduction

to the Internet, the Tutorial also includes categorized links to employability tool sites which include the following: exploring careers, searching for a job, resume and cover letter critiquing and writing, resume posting, and interviewing. Employability tips, helpful related resources, and miscellaneous links, including education-specific sites, employability web sites, and web page construction-related sites, are also offered. Also, tips are included about how to use web pages effectively in the classroom. Finally, an on-line survey is provided for immediate constructive feedback regarding users' background, their experience level, their perceptions, and suggestions to improve the Tutorial.

A structural schematic of the Tutorial was also created, including rationale for the elements of the web site and changes made to it based on survey feedback. In addition, computer screen shots of the actual on-line Tutorial web pages, both pre- and post-modification, were created to present the Tutorial in hard copy. This structural schematic, along with a navigation map and accompanying screen shots, can be seen in Appendix A of this thesis.

It is hoped that by viewing the on-line Tutori teachers will gain insight about the capabilities a advantages of using the Internet for career exploration and development in the classroom and use the tool sites and resources offered to supplement their implementation of career exploration and development using the Internet.

Educational Web Site Testing and Evaluation: Evaluation Procedure, Results, Inferences, and Modifications

The Tutorial was tested using two evaluation forms. The first evaluation form (See APPENDIX A) was an on-line survey incorporated into the Tutorial web site. After the web site was posted on the Internet, students at local Mt. San Jacinto Community College were asked to view the web site on-line and offer constructive criticism by submitting their responses to the accompanying survey questions.

For the first on-line survey, name and e-mail address were requested. Data from 27 surveys was collected, and a breakdown of the results follows:

Table 1. Data from First On-line Survey

On-line Survey Questions	On-line Survey Results	On-line Survey Percentages
1.) Are you a teacher?	Yes: 5 No: 22	Yes: 19% No: 81%

2.) If yes to #1, do you have access to a computer at your school?	Yes: 5 No: 0	Yes: 19% No: 0%
3.) If yes to #2, do you have access to the Internet at your school?	Yes: 5 No: 0	Yes: 19% No: 0%
4.) How much computer experience have you had?	None:0 Moderate: 18 Extensive: 9	None: 0% Moderate: 67% Extensive: 33%
5.) How much experience have you had with the Internet?	None: 1 Moderate: 23 Extensive: 3	None: 4% Moderate: 85% Extensive: 11%
6.) Have you ever created a Web Site?	Yes: 6 No: 21	Yes: 22% No: 78%
7.) Do you have a computer at home?	Yes: 27 No: 0	Yes: 100% No: 0%
8.) If yes to #7, do you have Internet access at home?	Yes: 25 No: 2	Yes: 93% No: 7%
9.) Have you ever looked for a job online?	Yes: 13 No: 14	Yes: 48% No: 52%
10.) Have you ever posted your resume on the Internet?	Yes: 4 No: 23	Yes: 15% No: 85%

11.) If yes to #10, have you ever helped a student post his/her resume on the Internet?	Yes: 1 No: 3	Yes: 4% No: 11%
12.) Have you ever helped a student create an online career portfolio?	Yes: 0 No: 27	Yes: 0% No: 100%
13.) Have you ever helped a student practice interview skills using resources available on the Internet?	Yes: 2 No: 25	Yes: 7% No: 93%
14.) Was the online tutorial visually appealing?	Yes: 21 No: 0 Somewhat: 6	Yes: 78% No: 0% Somewhat: 22%
15.) Was the goal of this tutorial on the Internet clear?	Yes: 25 No: 0 Somewhat: 2	Yes: 93% No: 0% Somewhat: 7%
16.) Was the Tutorial easy to use?	Yes: 26 No: 0 Somewhat: 1	Yes: 96% No: 0% Somewhat: 4%
17.) Was the Tutorial enjoyable?	Yes: 25 No: 0 Somewhat: 2	Yes: 93% No: 0% Somewhat: 7%
18.) Was the Tutorial informational?	Yes: 25 No: 0 Somewhat: 2	Yes: 93% No: 0% Somewhat: 7%
19.) Was the Tutorial too technical?	Yes: 4 No: 21 Somewhat: 2	Yes: 15% No: 78% Somewhat: 7%
20.) Was the Tutorial understandable?	Yes: 26 No: 0 Somewhat: 1	Yes: 96% No: 0% Somewhat: 4%

The last section of the on-line survey asked what respondents liked about the Tutorial as well as what they felt could be done to improve it. A summary of those responses and resulting modifications to the web site follows:

Table 2. Responses and Resulting Modifications from First On-line Survey

On-line Survey Results	Resulting Modifications
Background color is too dark which makes it hard to read the text.	Background color was changed from teal to a lighter color, tan.
Easy to use and to find information.	All the links and frames were left intact because navigation was found to be favorable.
I would change the color scheme and color of links.	Background color was changed from teal to tan to create greater contrast with text color, thereby making text easier to read.
[On the questionnaire] you may consider having an N/A option for questions that do not apply to certain people or state on certain questions to skip to the next one if not applicable.	The introductory phrase "If you are a teacher," and an optional N/A answer was added to questions #11-13.

Change the first question to be able to affirm that the respondent is of legal age.	First question of on-line survey changed to confirm that the respondent is 18-years-old or older and grants permission for responses to be used in my master's thesis.
One of your links to another page isn't working.	All links were checked and the link on the "Employability Tool Sites and Tips Page" which took the user to the next web page, the "Employability Resources Page," had to be re-linked.

After the modifications to the Tutorial and on-line survey were made in response to the first on-line survey, the Tutorial was evaluated again using a modified on-line survey, however, this time the entire staff at Yucca Valley High School was targeted and twenty-four people responded offering their constructive criticism.

For this modified on-line survey, legal age, name and e-mail address were requested. A total of 24 completed on-line surveys were submitted, and a breakdown of the results follows:

Table 3. Data from Second On-line Survey

On-line Survey Questions	On-line Survey Results	On-line Survey Percentages
1.) Are you a teacher?	Yes: 18 No: 6	Yes: 75% No: 25%
2.) If yes to #1, do you have access to a computer at your school?	Yes: 17 No: 7	Yes: 71% No: 29%
3.) If yes to #2, do you have access to the Internet at your school?	Yes: 19 No: 5	Yes: 79% No: 21%
4.) How much computer experience have you had?	None: 1 Moderate: 13 Extensive: 10	None: 4% Moderate: 54% Extensive: 42%
5.) How much experience have you had with the Internet?	None: 2 Moderate: 15 Extensive: 7	None: 8% Moderate: 63% Extensive: 29%
6.) Have you ever created a Web Site?	Yes: 7 No: 17	Yes: 29% No: 71%
7.) Do you have a computer at home?	Yes: 23 No: 1	Yes: 96% No: 4%
8.) If yes to #7, do you have Internet access at home?	Yes: 20 No: 4	Yes: 83% No: 17%
9.) Have you ever looked for a job online?	Yes: 10 No: 14	Yes: 42% No: 58%
10.) Have you ever posted your resume on the Internet?	Yes: 3 No: 21	Yes: 8% No: 92%

11.) If you are a teacher, have you ever helped a student post his/her resume on the Internet?	Yes: 1 No: 6 N/A: 17	Yes: 4% No: 25% N/A: 71%
12.) If you are a teacher, have you ever helped a student create an online career portfolio?	Yes: 1 No: 15 N/A: 8	Yes: 4% No: 63% N/A: 33%
13.) If you are a teacher, have you ever helped a student practice interview skills using resources available on the Internet?	Yes: 2 No: 13 N/A: 9	Yes: 8% No: 54% N/A: 38%
14.) Was the online tutorial visually appealing?	Yes: 21 No: 0 Somewhat: 3	Yes: 86% No: 0% Somewhat: 14%
15.) Was the goal of this tutorial on the Internet clear?	Yes: 24 No: 0 Somewhat: 0	Yes: 100% No: 0% Somewhat: 0%
16.) Was the Tutorial easy to use?	Yes: 24 No: 0 Somewhat: 0	Yes: 100% No: 0% Somewhat: 0%
17.) Was the Tutorial enjoyable?	Yes: 23 No: 0 Somewhat: 1	Yes: 96% No: 0% Somewhat: 4%
18.) Was the Tutorial informational?	Yes: 24 No: 0 Somewhat: 0	Yes: 100% No: 0% Somewhat: 0%
19.) Was the Tutorial too technical?	Yes: 0 No: 23 Somewhat: 1	Yes: 0% No: 96% Somewhat: 4%
20.) Was the Tutorial understandable?	Yes: 23 No: 0 Somewhat: 1	Yes: 96% No: 0% Somewhat: 4%

As in the first on-line survey, the last section of the second on-line survey asked what respondents liked about the web site and what could be done to improve it. A summary of those responses and subsequent changes follows:

Table 4. Responses and Resulting Modifications from Second On-line Survey

On-line Survey Results	Resulting Modifications
The site needs animation to accentuate the main point.	I felt the animation already present was adequate and appropriate; therefore, I did not add any.
Large fonts made it easy to read. One typo in Question #11: "If yes to #10 is yes."	I kept the large font size intact, but removed the typographical error by rewording Question #11-13 to begin with "If you are a teacher…"
I wouldn't change the Tutorial, but every time I clicked into another area, a VERY annoying pop-up appeared.	I moved the on-line Tutorial from a free web space requiring on-site or pop-up advertising to a different web space {http://www.webandgraphicdesigns.com/careers} not requiring on-site or pop-up advertising.
In "Telecommunications in the Classroom," you have the words "a excellent" where the word "an" should be.	I changed "a" to "an."

Easy-to-read print, use of colors, down-to-Earth but intelligent language.	Since the larger text size, use of colors and simple language was beneficial, I decided to keep them unchanged.
Is there such a thing as a web "suite?" If not, you have a typo.	I changed to word "suite" to "site" to maintain consistency and avoid any confusion.
The table of links for critiquing and posting resumes has a dead link.	I did a link check on the entire web site and reset the www.jobhuntersbible.com link.

The evaluation results from both on-line surveys were insightful and provided constructive feedback which manifested as responsive changes to the Tutorial. It is hoped that the resulting final web site is more appealing and effectual than the original version, and that it will better promote the integration of technology in career exploration and development within the classroom.

CHAPTER FOUR: CONCLUSIONS AND DISCUSSION OF INTERNET INTEGRATION IN CAREER EXPLORATION IN EDUCATION

Internet Incorporation: How Integration of the Internet in Career Exploration Can Benefit Education

Integration of the Internet in career exploration and development has benefited the classroom, in general, in many ways. Clearly, the Internet frees the busy teacher by increasing the pool of educational resources and allowing time for the teacher to facilitate learning. By exciting students with appealing and sophisticated dimensionality, vast, timely resources, and new challenges, it makes students active learners, and, consequently, takes pressure off the teacher to be a "fountain of knowledge." However, the specific application of career exploration and development using the Internet offers definite benefits to the classroom. It allows for academics to be driven by work-related experiences, whether virtual or actual. Husain (1998) points out that virtual reality and simulations can "introduce students to a high-tech 3-D world where they can experience the work world without leaving the classroom." Also, actual experiences, such as communication through e-mail, bulletin boards, listservs, and chat rooms, can drive academics. Furthermore, the

resultant increase in motivation and metacognition associated with Internet-based experiences (Grabe & Grabe, 1998) in career exploration and development can promote skills which foster transfer--the ultimate goal of education--to other areas of study.

Simpson and Thompson (1990) assert, "...media are mere vehicles that deliver instruction but do not influence student achievement." If this is true, then it could be argued that the relatively new medium of the Internet is just another vehicle. However, it is a unique vehicle because, with its vast resources, connectivity and dimensionality, it increases the content of instruction which influences achievement. Programmed computer-aided instruction, based on behaviorism, by itself has failed to show significant improvement in learning over conventional instruction (Simpson & Thomspon, 1990). Students engaged in career exploration and development using the Internet can connect to all levels and locations to reap the benefits of social interaction. Ries (1999) supports this point: "The best career exploration programs link learning to life experiences, and get teachers, parents, business, and industry involved." Willis et al. (1996) offer another Vygotskian perspective concerning the advantage of this

social interaction: in a social context with the assistance of others such as teachers, parents, and students, if students use critical thinking and problem solving within in the zone of proximal development, eventually they will be able to practice those skills and abilities independently.

Many schools have strong career-related programs established which may include any of the following: modular computer labs dedicated to career exploration, career academies, career pathways, "tech prep," corporate partnerships, curriculum-infused job shadowing, interning, and mentoring. However, for those students who are not involved in such beneficial programs, the Internet can provide equity by offering actual and virtual work-related opportunities within the classroom to strengthen the relationship of academics to the work world.

When careers are addressed in the classroom, more teacher guidance can be offered to promote what Hoyt, the "father of education," says is most important: "...general employability, adaptability, and promotability …" (1999, as cited in Ries, 1999).

Internet integration of career exploration and development in the classroom carries the added benefit of

providing direction and keeping students focused on their professional goal, which motivates them in their studies. While educational partnerships with big business have been sporadic until the school-to-work philosophy was legislated in forms such as the 1994 Department of Education publication *National Goals for Education: Goals 2000*, they are common today. The integration of the Internet in career exploration and development within the classroom strengthens this bond by supporting the teacher and providing work-based opportunities and resources for learning that did not exist before partnerships. Today, students in the classroom are free to use a wide array of telecommunication media for interpersonal communication with the work place. Ornstein and Levine (1997) point out that businesses are providing training in public and private schools which will later "feed" employees to those same businesses and that many believe they will continue to do so, particularly to address the needs of high-tech and information-based industries.

The integration of the Internet in career exploration and development in the classroom has also promoted authentic assessment by opening it to a global audience. Student work such as electronically-stored portfolios and

projects, which support the documentation of a metacognitive process of learning, is evaluated by work world individuals or committees outside of the classroom via e-mail, chat rooms, and other forms of electronic media. McNabb (1999) supports such flexible types of authentic assessment and reminds us that "standardized assessment methods are for measuring some important indicators of learning," but not for all.

While more research needs to be done on the effects of incorporating Internet-based career exploration and development in the classroom, anecdotal evidence from surveys throughout the United States suggests that it promotes students' interest, grades, and post-secondary study, and that students benefit both socially and academically (Ries, 1999).

Cyberspace activities in the classroom are a subtle catalyst for restructuring schools from within and are embraced by students and teachers alike. Internet-based career exploration and development, while just one of many such activities, undeniably benefits our ever-changing educational system.

Expected Student and Teacher Outcomes: Connecting Internet Technology with ESLRs and the Technology Plan

Inherent in any school technology plan is a vision of outcomes expected of teachers and students resulting from its implementation. It is important that these expected outcomes are cohesively integrated with goals already in place as well as with new goals, or they will be resisted. Student goals must mesh with teacher goals, which must mesh with district goals, which must mesh with state and national goals (i.e., frameworks). This cohesion can be accomplished systemically with little discomfort if expected outcomes are clearly delineated beforehand. One way to ensure this is to first establish basic school-wide expected learning outcomes known as ESLRs, Expected School-wide Learning Results. Once they are agreed upon by faculty and maintained as a vision, the school is free to begin writing a technology plan to address those ESLRs. However, more than basic ESLRs are needed if a technology plan is to work and be assessed accurately. A carefully-honed list of technology-related expected outcomes for teachers and students is needed and should reflect not only the demands of academia, but also the generic demands of the technologically-rich work place, and these expected

outcomes should fall under the umbrella of the ESLRs. A way to ensure appropriate expected outcomes is to research, talk with work place professionals, study outcomes suggested in successful technology plans, and discuss findings among the school, business, and community. Often, insights offered by those outside the educational communities help to shape expected outcomes. A list of expected outcomes for teachers and students, which is part of the Yucca Valley High School Technology Plan co-authored by this writer and Business Department Chairperson, Cindy Miller, has been provided by this writer (See APPENDIX C) which can serve as a starting point for those interested in developing their own expected outcomes and technology plan. Every school must agree on its own ESLRs and subsequent technology-related expected outcomes for teachers and students if they are to be achieved, for only through faculty support can expected outcomes be properly addressed.

The expected outcomes for both ESLRs and a technology plan can also serve another very important purpose: teachers can use them as a basis for activities within their lesson plans. This list contains ideas inspired by

peer discussion, research, other technology plans, and educational standards and frameworks.

This writer has found that, currently, lesson plans involving the incorporation of the Internet into career exploration and development in the classroom are scarce and difficult to find on the Internet. Therefore, five lesson plans (See APPENDIX B) have been written which do just that. Although these plans are designed for high school students who are about to enter--or have already entered--the work place, many of the elements of these lesson plans are "tried-and-true," and require only basic computer literacy.

As an additional resource for lesson planning, a categorized list of Internet sites related to education and career exploration and development has been provided (See APPENDIX D).

Armed with ESLRs, a list of technology plan expected outcomes, sample lesson plans, and Internet resources, one can realistically challenge the "dark side" of traditional education, and begin to incorporate the Internet in career exploration and development in the classroom.

Conclusion: Project Summary

In this project, the integration of one, technology; two, the Internet; and three, the integration of the Internet within career exploration and development within the classroom were explored and discussed. A concept of the classroom as a cooperative, social community permeates this research and carries with it a sense of mission. McNabb (1999) warns that as post-modern education shifts from the traditional "mono-cultural" approach to a multi-cultural one, integration of the Internet is more important than ever to allow students to construct their own meaning. Hypermedia, which offers greater dimensionality than traditional texts, allows readers to "navigate the terrain of a hypertext, composing his/her own unique text (Lawless & Kulikowic, 1998)." This break with the traditional learning environment may prove to be the most effective change yet in education. However, as technology changes, there is a never-ending challenge to find the most meaningful way to integrate the Internet into the classroom and to further integrate career exploration and development as well. Liao (1998) advises that "medium and method should have a more integral relationship…[and that] both are part of the instructional design." Will educators

adapt to this technological change, or will the change adapt to them? Will staff development and technology funding meet this challenge? Will the commercial sector continue to support educational technology even to the extent to which they currently do? Will the contribution of hypermedia to learning be clearly understood? These questions, and many more, remain to be explored.

It is hoped that this project and accompanying web site, while offering helpful insight and functional tools, will provide a perspective to consider as educators face the challenge of how best of integrate the Internet within the classroom, and more specifically, within career exploration and development.

APPENDIX A: ON-LINE TUTORIAL'S STRUCTURAL SCHEMATIC, RATIONALE, NAVIGATION MAP, AND SCREEN SHOTS INCLUDING SURVEY FORM

A frame-document web site was designed to allow users the option of navigating throughout the web site by using either the left-side window's scrollable table of contents titled "Pages of This Web" containing hyperlinks to each page ("Home Page," "Employability Tool Sites and Tips Page," "Employment Resources Page," "Resources and Tips Page for Designing Web Sites," and "Survey Form") or the hyperlinks within each page which appear in the right-side frame window. No changes were made to this web site table of contents. It is hoped that the arrangement of the scrollable table of contents will reinforce the logical sequence of the pages within the web site. The schematic below reflects both the pre- and post-modification structure of the on-line Tutorial. Content and design elements are indicated by the underlined label "Page Item," while the page items' rationale, indicated by the underlined label "Rationale," is provided directly below each page item. Changes made in the post-modification web site are indicated by the underlined label "Modification," and follow each rationale where applicable. In addition, in this appendix a navigation map has been included after

this schematic to further clarify the structure of the Tutorial.

WEB PAGE #1

Page Item: Home Page of On-line Tutorial for Teachers of Career Exploration Implementing Technology

Rationale: To clearly present the desired outcomes from the Tutorial's use

Page Item: Teal-colored background

Rationale: To provide a subtle background for reading

Modification: Background color changed to light tan for easier reading

Page Item: Animated vertically-rotating "Welcome" graphic

Rationale: To emphatically welcome the user's through animated eye-catching movement

Page Item: Tutorial introduction: advantages and highlights of the web site

Rationale: To clearly present the desired outcomes of the Tutorial

Page Item: Five bulleted reasons why using the Internet in career development can create an effective learning environment

Rationale: To show the connection between the advantages of Internet use and classroom instruction, with highlighted text for emphasis

Page Item: Three bulleted advantages about the Internet as a tool for career development

Rationale: To show the connection between using the Internet and exploring careers

Page Item: Definitions of various Internet terms, some accompanied by animated and non-animated graphics

Rationale: To provide the user with a referable source of definitions enhanced with graphics and to enable users to download either Internet Explorer or Netscape Navigator

Page Item: A "Back to the Top" link

Rationale: To provide for ease of navigation throughout the page

Page Item: A link to the "Employability Tool Sites and Tips" Page

Rationale: To guide users to the next logically-sequenced page

Page Item: A counter component

Rationale: To validate the web site for the user by indicating the number of visitors

Page Item: Copyright paragraph

Rationale: To explain author's copyright and ask for feedback regarding any possible copyright violations in this web site.

Modification: The word "suite" was changed to "site," as some readers thought it was a typographical error

Page Item: Pop-up banner advertisements

Rationale: To allow for hosting of web site on a free domain

Modification: Web site moved to another commercial domain which does not provide free posting of web sites, and therefore, does not create pop-up banner advertisements as a concession to advertisers

WEB PAGE #2

Page Item: Employability Tool Sites and Tips Page

Rationale: To provide helpful web site and tips about exploring and searching for careers

Page Item: Teal-colored background

Rationale: To provide a subtle background for reading

Modification: Background color changed to light tan for easier reading

Page Item: Three bulleted ways the Internet can assist students in their career planning

Rationale: To justify the connection between career planning and using the Internet

Page Item: A table of eight web site links to help students plan a career

Rationale: To offer web sites dedicated as tools to help one plan a career

Page Item: Four bulleted ways the Internet can help students develop and present their resumes and cover letters

Rationale: To justify how the Internet can help one develop and present one's resume and cover letter

Page Item: A table of six web site links to help develop and present resumes and cover letters

Rationale: To offer various tool sites designed to help develop and present resumes and cover letters

Page Item: A table of eight web site links designed to help students critique and post their resumes

Rationale: To offer various tool sites designed to help critique and post resumes

Modification: One corrupted link, www.jobhuntersbible.com, relinked

Page Item: A table of four web site links designed to hone interviewing skills, some of which allow virtual interviewing

Rationale: To offer various tool sites designed to help hone interviewing skills

Page Item: Four bulleted "hot facts and/or tips" about the job search

Rationale: To emphasize a framework of overriding precepts regarding the job search process to serve as encouragement

Page Item: "Back to the Top" link

Rationale: To provide for easy navigation throughout the web page

Page Item: Link to the "Employment Resources Page"

Rationale: To guide users to the next logically sequenced page

Modification: Corrupted link was re-linked to the next page, the "Employability Resources Page"

Modification: A typographical error in the explanation of the listed resource *Telecommunications in the Classroom* was changed from "a excellent…" to "an excellent…"

Page Item: Copyright paragraph

Rationale: To explain author's copyright and ask for feedback regarding any possible copyright violations in this web site.

Modification: The word "suite" was changed to "site," as some readers thought it was a typographical error

Page Item: Pop-up banner advertisements

Rationale: To allow for hosting of web site on a free domain

Modification: Web site moved to another commercial domain which does not provide free hosting of web sites, and therefore, does not create pop-up banner advertisements as a concession to advertisers

WEB PAGE #3

Page Item: Teal-colored background

Rationale: To provide a subtle background for reading

Modification: Background color changed to light tan for easier reading

Page Item: Employment Resources Page

Rationale: To offer helpful resources for teachers

Page Items: A bulleted list of four books dealing with using the Internet in the classroom

Rationale: To offer teachers practical Internet text references

Page Item: A bulleted list of five helpful web site links designed for teachers to utilize technology and incorporate the Internet in the classroom

Rationale: To offer links designed specifically for teachers to help incorporate the Internet

Page Item: A bulleted list of six miscellaneous web site links to help teachers learn more about web sites and how to build them

Rationale: To offer web site links where educators can visit to explore web pages and learn more about their design

Page Item: Explanation of Tutorial's author and a link to this web site's on-line survey and to author's e-mail

Rationale: To introduce the author, to explain how and why this tutorial was created, and to allow for immediate constructive feedback via an on-line survey form and author's e-mail

Page Item: "Back to the Top" link

Rationale: To provide easy navigation throughout the web page

Page Item: Link to the "Resources and Tips Page for Designing Web Sites"

Rationale: To guide users to the next logically-sequenced page

Page Item: Menu bar of various search engines, including AltaVista, Lycos, Excite, Infoseek, Hotbot, and Yahoo

Rationale: To provide users with ability to search and experiment with various Internet search engines

Page Item: Copyright paragraph

Rationale: To explain author's copyright and ask for feedback regarding any possible copyright violations in this web site.

Modification: The word "suite" was changed to "site," as some readers thought it was a typographical error

Page Item: Pop-up banner advertisements

Rationale: To allow for hosting of web site on a free domain

Modification: Web site moved to another commercial domain which does not provide free posting of web sites, and therefore, does not create pop-up banner advertisements as a concession to advertisers

WEB PAGE #4

Page Item: Teal-colored background

Rationale: To provide a subtle background for reading

Modification: Background color changed to light tan for easier reading

Page Item: Resources and Tips Page for Designing Web Sites

Rationale: To provide a simple overview of how a web page is created using an HTML or WYSIWYG program and how a web page can be used to its potential in the classroom

Page Item: A bulleted list of six elements which you can incorporate to "spice up" web pages to enhance the learning process, including links to some web page design programs and a banner animation

Rationale: To offer ways for teachers to make their web sites more engaging and interactive as well as allow for student to, thereby, construct their own meaning. Animation is included to show what "animated" means and to demonstrate how it can effectively draw attention

Page Item: "Back to the Top" link

Rationale: To provide easy navigation throughout the web page

Page Item: Copyright paragraph

Rationale: To explain author's copyright and ask for feedback regarding any possible copyright violations in this web site.

Modification: The word "suite" was changed to "site," as some readers thought it was a typographical error

Page Item: Pop-up banner advertisements

Rationale: To allow for hosting of web site on a free domain

Modification: Web site moved to another commercial domain which does not provide free posting of web sites, and therefore, does not

create pop-up banner advertisements as a concession to advertisers

WEB PAGE #5

Page Item: Fill-in Form for Tutorial Evaluation

Rationale: To provide opportunity to submit constructive feedback about the Tutorial

Page Item: Teal-colored background

Rationale: To provide a subtle background for reading

Modification: Background color changed to light tan for easier reading

Page Item: Input of first name, last name, and e-mail address

Rationale: To enable author to reply to respondent's feedback and incorporate changes based on that feedback

Modification: First question of on-line survey changed to confirm that the respondent is 18-years-old or older, and grants permission for responses to be used in my master's thesis

Page Item: Questions for permission to use respondent's feedback for my Master's thesis

Rationale: To allow respondents the opportunity to consent or decline the use of their feedback in my Master's thesis

Page Item: Questions about respondent's occupation, computer experience, and Internet experience

Rationale: To provide insight to author about the respondent's background and experience level with computers and the Internet

Page Item: Questions about respondent's use of the Internet for career development, including exploring careers, searching for jobs, creating and posting a resume, developing an on-line career portfolio, and virtual interviewing

Rationale: To provide specific insight to author about respondent's level of experience in using the Internet for career exploration and developmentModification: Questions #11-13 changed to include introductory clause "If you are a teacher" and an optional N/A answer provided

Page Item: Questions about respondent's perceptions, likes, and dislikes about the Tutorial

Rationale: To provide specific insight to author about respondent's impressions of the Tutorial

Page Item: Link to Home Page of Tutorial

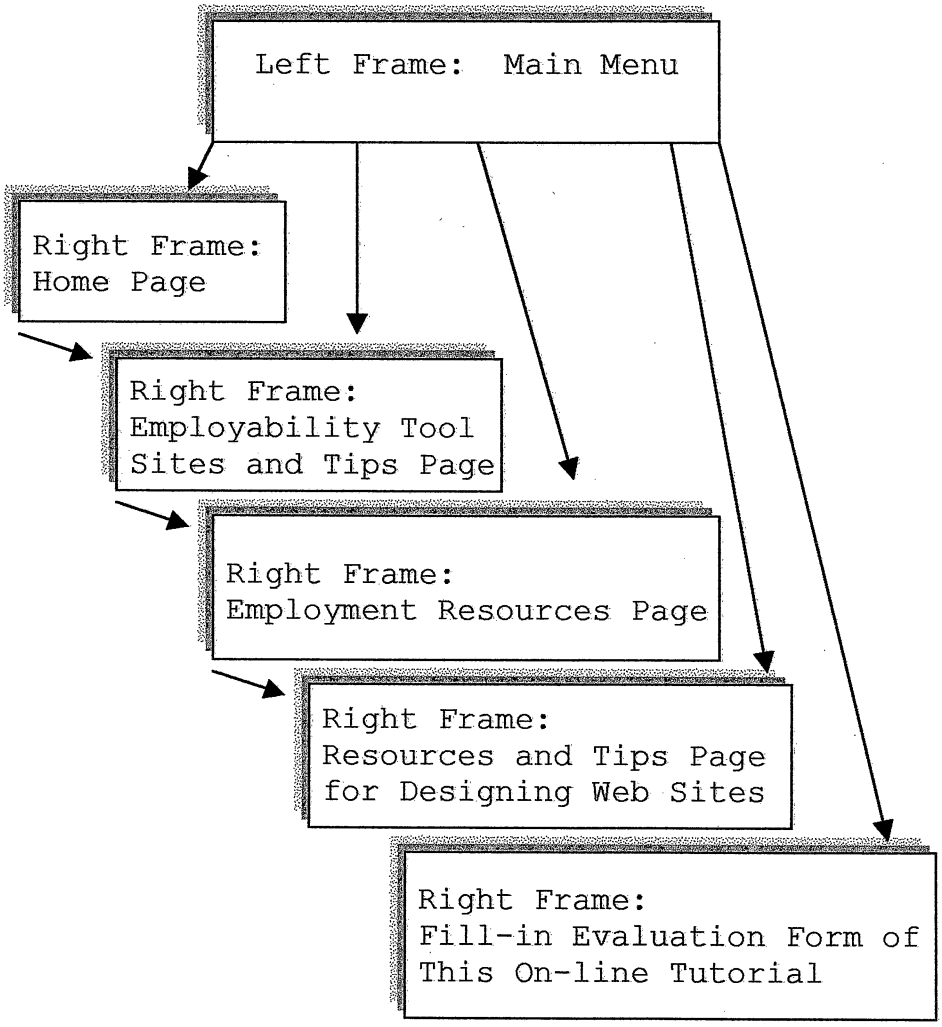
Rationale: To provide easy navigation back to the home page

Page Item: Pop-up banner advertisements

Rationale: To allow for hosting of web site on a free domain

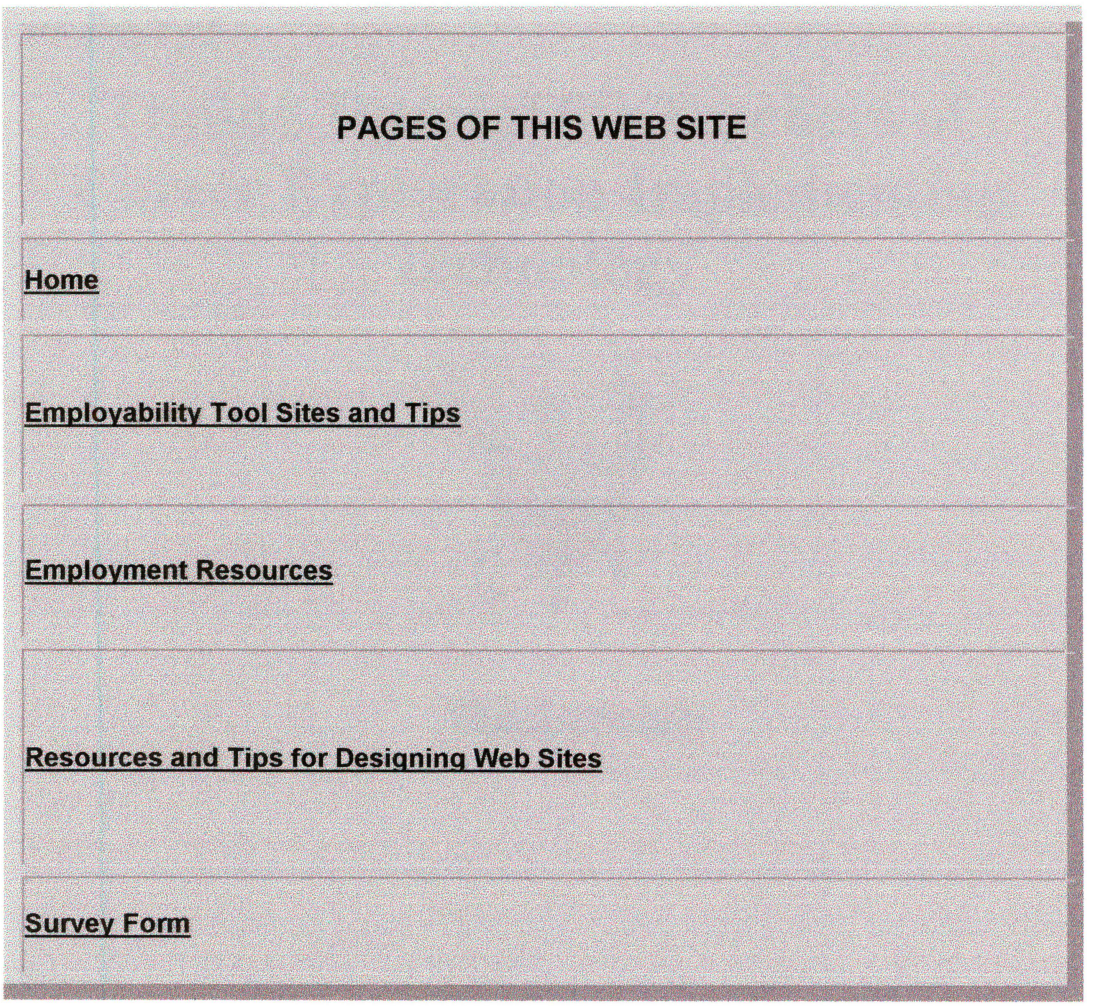
Modification: Website moved to another commercial domain which does not provide free posting of web sites, and therefore, does not create pop-up banner advertisements as a concession to advertisers

Tutorial's Navigation Map



Tutorial's Screen Shots (Pre-modifications)

Left-side Window of Frame Document (Main Menu):



Directory Path:
Main Menu/Home Page *cont.'d*

Why should I use the Internet in my school to teach career development? With the goal of creating an effective learning environment, the advantages of implementing and using the Internet can include the following:

- **You, as educator, can provide learning environments where students are interactively involved in career development which addresses the current employment environment.**

- **Students can then focus and drive their career interests and goals by taking responsibility for conducting and managing their own career development.**

- **Students can learn to create their own online career portfolio, including their resume, to market themselves in today's competitive employment world.**

- **An alternative to rote memorization in a passive receiver role, students can practice problem-solving skills in collaboration with others.**

- **And, finally, the Net can provide students with complete, timely information and allow for communication with peers and experts on career-related topics.**

OK, to start, let's cover some of the basics of the Internet as they relate to career development:

The Internet is developing into one of the most productive tools to do the following:

- **to find employment**
- **to get constructive, interactive feedback**
- **to develop a good resource for networking yourself within the employment market**

Next, what are some of the basic terms used in reference to the Net?

- ***World Wide Web*** **(the "Web"): The graphical portion of the Net. Each separate page has its own address called a URL (Uniform Resource Locator), and can contain one or many links to travel(surf) elsewhere on the Net.**

- ***Browser:*** **A program used to view information on the Net. The two most popular are:**

- ***Netscape Navigator.*** **Click to download Netscape Navigator for free.**

- ***Microsoft Internet Excplorer.*** **Click to download Internet Explorer for free.**

- ***Web Site:*** **A series of hyperlinked pages created using HTML and which can contain text and graphics to provide a presence on the Internet.**

- ***Home Page:*** **An opening or welcome screen to a Web site, which can have more than one reference screen.**

- ***Hyperlink:*** **A connection instrument used between text and/or pictures on different Web pages. The links can be in different colors and are usually underlined, and clicking on the link takes you to a different web page.**

- ***Search Engines:*** **Programs on the Net that search for different Web pages after you have entered different words, phrases, or concepts on the topic(s) you are searching for.**

- ***E-mail*****: E-mail allows you send messages through the Net. You need an e-mail program--usually included with your browser--to send and receive messages. You get your own personalized address, and you can also send attachments (Files, URL Links) in addition to creating a list of correspondents using the e-mail program's address book.**

- ***Bookmarking:*** **This feature allows the user to mark and save favorite Net URLs to their browser for later linking without having to search the Net over again to find the link.**

- ***FTP (File Transfer Protocol):*** **The protocol used on the Internet for sending files. There are a series of computers that hold distribution software files that allows you to download the software programs of your choice, and they use the FTP.**

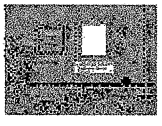
- ***Freeware and Shareware:*** **Freeware is software you can download for free. In most cases the author still has the copyright to the program, and may ask you to do, or don't do something(s) after you download the software (e.g. don't change the program in any**

way). Shareware is similar to freeware, but a fee - - usually very small - - is asked if you intend to keep the program.

- ***Newsgroups*: Online topic-specific communities, including career development newsgroups, where you can interact via e-mail.**
- ***Posting:* The procedure for copying-and-pasting information (e.g., resume) into an online database from which that information is then able to be viewed on the Net.**

Back to the top

Ready to go to the Employability Tool Sites and Tips Page? Just click in the classroom!



FastCounter by LinkExchange

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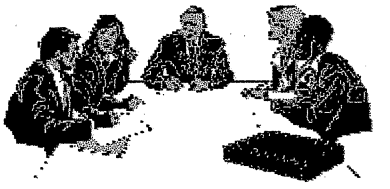
Directory Path:
Main Menu/Employability Tool Sites and Tips Page

Employability Tool Sites and Tips Page



Career Planning: The Net can help students develop a plan to find a job or career suited to them. It can assist them by helping them develop the following:

- an analysis of their interests and proclivities
- an understanding of their skills
- a deeper understanding of jobs and careers

The following examples are some excellent Net hyperlinks designed to help students develop their job or career plan:

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

Name of Website	**Hyperlink to Website**
Bureau of Labor Statistics	stats.bls.gov//blshome.htm
Career Center on the Web	career.berkeley.edu
Career Perfect	www.careerPerfect.com
JobSmart	jobsmart.org/tools/career/index.htm
O*Net Occupational Information Network	www.doleta.gov/programs/onet/
O*Net School-To-Work	www.doleta.gov/programs/onet
1998-99 Occupational Outlook Handbook	bls.gov/ocohome.htm
Welcome to My Future	www.myfuture.com

Resumes and Cover Letters: The Net can help students to better develop and present their resumes and cover letters by providing the following:

- templates and self-guides for creating resumes
- posting capabilities for Net viewing by prospective employers
- online critiquing by peers and experts
- delivery of resumes and cover letters via e-mail according to students' career choice

The following examples are some excellent Net hyperlinks designed to assist students create their resumes and/or cover letters:

Name of Website	**Hyperlink to Website**
Byte-able Resumes	www.careermag.com/newsarts/jobsearch/byte.html
Career Lab	www.careerlab.com/letters/default.htm
Online Resume Sample	www.jobweb.org/catapult/guenov/sampleres.html
Rebecca Smith's eResumes & Resources	www.eresumes.com

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

Resumania	www.umn.edu/ohr/ecep/resume
The Universal Challenge	www.uniq.unilever.com

The following examples are some excellent Net hyperlinks designed to offer critiques of resumes and/or to enable students to post their resumes:

Name of Website	**Hyperlink to Website**
Bridgepath	www.bridgepath.com
Career Path	www.careerpath.com
JobBank USA	www.jobbankusa.com
JobTrack	www.jobtrack.com
Monster Board	www.monster.com

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

The Riley Guide	www.dbm.com/jobguide
What Color Is Your Parachute?	www.jobhuntersbible.com
Yahoo! Jobs	dir.yahoo.com/Business_and_Economy/Employment/Jobs/

Interviewing: The Net also provides numerous resources to hone students' interviewing skills. Below are some excellent hyperlinks, some of which are interactive:

Name of Website	**Hyperlink to Website**
Kaplan's Mock Interview	www.kaplan.com/career/hotseat/hotseat
Virtual Interview	www.studentcenter.com/brief/virtual/virtual.html

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

Kaplan's Interview Tips	www.kaplan.com/career/Interview_Tips.html
Job Web: Answers To Common Interview Questions	www.jobweb.org/catapult/jsguides.htm

Hot Facts and/or Tips:

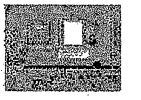
- While the general consensus is that the resume functions as a 13-15 second screener and that the cover letter is, in fact, more important, most web sites pay more attention to the resume.
- Approximately only 14% of all new jobs are from ads, and only 24% of all new jobs are from networking; it would appear that both are highly over-rated.
- Research shows that the most effective way to get a job is as follows:

1. determine your field of interest
2. identify the company
3. research it by conducting an informational interview (not looking for a job at this time)
4. identify the hiring authority
5. cold call!

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

• While your job skills are critical to your job performance, prospective employers give much more weight to personal characteristics such as honesty, motivation, communication, self-confidence, flexibility, interpersonal skills, teamwork, leadership, and enthusiasm--and in that order!

Back to the Top



Click in the classroom to go to the Employment Resources page!

(Please Note: This web suite is copyrighted by James Asher. All tools were used with the understanding that they are royalty-free, if you find any violation of copyright please notify the author at once. This information may only be distributed and duplicated if permission is granted by the author in response to a written request. Thank you!)

Directory Path:
Main Menu/Employment Resources Page

Employment Resources Page

First, here are some great reference books:

- ***NetLearning: Why Teachers Use the Internet.*** **(1996) By Ferdi Serim and Melissa Koch. (Songline Studios, Inc.). It includes CD-ROM to get you started on the Internet, and has many useful Net links!**

- ***Telecommunications in the Classroom*** **. 2nd Ed. (1995) By Sara Armstrong. (International Society for Technology in Education). It has a excellent list of classroom activities!**

- ***Student's Guide to the Internet*** **(1995) by David Clark. (Alpha Books). The guide is a helpful tool for students and teachers, and includes tips on researching and job hunting!**

- ***10 Minute Guide to the Internet and the World Wide Web*** **2nd Ed. (1996) by Galen A. Grimes. (Que Corporation). This 198-page book is a quick-reference guide for the Internet!**

Second, let's look at some links specifically for educators:

- ***T.H.E. Journal Web Site.*** **This excellent Web site offers resources and articles dealing with teachers and technology!**

- ***The United States Department of Education (DOE) Web Site.*** **This Web site has news and resources for almost all aspects of education, including the full text of many DOE publications!**

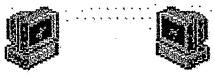
- ***Educational Listservs.*** **This Web site has links to many different educational listservs! (A listserv is a group of e-mail participants who communicate back and forth via e-mail on specific topics.)**

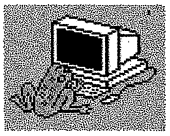
- ***Instructional Technology Connections.*** **This Web site has tons of great resources for teachers dealing with technology and education!**

- ***University of Colorado-Denver K-12 and Beyond Resource Pages.*** **This Web site has some great resources for K-12 teachers!**

Finally, here are some great miscellaneous links!

- ***NetPages.*** **(Aldea Communications, Inc.). A great resource to the Internet! A phone book type format that has white and yellow pages, mailing lists, usenet newsgroups, and over 20,000 Web site listings, including international sites! Awesome.**

-  ***The Clip Art Connection.*** **This site has some great animation, and most of them are free! Also, there are great tips and links to creating your own animation!**

-  ***Builder.*** **This site is a great source for learning Web page design! Try it! You'll be amazed at how easy it really is!**

- ***GoTo.com.*** **This site has a listing of companies which will help you get a Web page up and running for free!**

- ***Filemaker Home Page.*** **This WYSISYG (What You See Is What You Get) program allows you to design Web pages right on the screen as it will appear on the Web.**

Directory Path:
Main Menu/Employment Resources Page *cont.'d*

- ***Microsoft Front Page.*** **This WYSISYG program is top-of-the-line and has many great features, like automatically updating hyperlink navigation bars and auto-embedding referenced graphics, which make your web design easier.**

About this Tutorial's creator:

Hello, my name is Jim Asher and I am a graduate student at California State University in San Bernardino. As part of my Master's project, and in addition to my written thesis, I created this Internet tutorial for teachers and students to access and use in the hopes that the power of the Internet can be used educationally to its fullest potential! A survey of the Tutorial was also created to acquire some valuable feedback from YOU, including how the Tutorial has helped and how it could be better! So, if you could take several minutes and complete the brief survey, I would sure appreciate it. Thank You! Survey Form Here!

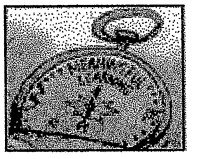
Also, you can send me an e-mail and I will respond as soon as possible!

PSJimA@aol.com

Directory Path:
Main Menu/Employment Resources Page *cont.'d*

Back to the Top

Click your watch to go to the Resources and Tips Page for Designing Web Sites!



Search Engine Links

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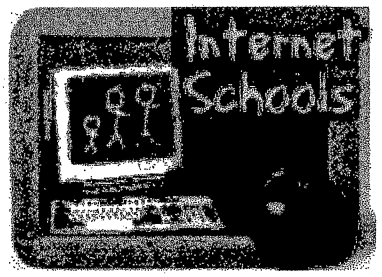
Directory Path:
Main Menu/Resources and Tips Page for Designing Web Sites

Resources and Tips Page for Designing Web Sites



What about creating Web Pages?

Using a program language called HTML (Hypertext Markup Language), you can easily create pages--actually files--to put on the Web. There are lots of links (see the Employment Resource Page), books, and even software programs to help you create your personalized Web pages! A few of the favorite WYSIWYG (What You See Is What You Get) programs which let you build a web page without even knowing HTML are Filemaker Home Page and Microsoft FrontPage. These programs allow you to

view your web page as an HTML document (in programming language) or as a web page for easy editing.

Web pages can contain all kinds of goodies:

- You can include animated pictures or words--and even make them hyperlinks! See the Employment Resources Page for links to get free Web stuff to help you and your students create cool Web sites!

  For example, I made this animation--and you can do it too--in less than 10 minutes: **It's easy to create animation!**

- You can include lesson plans for your students to view and download either from home or from school!

- You can also post various topics and links for you and your students' personal and professional interests!

- You can incorporate interactive features such as a discussion board or a search form, both of which are used on this web site.

- You can copy others' HTML language and paste it into YOUR web site where you can make modifications to it as needed.

Directory Path:
Main Menu/Resources and Tips Page for Designing Web Sites
cont.'d

- You can hyperlink your web site to other related web sites to enrich it.

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Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial

Fill-in Evaluation Form of this On-line Tutorial

First Name:

Last Name:

E-Mail Address(Optional):

If you are under 18 years old, do you give your permission to incorporate your responses into this evaluation summary?

- ○ **Yes**
- ○ No

Is it permissible to incorporate your responses into this evaluation summary?

- ○ **Yes**
- ○ **No**

1.) Are you a teacher?

- ○ **Yes**
- ○ **No**

2.) If yes to #1, do you have access to a computer at your school?

- ○ **Yes**
- ○ **No**

Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial
cont.'d

3.) If yes to #2, do you have access to the Internet at your school?

○ **Yes**

○ **No**

4.) How much computer experience have you had?

None
Moderate

5.) How much experience have you had with the Internet?

None
Moderate

6.) Have you ever created a Web Site?

○ **Yes**

○ **No**

7.) Do you have a computer at home?

○ **Yes**

○ **No**

8.) If yes to #7, do you have Internet access at home?

○ **Yes**

○ **No**

9.) Have you ever looked for a job online?

○ **Yes**

○ **No**

10.) Have you ever posted your resume on the Internet?

○ **Yes**

○ **No**

Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial
cont.'d

11.) If yes to #10 is yes, have you ever helped a student post his/her resume on the Internet?

○ **Yes**

○ **No**

12.) Have you ever helped a student create an online career portfolio?

○ **Yes**

○ **No**

13.) Have you ever helped a student practice interview skills using resources available on the Internet?

○ **Yes**

○ **No**

14.) Was the online tutorial visually appealing?

Yes
No

15.) Was the goal of this tutorial on the Internet clear?

Yes
No

16.) Was the Tutorial easy to use?

Yes
No

17.) Was the Tutorial enjoyable?

Yes
No

18.) Was the Tutorial informational?

Yes
No

Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial
cont.'d

19.) Was the Tutorial too technical?

Yes
No

20.) Was the Tutorial understandable?

Yes
No

21.) What did you enjoy about the Tutorial?

22.) What would you change about the Tutorial, good or bad? (Be Honest.)

Send the Information!

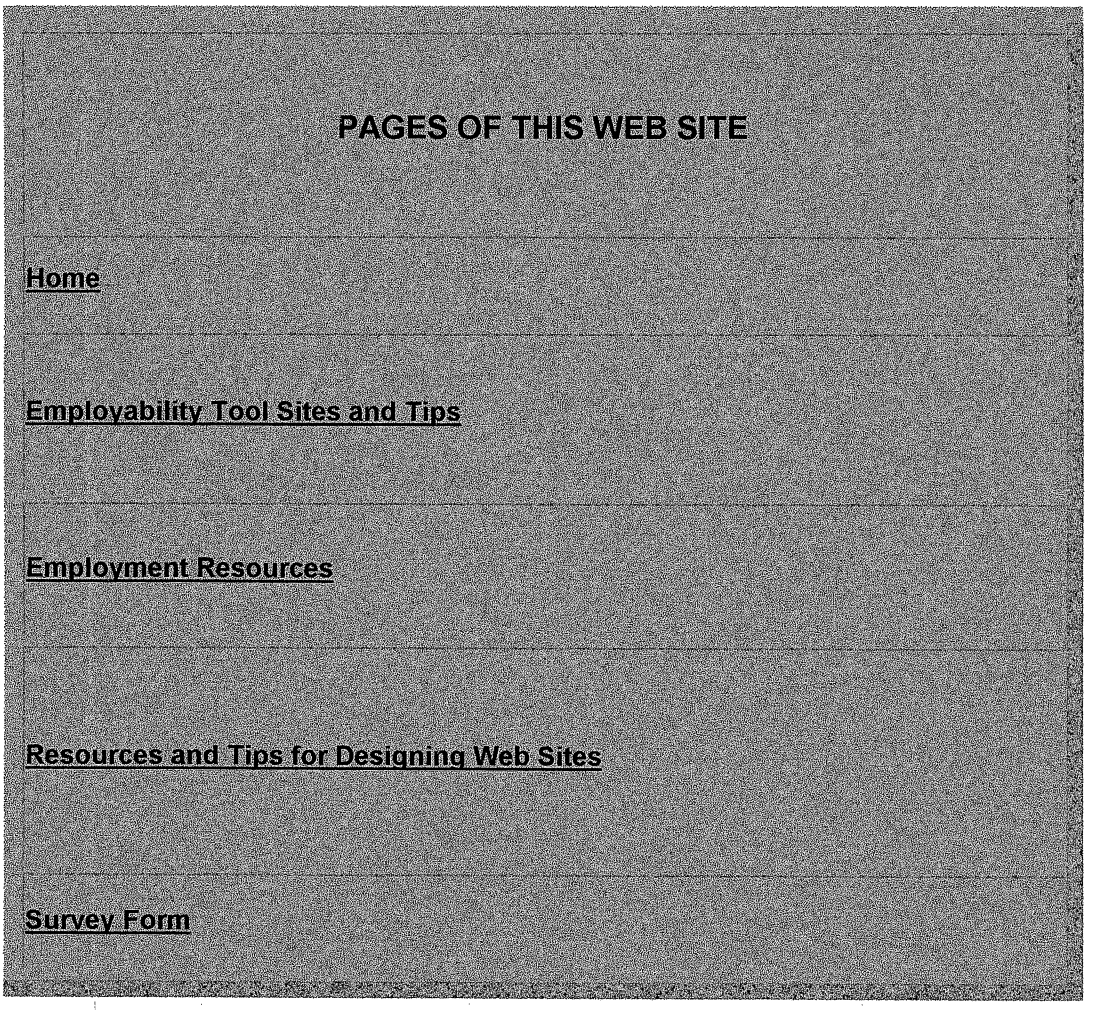
Reset the Form.

Thank you for your responses!

Back to the Top

Tutorial's Screen Shots (Post-modifications)

Left-side Window of Frame Document (Main Menu):

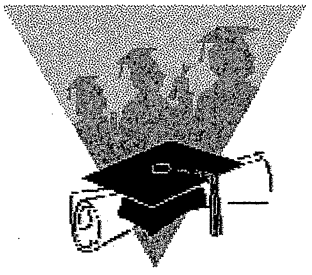


Right-side Window of Frame Document:

Directory Path:
Main Menu/Home Page

Home Page of...

Online Tutorial for Teachers of Career Exploration Implementing Technology



Welcome

In this hands-on Internet Tutorial you will be shown some of the advantages and highlights of using the Internet (the "Net") to *enhance and supplement career development lessons for your students!* This tutorial will help guide you through the steps to access and use the Internet to make career development more interactive and productive!

Directory Path:
Main Menu/Home Page *cont.'d*

Why should I use the Internet in my school to teach career development? With the goal of creating an effective learning environment, the advantages of implementing and using the Internet can include the following:

- **You, as educator, can provide learning environments where students are interactively involved in career development which addresses the current employment environment.**

- **Students can then focus and drive their career interests and goals by taking responsibility for conducting and managing their own career development.**

- **Students can learn to create their own online career portfolio, including their resume, to market themselves in today's competitive employment world.**

- **An alternative to rote memorization in a passive receiver role, students can practice problem-solving skills in collaboration with others.**

- **And, finally, the Net can provide students with complete, timely information and allow for communication with peers and experts on career-related topics.**

OK, to start, let's cover some of the basics of the Internet as they relate to career development:

The Internet is developing into one of the most productive tools to do the following:

- **to find employment**
- **to get constructive, interactive feedback**
- **to develop a good resource for networking yourself within the employment market**

Next, what are some of the basic terms used in reference to the Net?

- ***World Wide Web*** **(the "Web"): The graphical portion of the Net. Each separate page has its own address called a URL (Uniform Resource Locator), and can contain one or many links to travel(surf) elsewhere on the Net.**

- ***Browser:*** **A program used to view information on the Net. The two most popular are:**

- ***Netscape Navigator.*** **Click to download Netscape Navigator for free.**

- ***Microsoft Internet Excplorer.*** **Click to download Internet Explorer for free.**

- ***Web Site:*** **A series of hyperlinked pages created using HTML and which can contain text and graphics to provide a presence on the Internet.**

- ***Home Page:*** **An opening or welcome screen to a Web site, which can have more than one reference screen.**

- ***Hyperlink:*** **A connection instrument used between text and/or pictures on different Web pages. The links can be in different colors and are usually underlined, and clicking on the link takes you to a different web page.**

- ***Search Engines:*** **Programs on the Net that search for different Web pages after you have entered different words, phrases, or concepts on the topic(s) you are searching for.**

- ***E-mail*****: E-mail allows you send messages through the Net. You need an e-mail program--usually included with your browser--to send and receive messages. You get your own personalized address, and you can also send attachments (Files, URL Links) in addition to creating a list of correspondents using the e-mail program's address book.**

- ***Bookmarking:*** **This feature allows the user to mark and save favorite Net URLs to their browser for later linking without having to search the Net over again to find the link.**

- ***FTP (File Transfer Protocol):*** **The protocol used on the Internet for sending files. There are a series of computers that hold distribution software files that allows you to download the software programs of your choice, and they use the FTP.**

- ***Freeware and Shareware:*** **Freeware is software you can download for free. In most cases the author still has the copyright to the program, and may ask you to do, or don't do something(s) after you download the software (e.g. don't change the program in any**

way). Shareware is similar to freeware, but a fee - - usually very small - - is asked if you intend to keep the program.

- ***Newsgroups*: Online topic-specific communities, including career development newsgroups, where you can interact via e-mail.**
- ***Posting:* The procedure for copying-and-pasting information (e.g., resume) into an online database from which that information is then able to be viewed on the Net.**

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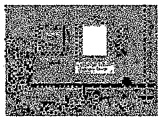
Ready to go to the Employability Tool Sites and Tips Page? Just click in the classroom!



FastCounter by LinkExchange

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Directory Path:
Main Menu/Employability Tool Sites and Tips Page

Employability Tool Sites and Tips Page

Career Planning: The Net can help students develop a plan to find a job or career suited to them. It can assist them by helping them develop the following:

- an analysis of their interests and proclivities
- an understanding of their skills
- a deeper understanding of jobs and careers

The following examples are some excellent Net hyperlinks designed to help students develop their job or career plan:

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

Name of Website	**Hyperlink to Website**
Bureau of Labor Statistics	stats.bls.gov//blshome.htm
Career Center on the Web	career.berkeley.edu
Career Perfect	www.careerPerfect.com
JobSmart	jobsmart.org/tools/career/index.htm
O*Net Occupational Information Network	www.doleta.gov/programs/onet/
O*Net School-To-Work	www.doleta.gov/programs/onet
1998-99 Occupational Outlook Handbook	bls.gov/ocohome.htm
Welcome to My Future	www.myfuture.com

Resumes and Cover Letters: The Net can help students to better develop and present their resumes and cover letters by providing the following:

- templates and self-guides for creating resumes
- posting capabilities for Net viewing by prospective employers
- online critiquing by peers and experts
- delivery of resumes and cover letters via e-mail according to students' career choice

The following examples are some excellent Net hyperlinks designed to assist students create their resumes and/or cover letters:

Name of Website	**Hyperlink to Website**
Byte-able Resumes	www.careermag.com/newsarts/jobsearch/byte.html
Career Lab	www.careerlab.com/letters/default.htm
Online Resume Sample	www.jobweb.org/catapult/guenov/sampleres.html
Rebecca Smith's eResumes & Resources	www.eresumes.com

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

Resumania	www.umn.edu/ohr/ecep/resume
The Universal Challenge	www.uniq.unilever.com

The following examples are some excellent Net hyperlinks designed to offer critiques of resumes and/or to enable students to post their resumes:

Name of Website	**Hyperlink to Website**
Bridgepath	www.bridgepath.com
Career Path	www.careerpath.com
JobBank USA	www.jobbankusa.com
JobTrack	www.jobtrack.com
Monster Board	www.monster.com

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

The Riley Guide	www.dbm.com/jobguide
What Color Is Your Parachute?	www.jobhuntersbible.com
Yahoo! Jobs	dir.yahoo.com/Business_and_Economy/Employment/Jobs/

Interviewing: The Net also provides numerous resources to hone students' interviewing skills. Below are some excellent hyperlinks, some of which are interactive:

Name of Website	**Hyperlink to Website**
Kaplan's Mock Interview	www.kaplan.com/career/hotseat/hotseat
Virtual Interview	www.studentcenter.com/brief/virtual/virtual.html

Directory Path:

Main Menu/Employability Tool Sites and Tips Page *cont.'d*

Kaplan's Interview Tips	www.kaplan.com/career/Interview_Tips.html
Job Web: Answers To Common Interview Questions	www.jobweb.org/catapult/jsguides.htm

Hot Facts and/or Tips:

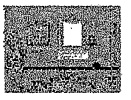
- While the general consensus is that the resume functions as a 13-15 second screener and that the cover letter is, in fact, more important, most web sites pay more attention to the resume.
- Approximately only 14% of all new jobs are from ads, and only 24% of all new jobs are from networking; it would appear that both are highly over-rated.
- Research shows that the most effective way to get a job is as follows:

1. determine your field of interest
2. identify the company
3. research it by conducting an informational interview (not looking for a job at this time)
4. identify the hiring authority
5. cold call!

Directory Path:
Main Menu/Employability Tool Sites and Tips Page *cont.'d*

• While your job skills are critical to your job performance, prospective employers give much more weight to personal characteristics such as honesty, motivation, communication, self-confidence, flexibility, interpersonal skills, teamwork, leadership, and enthusiasm--and in that order!

Back to the Top



Click in the classroom to go to the Employment Resources page!

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Directory Path:
Main Menu/Employment Resources Page

Employment Resources Page

First, here are some great reference books:

- ***NetLearning: Why Teachers Use the Internet.*** **(1996) By Ferdi Serim and Melissa Koch. (Songline Studios, Inc.). It includes CD-ROM to get you started on the Internet, and has many useful Net links!**

- ***Telecommunications in the Classroom*** **. 2nd Ed. (1995) By Sara Armstrong. (International Society for Technology in Education). It has an excellent list of classroom activities!**

- ***Student's Guide to the Internet*** **(1995) by David Clark. (Alpha Books). The guide is a helpful tool for students and teachers, and includes tips on researching and job hunting!**

- ***10 Minute Guide to the Internet and the World Wide Web*** **2nd Ed. (1996) by Galen A. Grimes. (Que Corporation). This 198-page book is a quick-reference guide for the Internet!**

Second, let's look at some links specifically for educators:

- ***T.H.E. Journal Web Site.*** **This excellent Web site offers resources and articles dealing with teachers and technology!**

- ***The United States Department of Education (DOE) Web Site.*** **This Web site has news and resources for almost all aspects of education, including the full text of many DOE publications!**

- ***Educational Listservs.*** **This Web site has links to many different educational listservs! (A listserv is a group of e-mail participants who communicate back and forth via e-mail on specific topics.)**

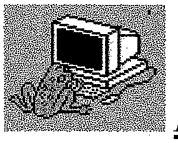
- ***Instructional Technology Connections.*** **This Web site has tons of great resources for teachers dealing with technology and education!**

- ***University of Colorado-Denver K-12 and Beyond Resource Pages.*** **This Web site has some great resources for K-12 teachers!**

Finally, here are some great miscellaneous links!

- ***NetPages.*** **(Aldea Communications, Inc.). A great resource to the Internet! A phone book type format that has white and yellow pages, mailing lists, usenet newsgroups, and over 20,000 Web site listings, including international sites! Awesome.**

- ***The Clip Art Connection.*** **This site has some great animation, and most of them are free! Also, there are great tips and links to creating your own animation!**

-  ***Builder.*** **This site is a great source for learning Web page design! Try it! You'll be amazed at how easy it really is!**

- ***GoTo.com.*** **This site has a listing of companies which will help you get a Web page up and running for free!**

- ***Filemaker Home Page.*** **This WYSISYG (What You See Is What You Get) program allows you to design Web pages right on the screen as it will appear on the Web.**

Directory Path:
Main Menu/Employment Resources Page *cont.'d*

- ***Microsoft Front Page.*** **This WYSISYG program is top-of-the-line and has many great features, like automatically updating hyperlink navigation bars and auto-embedding referenced graphics, which make your web design easier.**

About this Tutorial's creator:

Hello, my name is Jim Asher and I am a graduate student at California State University in San Bernardino. As part of my Master's project, and in addition to my written thesis, I created this Internet tutorial for teachers and students to access and use in the hopes that the power of the Internet can be used educationally to its fullest potential! A survey of the Tutorial was also created to acquire some valuable feedback from YOU, including how the Tutorial has helped and how it could be better! So, if you could take several minutes and complete the brief survey, I would sure appreciate it. Thank You! Survey Form Here!

Also, you can send me an e-mail and I will respond as soon as possible!

PSJimA@aol.com

Directory Path:
Main Menu/Employment Resources Page *cont.'d*

Back to the Top

Click your watch to go to the Resources and Tips Page for Designing Web Sites!

Search Engine Links

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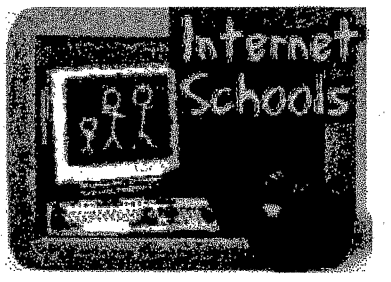
Resources and Tips Page for Designing Web Sites



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Web pages can contain all kinds of goodies:

- You can include animated pictures or words--and even make them hyperlinks! See the Employment Resources Page for links to get free Web stuff to help you and your students create cool Web sites!

  For example, I made this animation--and you can do it too--in less than 10 minutes: It's easy to create animation!

- You can include lesson plans for your students to view and download either from home or from school!

- You can also post various topics and links for you and your students' personal and professional interests!

- You can incorporate interactive features such as a discussion board or a search form, both of which are used on this web site.

- You can copy others' HTML language and paste it into YOUR web site where you can make modifications to it as needed.

Directory Path:
Main Menu/Resources and Tips Page for Designing Web Sites
cont.'d

- You can hyperlink your web site to other related web sites to enrich it.

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Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial

Fill-in Evaluation Form of this On-line Tutorial

First Name:

Last Name:

E-Mail Address(Optional):

I am 18 years old or older, and grant my permission for my responses to this survey to be used in the master's thesis being written in conjunction with this web suite.

- ○ **Yes**
- ○ No

Is it permissible to incorporate your responses into this evaluation summary?

- ○ **Yes**
- ○ **No**

1.) Are you a teacher?

- ○ **Yes**
- ○ **No**

2.) If yes to #1, do you have access to a computer at your school?

- ○ **Yes**
- ○ **No**

Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial
cont.'d

3.) If yes to #2, do you have access to the Internet at your school?

○ **Yes**

○ **No**

4.) How much computer experience have you had?

None
Moderate

5.) How much experience have you had with the Internet?

None
Moderate

6.) Have you ever created a Web Site?

○ **Yes**

○ **No**

7.) Do you have a computer at home?

○ **Yes**

○ **No**

8.) If yes to #7, do you have Internet access at home?

○ **Yes**

○ **No**

9.) Have you ever looked for a job online?

○ **Yes**

○ **No**

10.) Have you ever posted your resume on the Internet?

○ **Yes**

○ **No**

Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial
cont.'d

11.) If you are a teacher, have you ever helped a student post his/her resume on the Internet?

- ○ **Yes**
- ○ **No**
- ○ **N/A**

12.) If you are a teacher, have you ever helped a student create an online career portfolio?

- ○ **Yes**
- ○ **No**
- ○ **N/A**

13.) If you are a teacher, have you ever helped a student practice interview skills using resources available on the Internet?

- ○ **Yes**
- ○ **No**
- ○ **N/A**

14.) Was the online tutorial visually appealing?

Yes
No

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Yes
No

16.) Was the Tutorial easy to use?

Yes
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No

Directory Path:
Main Menu/Fill-in Evaluation Form of this On-line Tutorial
cont.'d

18.) Was the Tutorial informational?

Yes
No

19.) Was the Tutorial too technical?

Yes
No

20.) Was the Tutorial understandable?

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No

21.) What did you enjoy about the Tutorial?

22.) What would you change about the Tutorial, good or bad? (Be Honest.)

Send the Information!

Reset the Form

Thank you for your responses!

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APPENDIX B: SAMPLE CAREER DEVELOPMENT LESSON PLANS UTILIZING THE INTERNET

1. *Sample Career Exploration Lesson Plan*

Title: "C.O.I.N.-based Oral Presentation"

Grade Level: 9-12

Time Frame: 5 days

Resources: Microsoft Word, the CD-ROM titled "C.O.I.N." (California Occupational Inventory Network), the Internet, and e-mail

Major Objectives:

- to provide students in a rural setting the freedom to explore careers using the Internet
- to provide students a context for using search engines and the Internet to explore careers
- to provide development of students' word processing skills
- to familiarize students with the usage of e-mail as a learning tool
- to build students' confidence in their ability to orally communication their findings

Summary:
Students work in groups to create a classroom pool of "career questions" to be answered regarding any career. Next, they each complete the C.O.P.S., a career interest inventory, and evaluate their results. When done, they access the C.O.I.N. CD-ROM program to explore their career interest, as indicated by the C.O.P.S. career interest inventory, and search for answers to their pool of career questions. When done using C.O.I.N., they are allowed to use search engines to search web sites related to their career interest. Next, they paste their findings into a new Word document which will contain the list of "career questions" and their answers as well as any other related information of interest. Next, they e-mail their Word document as an attachment to the teacher. They then compose on note cards a brief 5-minute oral presentation

which "should make a lasting impression." Last, they each present to the class!

Evaluation:
Student evaluation matrix for oral presentation (designed by teacher or by class)

2. *Sample Career Search Lesson Plan*

Title: "On-line Job Search"

Grade Level: 10-12

Time Frame: 4 days

Resources: Internet, Microsoft Word, The Desert Sun Web Site, and other "Classifieds" sections of other newspapers such as Los Angeles Times or New York Times {http://www.desertsunclassifieds.com}

Major Objectives:

- to improve students' ability to work in groups to solve problems
- to gather, evaluate, organize, and analyze information using the Internet
- to increase understanding of various terms and concepts involved in the career search

Summary:
Students first participate in a discussion about how to find a job using the newspaper. As a product of this discussion, a class list of classified ad abbreviations is created for later reference. Students then go on-line to an employment classified ads site and add other unidentified abbreviations to the class list. Next, they are to fill-in a template handout, requiring information ranging from abbreviations used in the ad to educational requirements of the applicant, for each of five jobs which they found related to their career interest. (They may need to expand their on-line search to other newspapers' "Employment Classified Ads" section.) Next, they meet in groups to discuss their findings and to resolve any confusion regarding abbreviations, concepts, or anything else about their five chosen ads. Last, each student gives

a brief, but careful, oral explanation of the favorite classified ad for employment and a rationale as to why it is the favorite.

Evaluation:
Students are evaluated on the basis of three grades averaged together: the first grade based on their group participation; the second grade based on the thoroughness of their completed template hand-outs; and the last grade based on the oral explanation of the favorite classified ad for employment.

3. *Sample Cover Letter and Resume Critiquing and Writing Lesson Plan*

Title: "Cover Letters and Resumes: The Good, the Bad, and the Ugly"

Grade Level: 10-12

Time Frame: 5 days

Resources: Word, the Internet, "Critique Template" handout, and various employability web sites {http://www.monster.com}

Major Objectives:

- to learn the criteria of a good cover letter and resume
- to learn the relationship of a cover letter to a resume
- to research the Internet to find excellent and poor cover letters and resumes
- to work in groups to develop their discernment between excellent and poor cover letters and resumes
- to work in groups to create a written product
- to familiarize students with cover letters and resume templates

Summary:
After students discuss the cover letter and resume and its purpose, they complete both a rough draft cover letter, based on a prompting handout, and a "functional resume." Next, they look at cover letters and resumes on the

Internet on job search web sites like the popular {http://www.monster.com}. Then they take Internet screen shots of two excellent and two poor cover letters and resumes and paste them into a Word document which they print out. Next, they break into groups, share their screen shots and discuss why thy chose the resumes they did. Using their rough draft cover letter, the resume template in Word, and the information on their "functional resume," students construct their own final draft cover letter and resume and have others in their group critique both the cover letter and the resume by using a "Critique Template" handout. Then, based on the critique, students make changes to their resume and submit it to the teacher with a rationale for those changes based on the critique.

Evaluation:
Students are evaluated on the basis of two grades averaged together: one, the teacher's critique of their final cover letter and resume; and two, the student's group participation grade.

4. *Sample Resume Posting Lesson Plan*

Title: "Resumes: To Post of Not To Post"

Grade Level: 10-12

Time Frame: 4 days

Resources: Word, PowerPoint, the Internet

Major Objectives:

- to learn about the unique requirements of scanned and Internet-posted resumes
- to explore several Internet sites which allow free posting of resumes
- to explore several Internet sites which require a fee for posting of resumes
- to work in groups to make distinction about web sites
- to work in groups to make on oral presentation using technology
- to learn how to post a resume

Summary:
The class discusses the "unique requirements" for scanned and/or Internet-posted resumes. Next, they search the Internet to validate these "unique requirements" for scanned and/or posted resumes by either finding sample resumes or articles dealing with these "unique requirements." Next, they break into groups and assemble a chart of five web sites accompanied by teacher-specified characteristics (appeal, ease of use, etc.) that allow free posting of resumes and another chart of five web sites and their characteristics that charge a fee for posting resumes on the Internet. Last, each group is responsible for completing their charts and presenting them to the class using PowerPoint. Next, each group, as a team, has to write one essay comparing the elements of a scanned or Internet-posted resume to those of a hardcopy resume.

Evaluation:
Both the group PowerPoint presentation and the group essay are graded using a matrix.

5. *Sample Interviewing Lesson Plan*

Title: "Info Interview Versus the 'Hot Seat'"

Grade Level: 10-12

Time Frame: 5 days

Resources: The Internet, e-mail and/or "instant message" ("IM") capabilities, "Kaplan's Careers" web site {http://www1.kaplan.com/view/article/0,1898,3134,00.html}

Major Objectives:

- to interview adults via an "instant message" ("IM") and/or e-mail process to obtain career information and gain insight to perspective of the interviewer
- to practice being interviewed in a non-threatening, simulated environment to develop poise and confidence
- to read about interviewing tips
- to practice answering commonly-asked interview questions

Summary:
Students discuss the interview process in groups and make a chart of the positive and negative aspects of both the "informational interview" (as interviewer) and the job interview (as interviewee). Next, students go to a web site such as "Kaplan Careers" and read about the interview process, paying particular attention to "tips." Then students cut-and-paste Kaplan's on-line list of "50 Interview Questions" into a Word document for later reference. Next, they arrange via phone either an e-mail or "instant message" informational interview with an adult in the community who is employed in the student's career area of interest (or an area related to the student's career interest). Next, students practice the "Hot Seat" virtual interview on the "Kaplan Careers" web site then answer the "50 Interview Questions" in the *same* cut-and-paste Word document, which is due the next day. Last, reflecting on their original list of positive and negative aspects of both the "informational interview" and the job interview, they write a short essay.

Evaluation:
Students are evaluated based on their e-mail and or "instant message" communication, answers to their "50 Interview Questions," and their essay.

APPENDIX C: SAMPLE STUDENT AND TEACHER EXPECTED OUTCOMES EXTRACTED FROM A TECHNOLOGY PLAN

Successful Outcomes for Students

Students will:

- communicate effectively in written and oral language
  1. Attain performance standards through the integration of technology and curriculum
  2. Keyboarding at a minimum of 25-30 words per minute
  3. Create and edit an effective multimedia presentation
  4. Logically hyperlinking media sources
  5. Electronic search and retrieval of information
  6. Application of rubric to assess legitimacy of electronic information
  7. Access work from any computer in the school
  8. Use graphics programs to create and manipulate images
  9. Use electronic card catalogs, and CD-ROM's
  10. Use the Internet for research
  11. Create and post web pages
  12. Develop integrated electronic portfolios for presentation and assessment using Hyperstudio, PowerPoint, or other authoring software
  13. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing
  14. Graphing and charting software

- develop multimedia technology literacy
  1. Utilize technology daily in at least one of their classrooms
  2. Utilize technology in each curricular area
  3. Use graphics programs to create and manipulate images
  4. Create and edit an effective multimedia presentation their ideas
  5. Graphing and charting software
  6. Cut-and-paste applications
  7. File management
  8. Opening and exiting procedures with software programs

9. Minimizing, maximizing, and shaping windows on the computer to set up a workable on-screen environment
10. Logically hyperlinking media sources
11. Electronic search and retrieval of information
12. Operation of peripheral devices
13. Capture images using scanners, video cameras, and digital cameras
14. Access work from any computer in the school
15. Use word processing, spreadsheets, and databases
16. Use electronic card catalogs, and CD-ROM's
17. Use the Internet for research
18. Create and post web pages
19. Develop integrated electronic portfolios for presentation and assessment using Hyperstudio, PowerPoint, or other authoring software
20. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing

- link educational resources on all levels through the Internet and telecommunications
    1. Use e-mail to send and request during the research process
    2. Use teleconferencing to communicate with others on projects
    3. Use the Internet to search and retrieve information for projects
    4. Develop integrated electronic portfolios of their work for presentation and assessment using Hyperstudio, PowerPoint, and other authoring software
    5. Access work from any computer in the school
    6. Manage computer files
    7. Minimizing, maximizing, and shaping windows on the computer to set up a workable on-screen environment
    8. Cut-and-paste within and between applications
    9. Logically hyperlink media sources
    10. Use networking fundamentals to troubleshoot and maintain hardware and software
    11. Capture images using scanners, video cameras, and digital cameras
    12. Use graphics programs to create and manipulate images
    13. Use electronic card catalogs, and CD-ROM's

14. Use graphics programs to create and manipulate images
15. Use electronic card catalogs, and CD-ROM's

- collaborate in teams on technology-based projects
  1. Create and post web pages for classroom projects
  2. Develop integrated electronic portfolios of their work for presentation and assessment using Hyperstudio, PowerPoint, and other authoring software
  3. Capture images using scanners, video cameras, and digital cameras
  4. Apply a rubric to assess legitimacy of electronic information
  5. Cut-and-paste within and between applications
  6. Logically hyperlinking media sources
  7. Electronic search and retrieval of information
  8. Access work from any computer in the school
  9. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing
  10. Graphing and charting software

- develop a responsible work ethic
  1. Be a flexible worker able to use multiple technologies
  2. Opening and exiting procedures with software programs
  3. File management
  4. Application of rubric to assess legitimacy of electronic information
  5. Access work from any computer in the school

- explore career interests
  1. Use electronic card catalogs, and CD-ROM's
  2. Use the Internet to locate information and communicate
  3. Logically hyperlinking media sources
  4. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing

- use all SCANS competencies
  1. Use word processing to manipulate text
  2. Use formulas to help analyze data in spreadsheets
  3. Generate reports from a database in order to answer questions

4. Use networking fundamentals to troubleshoot and maintain hardware and software
5. Operation of peripheral devices
6. Capture images using scanners, video cameras, and digital cameras
7. Electronic search and retrieval of information
8. Application of rubric to assess legitimacy of electronic information
9. Access work from any computer in the school
10. Use graphics programs to create and manipulate images
11. Use electronic card catalogs, and CD-ROM's
12. Use the Internet for research
13. Create and edit multimedia presentations

Successful Outcomes for Teachers

Teachers will:

- develop a computer literacy and ongoing technology support
    1. File management
    2. Opening and exiting procedures with software programs
    3. Minimizing, maximizing, and shaping windows on the computer to set up a workable on-screen environment
    4. Cut-and-paste within and between applications
    5. Logically hyperlinking media sources
    6. Electronic search and retrieval of information
    7. Application of rubric to assess legitimacy of electronic information
    8. Operation of peripheral devices
    9. Capture images using scanners, video cameras, and digital cameras
    10. Access work from any computer in the school
    11. Networking fundamentals
    12. Use word processing, spreadsheets, and databases
    13. Use graphics programs to create and manipulate images
    14. Use electronic card catalogs, and CD-ROM's
    15. Use the Internet for research
    16. Create and post web pages
    17. Create and edit multimedia presentations

18. Develop integrated electronic portfolios for presentation and assessment using Hyperstudio, PowerPoint, or other authoring software
19. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing
20. Graphing and charting software

- access a wide variety of information resources from all levels
  1. Electronic search and retrieval of information
  2. Access work from any computer in the school
  3. Use electronic card catalogs, and CD-ROM's
  4. Use the Internet for research
  5. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing

- expand teaching strategies and outcomes to include technology-based, thematic materials
  1. Logically hyperlinking media sources
  2. Electronic search and retrieval of information
  3. Capture images using scanners, video cameras, and digital cameras
  4. Access work from any computer in the school
  5. Use word processing, spreadsheets, and databases
  6. Use graphics programs to create and manipulate images
  7. Use electronic card catalogs, and CD-ROM's
  8. Use the Internet for research
  9. Create and post web pages
  10. Create and edit multimedia presentations
  11. Develop integrated electronic portfolios for presentation and assessment using Hyperstudio, PowerPoint, or other authoring software
  12. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing
  13. Graphing and charting software

- develop electronic student management and electronic portfolio for assessment
  1. Logically hyperlinking media sources
  2. Application of rubric to assess legitimacy of electronic information
  3. Create and post web pages

4. Develop integrated electronic portfolios for presentation and assessment using Hyperstudio, PowerPoint, or other authoring software
5. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing
6. Graphing and charting software

- develop and align curriculum, instruction, and assessment in accordance with the emerging frameworks to help each student achieve academic excellence
  1. File management
  2. Minimizing, maximizing, and shaping windows on the computer to set up a workable on-screen environment
  3. Cut-and-paste within and between applications
  4. Logically hyperlinking media sources
  5. Electronic search and retrieval of information
  6. Application of rubric to assess legitimacy of electronic information
  7. Operation of peripheral devices
  8. Capture images using scanners, video cameras, and digital cameras
  9. Access work from any computer in the school
  10. Use word processing, spreadsheets, and databases
  11. Use graphics programs to create and manipulate images
  12. Use electronic card catalogs, and CD-ROM's
  13. Use the Internet for research
  14. Create and post web pages
  15. Create and edit multimedia presentations
  16. Develop integrated electronic portfolios for presentation and assessment using Hyperstudio, PowerPoint, or other authoring software
  17. Use telecommunications including e-mail, chat rooms, web sites, and teleconferencing
  18. Graphing and charting software

- model accountability and responsibility
  1. Electronic search and retrieval of information
  2. Application of rubric to assess legitimacy of electronic information
  3. Access work from any computer in the school
  4. Graphing and charting software

APPENDIX D: INTERNET RESOURCES FOR TEACHERS AND STUDENTS

Ten Popular Sites for Career Planning

1. Bureau of Labor Statistics

URL: stats.bls.gov//blshome.htm

2. Career Center on the Web

URL: career.berkeley.edu

3. Career Perfect

URL: www.careerPerfect.com

4. JobSmart

URL: jobsmart.org/tools/career/index.htm

5. Career Mosaic

URL: http://www.careermosaic.com

6. O*Net School-To-Work

URL: www.doleta.gov/programs/onet 1998-99

7. Academic Employment Network

URL: http://www.academploy.com/

8. FedWorld Federal Jobs

URL: http://www.fedworld.gov/jobs/jobsearch.html

9. Westech Virtual Job Fair

URL: http://www.jobcenter.com/team/emplinks.htm

10. Integrating the Internet

URL: http://www.qeddata.com/

Six Popular Sites To Develop Resumes and Cover Letters

1. Byte-able Resumes

URL: www.careermag.com/newsarts/jobsearch/byte.html

2. Career Lab

URL: www.careerlab.com/letters/default.htm

3. Online Resume Sample

URL: www.jobweb.org/catapult/guenov/sampleres.html

4. Rebecca Smith's eResumes and Resources

URL: www.eresumes.com

5. Resumania

URL: www.umn.edu/ohr/ecep/resume

6. The Universal Challenge

URL: www.uniq.unilever.com

Ten Popular Sites to Critique and Post Resumes

1. Bridgepath

URL: www.bridgepath.com

2. Career Path

URL: www.careerpath.com

3. JobBank USA

URL: www.jobbankusa.com

4. JobTrack

URL: www.jobtrack.com

5. Monster Board

URL: www.monster.com

6. The Riley Guide

URL: www.dbm.com/jobguide

7. What Color Is Your Parachute?

URL: www.jobhuntersbible.com

8. Yahoo! Jobs

URL: dir.yahoo.com/Business_and_Economy/Employment/Jobs/

9. Career Mosaic

URL: http://www.careermosaic.com

10. Job Connection

URL: http://www.817jobs.com/images/head.jpg

Four Popular Sites To Improve Interviewing Skills

1. Kaplan's Mock Interview

URL: www.kaplan.com/career/hotseat/hotseat

2. Virtual Interactive Interview

URL: www.studentcenter.com/brief/virtual/virtual.html

3. Kaplan's Interview Tips

URL: www.kaplan.com/career/Interview_Tips.html

4. Job Web: Answers To Common Interview Questions

URL: www.jobweb.org/catapult/jsguides.htm

Ten Popular Sites on Technology and Education

1. Academic Employment Network

URL: http://www.academploy.com/

2. Discovery Channel School

URL: http://www.discoveryschool.com/

3. QED

URL: http://www.qeddata.com/ (GOOD)

4. EdWeb

URL: http://edweb.sdsu.edu/

5. Kid Info

URL: http://www.kidinfo.com/

6. T.H.E. Journal

URL: http://www.thejournal.com/

7. McRel

URL: http://mcrel.org/

8. The Technology Coordinator's Home Page

URL: http://www.wwu.edu/~kenr/TCsite/home.html

9. The U.S. Department of Education

URL: http://www.ed.gov/

10. Online Internet Institute

URL: http://www.oii.org/

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