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An educational web page for Homestead High School athletic training

Charles William Murdach
San Jose State University

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AN EDUCATIONAL WEB PAGE FOR HOMESTEAD HIGH SCHOOL
ATHLETIC TRAINING

A Project Report

Presented to

The Faculty of the Department of Human Performance

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Masters of Arts

By

Charles William Murdach

May 1998

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APPROVED FOR THE DEPARTMENT OF HUMAN PERFORMANCE

Dr. Bethany Shifflett

Dr. Barbara J. Conry

Kyle Bodyfelt, MA, A.T., C.

APPROVED FOR THE UNIVERSITY

Serena M. Stanford

ABSTRACT

AN EDUCATIONAL WEB PAGE FOR HOMESTEAD HIGH SCHOOL ATHLETIC TRAINING

by Charles William Murdach

The purpose of this project was to produce an informational world wide web site for high school students. The web site contains information on athletic training, on and off campus educational opportunities, responsibilities of the student, expectations of working in the athletic training environment, associations and their journals in sports medicine, and other web sites of interest to the student. Such a site allows students to access information on the internet regarding allied health care professions as well as high school and district specific information. In addition, the student is able to use the various links to obtain vast amounts of information contained in remote databases.

DEDICATION

I would like to dedicate this project to Bethany Shifflett. Her passion for teaching greatly ignited my passion for creativity. I am thankful for her lively personality, dedication, and allowing me to gain a thorough understanding of myself and the material presented. Thank you for taking me under your wing.

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Chapter 1

INTRODUCTION

The arrival of the computer age has brought many questions regarding the allied health care professions. Will the computer replace the traditional role of the library in research? Will students no longer rely on a human being for the presentation of information? Will allied health care education suffer due to lack of human contact? These concerns can and will be investigated as the application of technology to education unfolds. On the positive side, the incorporation of computers in the learning environment has allowed education to evolve into a very diverse and expansive field. For example, the use of computers can create multisensory learning experiences. Discovering what stimulates student learning with computer systems has become a field of study in itself (Barker & Barker, 1996). Experienced instructors can now incorporate multimedia resources into lessons so that each student may be motivated to achieve their highest potential.

Two of the many technological developments currently being embraced by educators is the internet and world wide web (w3). The internet and w3 have both evolved from humble beginnings to be the most influential movements in mass media the world has seen to date. As a medium for the free and open exchange of ideas and information dispersal, it is unparalleled. In addition, as a vehicle to reach a wider audience for the marketing and delivery of instruction, educational administrators have been

quick to realize the internet's potential. For students, use of the w3 can facilitate the discovery of specific information about subject matters, as well as provide access to other sites expanding the potential amount of information that could be obtained via traditional sources. Overall, the use of the internet and the world wide web have tremendous applications with respect to searching for information, communicating with other individuals, and sharing information from any area on the globe.

The purpose of this project was to provide information and resources to high school students interested in furthering their education in an allied health care profession. The creation of this specific web site for high school students interested in the allied health professions allows students to access information on: (a) internships in the Homestead High School on-campus athletic training room, (b) classes offered at Homestead High School, (c) clinical affiliations, (d) institutions offering accredited educational programs in athletic training, (e) educational opportunities in allied health care professions, (f) associations involved in athletic medicine, (g) journals for further study, and (h) web sites containing other information regarding allied health care professions. The use of the web site allows the student to expand their awareness of the allied health care professions while offering information on a variety of therapies.

The current amount of information on allied health care professional programs available over the internet and w3 may be overwhelming and

confusing to students. The modular approach of this web site allows the student to view specific areas of interest without extraneous information being presented. The interactive, modular, and multimedia presentation allows the student to navigate easily through the areas of interest.

The scope of this project was necessarily limited by the creativity, motivation and software expertise of the designer; the time frame available; and the software utilized in the construction of the web site. In addition, the designer assumed students would have had experience with the use of some type of personal computer and exposure to the internet and the world wide web. It was also assumed that students would have access to the necessary hardware and software needed to connect to the internet.

The importance of the project rests on the web site's ability to help high school students view and make informed choices regarding their future education. The ease of use, and the density of information available on the internet provides a particularly rich environment of resources unmatched by other mediums.

Definition of Terms

For this project the following terms will be defined for the reader:

HTML: Hyper Text Markup Language. A set of special formatting codes and rules used to create web pages (Tatters & Colburn, 1997).

URL: Uniform Resource Locator. A description of a document's location, type, site, directory path, and name (Tatters & Colburn, 1997).

http: Hyper Text Transfer Protocol. URL protocol that identifies the document as an HTML file (Tatters & Colburn, 1997).

FTP: File Transfer Protocol. The method in which files are sent back and forth from server to host (Tatters & Colburn, 1997).

IP: Internet Protocol. The host-to-host portion of the address needed by each information packet to travel the internet (Tatters & Colburn, 1997).

World Wide Web: An array of interconnected computer networks through which specific HTML formatted information is accessed.

Internet: A large number of computer networks linked together while maintaining their own structure and identity.

Chapter 2

REVIEW OF LITERATURE

The review of literature for this project includes the history and development of the internet; applications of the internet for academia, research, and sport; applications of the internet for the athletic trainer; applications of the internet in high school education; and web site design considerations.

The History and Development of the Internet

The history of the internet is filled with individuals and specific actions contributing to the ideas that formed the most powerful, free, ownerless, and unregulated form of information retrieval the world has seen to date. The formation of the internet also gave rise to completely new activities and areas to explore in the use of computers. The following information highlights significant events in the chronological development of the internet.

Dwight D. Eisenhower formed the Defense Advanced Research Projects Agency (DARPA) in 1952 coinciding with the launch of Sputnik by the Soviet Union (Aspray, 1997). The main intentions of DARPA were to bridge the gaps in military research and development, become involved in furthering the space program, and facilitate nuclear testing.

In 1961, Leonard Kleinrock published a paper on the packet-switching theory (Leiner, B., Cerf, V., Clark, D., Kahn, B., Kleinrock, L., Lynch, D., Postel,

J., Roberts, L., & Wolff, S., 1997). Packets would be pieces of a computerized message broken up before transmission, interspersed with other messages and re-assembled at the destination. If the packet-switching theory could be proven, various separate computers could work simultaneously in a network able to access the same information at the same time.

In August 1962, J.C.R. Licklider of MIT wrote the first description of social interactions that could be accomplished through networking (Leiner, B., et al., 1997). Licklider envisioned a global set of interconnected computers through which all people could quickly and easily access information from any site in the world.

In 1965, Larry Roberts and Thomas Merril connected the first wide area network through low speed telephone lines with one computer in Massachusetts and another in California (Leiner, B., et al., 1997). Roberts' aim was to develop a computer network for interdepartmental data sharing. Roberts' network was created for DARPA, termed ARPANET and possessed both economic and military rationale. If the large and expensive computers in the pentagon could use packet switching, they would be able to share data thereby decreasing the number of costly computers used (Adam, 1996). Also, during the cold war the threat of a nuclear attack loomed. If the United States of America had no central communications network, an enemy would have no specific areas to target. In the event of a nuclear holocaust, the national communications infrastructure could theoretically remain intact.

In 1967, the Bolt, Beranek, and Newman Corporation (BBN) under Frank Heart developed the ARPANET switches called Interface Message Processors (IMP). The purpose of the IMP's was to divide the labor between the nodes and the hosts. "Nodes" would be the computer centers at various sites participating in the network. Robert Kahn was responsible for the overall system design. On September 1, 1969, Leonard Kleinrock, Director of the Network Measurement Center at the University of California, Los Angeles allowed the first ARPANET node to be established (Adam, 1996; Leiner, B., et al., 1997). Three other nodes were also established at SRI International in Menlo Park, California; the University of California, Santa Barbara; and the University of Utah, Salt Lake City (Adam, 1996).

In 1970, Vinton Cerf, a graduate student at the University of California, Los Angeles (UCLA) and key designer of ARPANET protocols became the principle programmer for the Network Measurement Center (Adam, 1996). The promotion of Cerf at UCLA would lead him to influence the direction of the slowly developing internet.

The basic message send-and-read program that became electronic mail was written in 1972 by Roy Tomlinson. The program created by Tomlinson and motivated by the ARPANET developers would quickly become one of the most widely used applications.

Between October 24-26, 1972 at the International Conference on Computer Communications, the first large scale successful demonstration of

ARPANET by Robert Kahn took place (Adam, 1996). The demonstration was a success with 1000 people in attendance watching forty terminals simultaneously engaging in applications from medical programs to air traffic control simulations. This demonstration was key to future developments of the internet since it showed the equipment could run together reliably (Adam, 1996). Before the conference, ARPANET traffic was increasing steadily by 1% per month (Adam, 1996). After the conference demonstration, ARPANET users increased by 67% per month (Adam, 1996).

Open architecture networking introduced by Robert Kahn in 1972 became the key idea behind the internet. Open architecture meant each individual network could stand alone and be designed as a unique entity to fit a special user requirement. Each smaller network would then be linked to a large network allowing information exchange with no forced rules or regulations (Leiner, B., et al., 1997). While still at DARPA, Robert Kahn also continued to work on satellite and radio networking. Both satellite and radio networking were defense projects aimed at communications in the field making it difficult for transmissions to be deciphered (Adam, 1996).

Working with diversified networks, an idea arose with Robert Kahn. ARPANET already linked together different computers, but an "internet" would join different networks with their own identity intact (Adam, 1996; Leiner, B., et al., 1997). Vinton Cerf was consulted immediately. The ground rules for the internet were: (a) each network had to stand on its own,

(b) packets would be re-transmitted if not received, (c) gateways, or routers connecting the networks would not retain information, and (d) there would be no global control at the operations level (Adam, 1996; Leiner, B., et al.).

A significant breakthrough occurred on November 22, 1977 when Cerf demonstrated the worlds first triple network internet. Information was transmitted with a packet-switching radio from a van driving down Highway 101 in California. The radio transmission went to ARPANETs ground receivers in the hillsides. The information in ARPANET through satellites was transmitted to Norway and the University College, London. The packets returned through the Atlantic Packet Satellite Network to ARPANET in West Virginia. Finally, the information was sent via network to machines at UCLA (Adam, 1996). The trip was a success without losing a single piece of information. The triple network internet experiment proved multiple systems could be used to communicate and send a message to a single destination reliably.

In 1985, the National Science Foundation's NSFNET announced its intent to serve higher education regardless of discipline (Leiner, B., et al., 1997). Stephen Wolff took over NSFNET in 1986 and recognized the need for wide area networks in the academic and research community. Wolff also developed a strategy for the information infrastructure to be independent of direct federal funding by encouraging its regional networks to seek commercial, non-academic customers (Leiner, B., et al.).

Kahn had left DARPA and hired Cerf as vice president for the Corporation for National Research Initiatives (CNRI) to build internet browsers and digital libraries. Until 1988, commerce on federal lines had to be linked to research. Cerf approached the government and received approval to link Microwave Communications, Inc. (MCI) mail to ARPANET (Adam, 1996). After linking MCI mail to ARPANET and making it available for experimentation by the public, use in the private sector exploded and commercial interest increased. In response to the increase in use, the National Science Foundation could no longer fund the growing internet. CNRI was asked to help support the internet's expansion.

The CNRI board approved the creation of the Internet Society to develop standards and processes of the internet in 1991. In 1994, the United States government stopped funding the internet, and MCI picked up a majority of the domestic and international lines formerly used by ARPANET.

With the advent of personal computers having multimedia capabilities, the internet has been cemented into everyday communications. Formerly serving as a means for government and university researchers to communicate with one another, it is now used by people of all walks of life world wide. Tim Berners-Lee's work linking data on one computer to another by clicking on the highlighted text link spawned the world wide web and a new age in communications.

Currently, experimentation is underway to make the computer screen produce visual images that rival real life. The user may be able to move about freely on the screen with enriched audio and video. A personal computer connected to the internet could be an alternative to television. (Grove, 1996). Developments are likely to produce Internet Appliances requiring less and less knowledge about computing. Indications are that the intent of developers is for the internet to be more widely available to individuals while keeping the complexities of computers and networks invisible to the user (Grove, 1996).

Applications of the Internet in Academia, Research, and Sports

Academia

The internet provides a new medium for communication between instructors and students. For example, the internet can assist instructors in disseminating information to students via web sites. The use of web pages to post class expectations and schedules helps to keep students informed of important dates during the course of study. A class web site can include links to other web sites and assist students in comprehending material by providing multiple examples. Web sites can provide the student with audio, video and animations that may not be accessible through other mediums such as listserves or electronic mail. Access for all students to the web site via the internet can create a more informed student population.

Another academic application of internet technology would be the incorporation of web site construction in course content. A class could be given a term assignment to create a web page as individuals or in small groups (Barker & Barker, 1996). Using web site construction as an assignment, the students could be responsible for the collection of relevant data, text, graphics, audio, video, or animations (Barker & Barker, 1996). The class would then author their own web sites and use them as presentation tools to be shared at the end of the term.

The use of web sites allows various multimedia to be combined. As an example, in the field of athletic training, stress tests are used to examine the integrity of a joint and various supporting and surrounding structures. These special tests may be demonstrated on video with the underlying structures incorporated by the use of computer animation (Barker & Barker, 1996). The use of video and multimedia can assist the student athletic trainer in seeing the pathology of the injury as well as the effectiveness of the tests (Barker & Barker, 1996). These images may then be transported to a server as a web site and be accessible on the w3 for viewing by other students or professionals.

Additional applicable resources available via the internet in an academic context includes listserves and newsgroups. The use of a listserve by an instructor can aid in informing students of changes in the course, disseminating practice exams, answering questions, or providing additions to the course. Students required to log in at certain times during the week to

participate in class listserve discussions can explore topics covered in lecture. Requirements to sign on with external newsgroups related to the topics being covered in the course can enhance weekly login sessions. Each of these activities can be facilitated by providing links on a web site to listserves and newsgroups as well as other resources.

A combination of all internet approaches together in one course can both strengthen the content for students and be a challenge to instructors. Using electronic mail and listserves in the initial planning and collaboration of course content allows off site instructors to participate in planning without meeting face to face. During the planning phase, presentations may be strengthened by instructors choosing lecture material they feel most comfortable in presenting (Barker & Barker, 1996). Teleconferencing allows students in a designated room to view an instructor's presentation from a different site (Barker & Barker, 1996). The use of teleconferencing increases the interaction of students, instructors and other institutions participating in the dialogue (Barker & Barker, 1996). The lectures commence as scheduled, but can be augmented with the use of listserves and electronic mail discussion groups that can foster out of class discussion. Assignments could be made to include the formation of a web site with participants from different institutions. Not only would the course be presented over the internet, but the students from different institutions would have to communicate, plan, and present in collaboration (Barker & Barker, 1996). The

use of the internet in education is limited only by the imagination of the instructor, particularly for schools providing direct internet access twenty-four hours a day, seven days a week (Luckey, Sweet, & Knupp, 1996).

From the perspective of curricular offerings at the university level, institutions lacking a large diversity of instructors may wish to augment their curricula by offering on-line instruction. The faculty offering on-line courses through a university would not have to be on site. Faculty in the field can create the opportunity to expand curricula and increase instructor diversity (Chodorow, 1996).

Research

Research endeavors begin by accessing related work conducted by others. This search process has increased in effectiveness with the advent of the internet. Libraries around the world have been opened to anyone with on-line access (Mikita & Drusedum, 1993). The internet has also changed the type of literature search done by the researcher. Information previously available only in print is now easily accessible through on-line databases (Whitehill, Norton, & Wright, 1996).

One drawback to internet based information is that consideration regarding the source of information used in literature reviews must be made because of the open format of data submission. Data found through on-line searches must be scrutinized because it may not have been through traditional peer review (Glowiniak, 1995). The quality of journal information

on-line is determined by the standards of the associations presenting the material (Glowiniak, 1995).

Collection and use of data over the internet can be another valuable application for the researcher. The process of data collection is typically a time consuming, expensive, and budget intensive process. The time considerations and monetary involvement of the researcher can be trimmed by collecting data on-line. Data collection over the internet requires no budget for research assistants, telephone interviews, or letter writing (Fawcett & Buhle, 1995; Wilmoth, 1995). To obtain data on-line, the researcher may post a questionnaire on any listserve, mail list, or web site. The specificity of the on-line source used will aid in reaching the proper subjects across the internet. The information contained in an on-line survey can be downloaded and filled out at the subject's convenience (Fawcett & Buhle, 1995). After a subject has filled out the electronic intake form, results may be sent back to the researcher via fax, postal delivery, or electronic mail (Fawcett & Buhle, 1995). When the data is returned electronically by the subject, the researcher can easily detect multiple submissions since an address is attached (Fawcett & Buhle, 1995; Wilmoth, 1995). When received electronically, data can be compiled and analyzed after downloading and printing by the researcher (Fawcett & Buhle, 1995). Results can then be posted on the sites originally used for the data request (Fawcett & Buhle, 1995). Posted data regarding

studies will allow other researchers to use, share, and collaborate on projects of common interest or similar nature.

Data collected from the internet also has negative ramifications for the researcher. Internet data collection results in a lack of interaction between researcher and subject. Face to face interviews in which perceptual feelings arise can aid the researcher in understanding the subjects' responses (Fawcett & Buhle, 1995; Wilmoth, 1995). Since the subject must be an on-line user the possibility of biased or skewed data also exists because of such factors as socioeconomic demographics.

The use of subjects solicited through on-line surveys presents ethical considerations regarding subject confidentiality and geographical location, both unique to internet research. On-line solicitation should be reviewed under the same policies as any other study by an institutional review board (IRB) (Biesecker & DeRenzo, 1995). With the w3 having the potential to post solicitations and draw subjects from the entire globe, university IRB's should be consulted regarding the use of data drawn from foreign countries (Biesecker & DeRenzo, 1995). Because the openness of the internet can allow for information to be accessed by unknown sources, the IRB should address subject confidentiality, anonymity, and issues of privacy before on-line solicitation takes place (Wilmoth, 1995). The researcher and IRB should make every effort to protect the rights of the subject through adequate review of policies and confidentiality agreements.

Sports

The potential of the internet can expand how information can be disseminated in the world of sports. Newsgroups can provide live, daily, hourly, and up to the minute updates on sporting events. Web pages can provide information on events, products, listings of seminars, and appearances by coaches or sport figures. One site on athletic interests can provide information on many types of sports (Malec, 1995). Since web pages can carry graphics, video, text, animations, and interactive applications, training resources can be made readily available to athletes and coaches (Benson, Kjellmer, Rosberg & Billig, 1997). Using visual applications can help an athlete "see" and incorporate proper technique. An athlete or coach can access the internet for information on training and add variety to routines. Coaches can run listserves to change workouts for athletes training abroad to stimulate their training. Electronic mail consultations from renowned coaches can add pointers on technique refinement. Through the internet, athletes and coaches can receive information from listserves, web sites, or newsgroups regarding their chosen sport. The use of the internet can increase communication and bring the sporting community closer together. Information on the super highway, and its application by coaches, athletes and others involved in the world of sport is just beginning to be explored.

Applications of the Internet for the Athletic Trainer

Using internet access, athletic trainers can communicate and share information with other allied health care professionals. Additionally, education in the field can be enhanced with appropriate on-line technology along with collaborative research being facilitated by the sharing of remote databases.

The internet can provide many avenues for open communication and exchange of ideas between colleagues. On-line technology can be used to communicate via listserves, newsgroups, mail lists or web sites (Glowiniak, 1995). Listserves manage, provide and exchange information between colleagues, as well as supply information to the subscriber regarding the topic of the list. Web resources may be used to facilitate searches and link to other pertinent information. Organizations, institutions, and medical centers can provide resources and on-line consultations to the athletic trainer as well (Fincher & Wright, 1996).

In allied health care professional education programs it is necessary to gain insight regarding the human body. In the educational setting, one of the best methods to study the human body is by dissection of a human cadaver. The use of computer animations, scanned images, and videos can allow the student to gain confidence through realistic simulations. The use of simulations are safe when hypothetical realities can be designed (DeJong, Van Andel, Leiblum & Mirande, 1992). In a simulation, the student can

participate in real life situations that will not cause harm, such as damage to body tissues during muscle or joint testing (Guthrie & McPherson, 1992; Schlechter & Bessemer, 1992). The student can practice skills without injury or risk and apply principles under realistic conditions (Schlechter & Bessemer, 1992).

The use of the internet by the athletic trainer can assist in database searches. ERIC and MEDLINE databases are available to on-line users through their local, or university library (Whitehill, et al., 1996). Athletic trainers taking advantage of access to information stored on remote computer systems benefit by exposure to additional information in an efficient manner (Ingersoll, 1996).

The use of computers and the internet in research can enhance speed and accuracy of data collection and entry. On-line data collection benefits researchers in remote areas with limited access to resources or lack of adequate time due to employment constraints. Completing literature reviews via the internet and on-line searches for journal articles can allow the researcher to complete the research process for certain studies without ever entering the library or field. Institutions studying specific types of pathologies can be accessed and included in the research project (Glowiniak, 1996). With computers being faster than humans and more accurate in computations, data can be entered and analyzed more efficiently (Smith, 1993). Even with speed and efficiency, a concern for athletic trainers is that on-line collection

may not fully represent the subjects because data collected will be limited to those adept with on-line resources.

Athletic trainers may find themselves working alone, or in a setting with on-site collaboration of colleagues. When working alone, the athletic trainer is independent, self-paced, and in control of his/her own learning process. When individualized learning is incorporated with traditional teaching methods, a powerful, creative and effective learning process can occur (Askar, Yavuz & Koksac, 1992). When learning in cooperative groups, individuals can collaborate, collectively solve problems, display multiple role playing sequences, and discuss ineffective strategies (Brown, Collins & Duguid, 1989). Through the internet, the athletic trainer can have access to resources that allow for thorough decision making in either an individual or group setting (Draper, 1987).

Applications of the Internet in the High School Setting

The implementation of the internet in structured learning programs at the high school level can prove to be very important. The opportunities of the internet once presented to the student and teacher can motivate both to embrace new instruction and learning strategies. Educational theory combined with teacher training in the use of the internet can increase the effectiveness of instruction.

The internet provides opportunities to increase the learning potential of the student. Information and knowledge can be gained at anytime, by

anyone, anywhere in the world (Friedman, Baron, & Addison, 1996). The use of on-line searches, world libraries, journals, educational games, list-serves and general information access can extend learning opportunities to the student (Heise & Grandgennett, 1996). Access to experts in the field and information on current research can enrich presented topics through remote site access and brought to the student (Friedman, et al.). The internet's initial function was one of free dispersal of information between researchers. The use of free information and exchange of ideas can increase collaboration between students locally and on-line (Friedman, et al.). The use of the internet can present more choices to the student and engage them in active problem solving (Heise & Grandgennett, 1996).

The perception of the student who uses computer instruction may determine the program's effectiveness. The more fun a program is to use, the more apt the student will be to use it to address educational goals (Perez & White, 1985). In addition, Guthrie and McPherson (1992), found that a higher level of enjoyment resulted in a more positive attitude which enabled students to work at their own pace. Interactive applications with sound, color, and animation have been found to be more appealing students due to the increase in interactivity (Guthrie & McPherson, 1992). Schlechter and Bessemer (1992) found student participation to be crucial, with active participation far outweighing the benefits of passive learning.

Motivation plays a large role in the student's ability to assimilate knowledge from information presented. For motivation to occur, the student must be stimulated by the information. The student may experience an increase in motivation when having a positive attitude about what they learn (Perez & White, 1985). According to Perez and White (1985), "a computer learning environment introduces and increases usage of varied motivational and educational factors which have the potential to improve learning as well as academic interest" (p. 42). The more active the student is in the learning process, the more likely is the assimilation of the presented information. In learning situations, students with a more active role and positive attitude are more likely to integrate the technology into personal learning systems (Heise & Grandgenett, 1996).

The application of teaching theory will help the student benefit more from the use of the internet. Instructors adapting the constructivist approach to learning in which students implement multiple skills by solving complex tasks, may be able to better use the internet in student based learning situations. According to constructivists, learning occurs in authentic social situations and activities to shape individual paradigms in the students' realm of real life experiences (Nicaise & Barnes, 1996). According to Nicaise and Barnes (1996), "when students are in student-centered, student-directed, collaborative classrooms supported with teacher scaffolding and authentic tasks, they learn more. Classrooms are then consistent with the inherent way

humans learn" (p. 205). The eventual evolution from teacher as the provider of information to a coach could increase freedom and flexibility in the students learning process (Stahl, Sumner, & Owen, 1995).

The primary functions of the internet are communication, access to any kind of information, and sharing of educational resources (Quinlan, 1996). Teachers must be innovative, creative, and flexible to integrate the internet into student centered lessons (Schrum, 1995). Supportive administrators must allow for current information to be assimilated and implemented by instructors through proper training. Administrative support, training, resources, and ready access is essential for internet skills to develop (Schrum, 1995).

Creativity and innovation can be addressed in many forms. Pryor, Galardi, Conger, Hetter, Huebel-Drake, Mouradian, Stern, Riley, and Soloway (1996) demonstrated innovation by using the internet to teach chemistry to special education students. The students in the paper presented by Pryor et al. (1996) had not been allowed into the traditional chemistry labs because "safety and other regulations meant their 'specialness' kept them out of strict chemistry classrooms" (p. 3). The innovation of teaching chemistry to a whole new group of students previously unable to take the course, demonstrates the power and creativity of internet instruction.

Web Site Design Considerations

In the production of a web site, the designer must consider factors that influence how the information presented will be perceived by the student. The design must be subject specific and consider learning styles. The type of text and images used will influence the effectiveness of the presentation. Student stimulation and an easy to use format should also be considered.

The design must be subject specific. The designer should create information detailed for one area of study (Chiou, 1992). While the information being presented must be specific to the domain, it must also be broad enough to allow the student to reference and use material on related topics (Contovoris, 1992).

Learning styles vary greatly. The designer must consider an integrated approach, with non-specific learning paths that will lead to individualization (Chiou, 1992). Learning goals and the context in which students apply them varies with each individual (Hutchings, Hall, Briggs, Hammond, Kibby, McKnight, & Riley 1992). Every student coming into contact with the web site should find their individual learning process stimulated.

The type of text and how it is portrayed on the screen will greatly influence what the user will interpret. Mixed sizes and fonts will aid the student in finding the accented text (Sawyer, 1985). A variety of colors placed on the page can draw the student to certain information. The style of writing

should be in the active voice, using familiar and concrete terminology while avoiding jargon (Child, 1996).

The type of images used in the web site will affect how fast the information can be retrieved. If pictures are large and realistic, the graphics will take too long to be retrieved (Child, 1996). The background should be neutral so as to not take away from the message conveyed. If too many graphics are placed on the screen the student may become confused, and the message of the web site will be missed (Child, 1996).

The student must be provided with multi-sensory stimulation. Visual learning should be a main force in the web site. According to Dede (1992), "visualization is one form of magic that empowers learning in multimedia environments; a second type of magic is virtual communities" (p. 57). The student must be allowed to participate in creative, spontaneous, and interactive stimulation (McGovern, 1996). Open space and a variety of margins will help the user maintain interest (Sawyer, 1985).

The web site should be easy to use. The format should promote a sense of achievement with logical steps for accomplishing outlined goals (Cates, 1992). The web site should have a good presentation, flexibility, and allow simple navigation by the user (Barker & Manji, 1992).

Chapter 3

METHOD

The creation of a web site for Homestead High School is intended to serve as a reference for high school students interested in allied health care professions. Information was intended to focus on the field of athletic training and familiarize students with the internship offered through the on-campus athletic training facility.

Equipment and Software

The hardware needed for the creation of the Homestead High School Athletic Training Web Site was:

1. An Apple Macintosh 68030/25 MHz processor or higher, or comparable PC.
2. 13-inch or larger monitor, 256 colors at 640 x 480 resolution or higher.
3. 28.8 kbps or higher Modem, or T-1 Direct Link to the internet.

The systems requirements needed for the creation of the Homestead High School Athletic Training Web Site were:

1. System 7.0 or later OR Windows 95 3.0.1 or later.
2. 8 MB RAM.
3. 16 MB hard disk space.

The software needed for the creation of the Homestead High School Athletic Training Web Site was:

1. Netscape Communicator 4.0 with Netscape Composer. Available through internet by download at: <http://www.netscape.home.com>.
2. WS-FTP software package by Ipswitch, Inc.
3. T-1 direct network link to the internet, or applicable communications software.

Procedures

The procedures for creating the Homestead High School Athletic Training Web Site began with an extensive review of various on-line sources and web sites involving the allied health care professions.

The first step in beginning the process of producing the web pages was to download Netscape Communicator 4.0 Standard Edition at <http://www.netscape.home.com>. Netscape Communicator 4.0 was placed on the hard drive. Netscape Communicator must include Netscape Composer, a near-What You See Is What You Get (WYSIWYG) web page editor. Netscape Composer is used in much the same way a word processor is used but in addition, generates the HTML codes needed by web browsers to display the information. Highlighting of text and selection of formatting options is accomplished by dragging down functions from the tool bar, menus, or clicking on their simplistic icons. During the production of text and information in Netscape Composer the designer was able to view and

manipulate the HTML code to accomplish the desired visual effect of the web page.

The first page created was the home page. The process began with the selection of "Communicator" the Netscape toolbar in the browser and "Page Composer" from the drop-down menu. Anytime "Page Composer" was selected a new document was opened for use.

The title heading to be used on this home page, as well as all other pages was created by placing "Homestead High School" on the top of the page followed by the "Running HHS Mustang" image. "Athletic Training" was then typed on the next line. The title "Homestead High School Athletic Training" was typed in size 36 font with Variable Width style. Before and after the tile, the "snakes and cross" medical images from Z's Medical and Pharmacy Icon Collection (http://pw1.netcom.com/~Z_pham/icons.html) were inserted (Please see Appendix A for full listing of URL's). The images were adjusted in the image menu to 32 X 32 pixels. The "Running HHS Mustang" image was scanned at Kinko's Computer Lab in Adobe Photo Shop 4.0, saved to floppy disk, and transferred to a hard drive image file created by the designer. The image was then selected and dragged into the web page document and adjusted to 230 X 303 pixels in the "Image Properties" menu. The image and title of the home page were centered by selecting the "Format" menu and "Align-Center" command. The title of "Homestead High School

Athletic Training Room" and the "Running HHS Mustang" was used as a title bar on all of the pages within the web site.

With the tile heading created the next step was to insert a horizontal line by clicking on the "Horizontal Line" (HL) icon. The text for the home page was typed into Netscape Composer and edited for style, grammar, and spelling errors.

A horizontal line was placed under the text by clicking on the HL icon to separate the text information from the table of contents menu. The table of contents was typed into the editor with size 12, all capital font. The table of contents was centered using the "Align-Center" function from the "Format" menu. The HL icon was then selected to separate the table of contents from the next block of information.

The address, phone and fax number, and an email address image link was added to allow users to contact the training room. The address section was centered using the "Align-Center" function from the "Format" menu.

Next, an image link to the Homestead High School home page was created. This "Homestead High School Frontpage" image was linked to the Homestead High School home page by highlighting the image and selecting the "Link" (LI) icon. The URL for Homestead High School's home page was entered to allow the user to access the Homestead High School home page. The "Homestead High School Frontpage" image was adjusted to size 44 X 170 pixels in the "Image" menu. The designer was given permission by

Homestead High School Instructor Angela Lih to use the "Homestead High School Frontpage" image under copyright by the webmasters at Homestead High School.

The next piece of information added to this home page was the "High School Sports Focus" image. The "High School Sports Focus" image was saved to 3 1/2 inch floppy disk and hard drive image file as previously described. The "High School Sports Focus" image was selected and dragged below the "Frontpage" image and linked to the Sports Focus URL. The "High School Sports Focus" Image was adjusted to size 45 X 251 pixels in the image menu. A counter image was inserted at the bottom of the home page to allow the designer to track the number of visitations by users over time. The counter found was produced by Web Tracker (<http://www.fxweb.com/tracker/>) and added to the web page by inserting an HTML Tag as previously described. The size of the web tracker was adjusted to 31 X 88 pixels in the image menu. A HL was inserted below the images and tracker.

Finally, an image link was inserted to allow users to contact the designer at his personal email address for feedback. The home page was saved by selecting the "Save" icon in the Composer toolbar. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was the "Athletic Training Room Information" page. The home page title and image heading were copied and pasted onto

the new page. "Athletic Training Room Information" was typed into Composer in all capitals, size 18 font, and highlighted. While highlighted, the title header was centered using the "Align-Center" formatting option. A HL was placed below the "Athletic Training Room Information" header. The page table of contents was inserted followed by a HL. Text was then typed into Composer and broken up by topic with HL's. Bullets were used to separate lists from main topics. Bullets were inserted into the text by highlighting the desired area and clicking on the "Bullets" icon in the Composer tool bar.

The next step was to add internal image navigation tools to this page at the end of each topic. The "Up" button was found at Andy's Art Attack (http://www.andyart.com/f_arrows.htm) and saved in the same manner as the previous images. The image was centered with a short description of the button, "Back To Top," centered below the image and adjusted to size 8 font. At the end of the page the "Home" image was inserted. The "Home" image was found at the Icon Bazaar (<http://www.iconbazaar.com/symbols/>) and saved as an image file as previously described. A short description of the button "Homestead High School Athletic Training Room Home Page" was inserted below the image, centered, and adjusted to size 8 font.

The next step for this page was to add internal text navigation tools. The table of contents for the page was then linked to the information within the document by placing a target in front of each section title. The target was added by placing the cursor in front of the topic heading and clicking the

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“Target” icon on the Composer toolbar. The table of contents information was then linked to the appropriate target. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was “Recommended Classes to Increase a Students Understanding of the Athletic Training Profession.” The title and image of the home page were added to the top of the document.

“Recommended Classes to Increase a Students Understanding of the Athletic Training Profession” was typed below the title header and image in all capitals and size 18 font. A HL separated the title section and the contents. The names of the classes were added in bold, size 14 font. Classes within a department were listed below the department heading in font size 12 followed by HL’s. In-line links were added to allow the user to access tangential information without disrupting the flow of the text. In-line links were added by highlighting the information desired and selecting the LI icon from the toolbar. The URL of the information to be accessed was inserted into the “link” box within the “Image Properties” menu. Internal links, page navigation tools at the end of each topic, and a home link and image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was “Athletic Training Opportunities in the Bay Area.” The title header of the home page was added to the top of the document. “Athletic Training Opportunities in the Bay Area” was typed

below the title and image in all capitals. A HL separated the title section and the table of contents. The table of contents was added and followed by a HL. The main information contained within this page was inserted into tables. Tables were added to the document by selecting the "Table" icon from the Composer toolbar. In-line links, internal links, page navigation tools at the end of each topic, and a home link and image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was "Colleges and Universities with Accredited Athletic Training Programs." The title header of the home page was added to the top of the document. "Colleges and Universities with Accredited Athletic Training Programs" was typed below the title header and image in all capitals and size 18 font. A HL separated the title section and the table of contents. The table of contents was added and followed by a HL. In-line links, internal links, page navigation tools at the end of each topic, and a home link and image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was "Allied Health Care Professional Education in the Bay Area." The title header of the home page was added to the top of the document. "Allied Health Care Professional Education in the Bay Area" was typed below the title header and image in all capitals and size 18 font. A HL separated the title section and the table of contents. The table of contents

was added and followed by a HL. The main information contained within this page was inserted into tables as previously described. In-line links, internal links, page navigation tools at the end of each topic, and a home link and image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was "Professional Associations in Sports Medicine." The title header of the home page was added to the top of the document. "Professional Associations in Sports Medicine" was typed below the title header and image in all capitals and size 18 font. A HL separated the title section and the introduction text. The main information contained within this page was inserted into tables as previously described. In-line links, internal links, and a home link and image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was "Journals in Sports Medicine." The title header of the home page was added to the top of the document. "Journals in Sports Medicine" was typed below the title header and image in all capitals and size 18 font. A HL separated the title section and the introduction text. The main information contained within this page was inserted into tables as previously described. In-line links, internal links, and a home link image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was "Clinical Experiences." The title header of the home page was added to the top of the document. "Clinical Experiences" was typed below the title header and image in all capitals and size 18 font. A HL separated the title section and the introduction text. The main information contained within this page was inserted into tables as previously described. In-line links, internal links, and a home link image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The next page created was "Links." The title header of the home page was added to the top of the document. "Links" was typed below the title header and image in all capitals. A HL separated the title section and the table of contents. The table of contents was added and followed by a HL. An image link to "Medsite," a medical information search engine, was inserted above the main topics. This link allows students to access another site for reference to other information not contained on the Homestead High School Athletic Training web site. "Medsite" was separated from other information with a HL. The main text information contained within this page was inserted into tables as previously described. In-line links, internal links, page navigation tools at the end of each topic, and a home link and image were inserted as previously described. The document was placed on the hard drive in a new file, along with a copy on a 3 1/2 inch floppy disk.

The final step after the construction of all of the documents was to link the home page table of contents with each file. Selection of the highlighted text in the home page table of contents allows the user to access and navigate through the information contained on all pages.

Design

The design of the Homestead High School Athletic Training Web Site incorporated a main home page and various links. The links included:

(a) expectations of the training room, (b) recommended classes to help the students' learning process in athletic training, (c) clinical affiliations, (d) selected university programs, (e) associations in sports medicine, (f) journals, (g) approved programs in athletic training, and (h) web sites to further a student's search of more information.

The web site used a multiple "pages" format, to allow faster download and more effective navigation by the user. Links to the various elements included on the pages were highlighted to allow the user to select the item, and move directly to the selected site when desired.

The home page included a title header and a brief description of the opportunities available through the Homestead High School Athletic Training Room. Appropriate graphics, school address, phone, fax, pager number, and e-mail address were made available. Links to other "pages" were available for the student to move easily through the site (see Appendix B for full text).

The second page regarding expectations of the athletic trainer included the role and function of the athletic trainer, why athletic training is important, and what a student can learn during an internship. Qualities and expectations of the student were also included. Hours of the training room were listed to inform the student of hours of operation.

Page three listed educational opportunities available to the student within the Fremont Union High School District. Classes included allow the student to gain an understanding of the breadth of education needed to become a Certified Athletic Trainer.

Optional clinical experiences for the student were listed on page four. All of the sites with previous agreements with the Homestead High School Training Room were listed. A link to the institution's home page was included.

Educational opportunities in allied health care professions were accessible to the student on page five. Local educational institutions were highlighted to provide the student with regional opportunities to further their education in the health care field. Athletic training, nursing, occupational therapy, physical therapy, exercise science, acupuncture, chiropractic, biomechanics, emergency medical technician, paramedic, and complementary therapies were listed.

Page six included selected universities with educational programs in athletic training. This page included a link to the National Athletic Trainers'

Association "Approved Curriculum" page. The linked page included the name, address, and proper link for each institution that has an approved athletic training curriculum.

Associations in sports medicine were listed on page seven. The associations were listed, and linked to their home pages to allow for easy access by the student.

Page eight included on-line journals in sports medicine. The journals were listed and linked to the on-line publications for easy reference by the student.

Web sites of interest were listed on page nine. The web sites listed included the appropriate link to allow the student to easily access the information available.

Establishing Trustworthiness of the Web Site

The input from various professionals in the field and from students having direct contact with the web site aided in establishing its trustworthiness. According to Hanson and Newburg (1992):

"The trustworthiness of a study refers to how well the researcher can persuade the reader that the results are worth paying attention to. Thus, the researcher's task is to build a convincing argument that his or her findings are worthy of consideration and that the end product contains potentially useful information" (p. 35).

Guba (1981), Hanson and Newburg (1992), and Lincoln and Guba (1985) agree that trustworthiness should be established through the use of four main

elements when using the naturalistic paradigm. The elements in establishing trustworthiness of the web site are: (a) credibility, (b) transferability, (c) dependability, and (d) confirmability.

Credibility

According to Hanson and Newburg (1992), "Credibility is similar to the positivist notion of internal validity. The naturalist would like their work to be deemed credible and accurate by being approved by those that created the data" (p. 35). Guba (1981), Hanson and Newburg (1992), and Lincoln and Guba (1985) agree that credibility is established by using the following four techniques: (a) member checking, (b) peer debriefing, (c) triangulation, (d) the use of a reflexive journal.

Member Checking

The use of member checking should take place throughout the entire course of the project so that data and interpretation may be tested as they arise (Guba, 1981). For the purpose of this project, member checking included three distinct groups of individuals (high school students, athletic trainers, and high school instructors) involved in the peer review of the web site. The groups were comprised of four high school students, four experts in the field of athletic training, and two high school instructors. The evaluation consisted of review of the web site and evaluation of web site design using a Likert scaled survey (see Appendix C).

Peer Debriefing

Hanson and Newburg (1992) consider peer debriefing as “exploring the inquirer’s biases, clarifying the inquirer’s interpretations, and generally playing the role of the devils advocate” (p. 36). The researcher should be allowed to discuss and explore new ideas as they arise with respect to the investigation being carried out (Guba, 1981). The peer debriefer chosen for this project was Dr. Bethany Shifflett, Ph.D. Dr. Shifflett is the Measurement and Evaluation Specialist in the Department of Human Performance, San Jose State University. The researcher met with Dr. Shifflett to review the findings and contents of the reflexive journal. The peer debriefer also identified questions and concerns about the accuracy and content of the web site during the course of the project.

Triangulation

Triangulation defined by Lincoln and Guba (1985) is “using different sources, different methods, and sometimes multiple investigators” (p. 307). Credibility will be given to data if information is obtained from one source that matches the information taken from a completely different source (Hanson & Newburg, 1992). When using triangulation in research Guba (1981) states, “no one item of information ought to be accepted that cannot be verified from at least two sources” (p. 85). Triangulation was applied to this project by having information presented in the web site critiqued by students, athletic trainers, the auditor, and the peer debriefer. A consensus was

achieved through these individuals in terms of the appropriateness and application of the material presented.

Reflexive Journal

A reflexive journal was developed by the author during the course of the web site development to assist in the establishment of trustworthiness. According to Hanson and Newburg (1992), "A reflexive journal is in essence a diary that is kept to record information about the researcher (who is instrumental in the study), and about the unfolding methodology of the study" (p. 37). Lincoln and Guba (1985) state that the reflexive journal consists:

"...of separate parts that include the following: (1) the *daily schedule and logistics* of the study; (2) a *personal diary* that provides for the opportunity for catharsis, for reflection upon what is happening in terms of one's own values and interests, and for speculation about growing insights; and (3) a *methodological log* in which methodological decisions and accompanying rationales are recorded" (p. 327).

The researcher kept a journal from January of 1998 to the completion of the project. The reflexive journal was reviewed as a part of the inquiry audit.

Transferability

To address the issue of transferability the researcher used a "thick description," or detailed account of all of the procedures involved in the production of the web site (Lincoln & Guba, 1985). Transferability is comparable to external validity in the positivist view. Hanson and Newburg

(1992) defined transferability further as the process of being able to "... provide enough information about the context and conditions under which the study was conducted to allow the reader to make an informed decision about whether the information presented is relevant to his or her situation" (p. 37). The reader is allowed to make informed choices on how to apply the data from this study to his/her own environment, based on the amount and level of detailed information given (Hanson & Newburg, 1992). It was the goal of the researcher to provide enough information on development and construction of the web site for it to be applied and duplicated in other similar environments.

Dependability and Confirmability

In the positivist approach the equivalent of dependability is reliability, and the equivalent of confirmability is objectivity. In the naturalist view, dependability is viewed as internal stability of the data (Guba, 1981). The goal of confirmability according to Hanson and Newburg (1992) "...is demonstrating that findings and interpretations are internally coherent or logically derived from the data" (p. 36). In order to check the dependability and confirmability of the web site, an inquiry audit was undertaken by Scott Barker, A. T., C. to determine whether the final project was logical and coherent. Throughout the duration of this study Scott Barker, A.T., C. was the Head Athletic Trainer of California State University, Chico. The inquiry audit was twofold in nature: (a) evaluation of the process of inquiry (dependability); and (b)

evaluation of the product of inquiry (confirmability) (Guba, 1981). The auditor first read all documentation, and re-reviewed "Web Page Design Considerations" to form a key elements checklist. The web site was then accessed and reviewed. A holistic evaluation was conducted to determine if the information mentioned in the paper was complete and appropriate. The auditor then compared the specific design elements mentioned in the paper to the information presented in the web site. The auditor then disengaged from the key elements cited in the paper to form a critical evaluation from his own perspective. The audit was completed with a critique of the process related to this research project including the written document, the web site and the reflexive journal.

Critique of the Web Site

A survey was created to allow high school students, high school instructors, and athletic trainers to critique the web site. Before the administration of the survey, reviewees were explained their rights and responsibilities by the researcher and signed a letter of consent approved by the Graduate Studies Office of San Jose State University (see Appendix D). The Likert scaled survey (see Appendix C) was completed by four high school students (two male and two female); four experts in the field of athletic training (two male and two female); and two high school instructors (male). Subject confidentiality was protected by instructing reviewees to use their age and first and last initials as a code. The key to the subject codes was held only

by the researcher for input into the Statistical Package for Social Sciences (SPSS) computer program.

Analysis of Survey

Data obtained from the students, athletic trainers, and instructors was placed in an SPSS file for analysis (see Appendix E). Descriptive information was obtained on all reviewees. A frequency distribution table was constructed for gender and occupation. Means and standard deviations were calculated for age. Descriptive information, for the whole group, was obtained on all of the components of the survey. Information from the survey components was then summarized for sub-groups. The sub groups consisted of high school students, athletic trainers, and high school faculty. Group membership was crosstabulated with the survey responses to search for patterns. A content analysis of the "suggestion" answer portions related to the survey items was also conducted.

Chapter 4

RESULTS

The purpose of this project was to provide information and resources to high school students interested in furthering their education in an allied health care profession. This web site allowed students to access information on: (a) internships in the Homestead High School on-campus athletic training room, (b) classes offered at Homestead High School, (c) clinical affiliations, (d) accredited academic institutions offering educational programs in athletic training, (e) educational opportunities in the allied health care professions, (f) associations involved in athletic medicine, (g) journals for further study, and (h) web sites containing other information regarding allied health care professions. The use of the web site allowed the student to expand his/her awareness of the allied health care professions since it offered information covering a variety of therapies in the health care professions.

The design employed a multiple page format to allow students to navigate through information as well as access tangential information through hyperlinks. The use of a multiple page format allowed the student to view specific areas of interest without extraneous information being presented. The interactive, modular, and multimedia presentation allowed the student to navigate easily through the areas of interest. The modular

approach of this web site allowed access of information that was specific in content but also wide in breadth of related information.

Results of the Survey

Statistical Analysis

The subjects involved in the survey were high school students, high school instructors, and athletic trainers. The Likert scaled (see Appendix C) survey was completed by four high school students, two male and two female subjects. The two high school females were age 14 (freshman), and 16 (Junior) with a mean age of 15 years. The two high school males were age 18 (both seniors) with a mean age of 18 years. The survey was then administered to four experts in the field of athletic training (two male and two female). The two female athletic trainers were age 23 and 24 with a mean age of 23.5 years. The last group surveyed was the high school instructors. Both high school instructors were male, ages 32 and 36 with a mean age of 34. The mean age of all subjects completing the survey was 22.8 years.

Table 1

Frequency Distribution Table-Gender

Gender	Frequency	Percent
Male	6	60
Female	4	40

Table 2

Frequency Distribution Table-Status

Status	Frequency	Percent
Student	4	40
Athletic Trainer	4	40
Instructor	2	20

Using SPSS, the researcher crosstabulated information to find evident patterns. The following patterns were found in the data from subject responses to survey questions:

- 1) Question one asked the subjects to rate the breadth of the web site. Of the eight subjects that rated breadth as excellent, six indicated the specificity was excellent.
- 2) Question two asked subjects to report on the specificity of the web site. Of the seven subjects that rated specificity as excellent, five indicated an excellent overall impression.
- 3) Question three allowed the subjects to respond to the graphical content of the web site. Of the two subjects that rated graphics as excellent, two indicated an overall impression rating of excellent.
- 4) Question four allowed the subject to respond to the ease of navigation. Of the five subjects that rated navigation ease as excellent, four indicated the links were excellent.

5) Question five allowed the subjects to respond to the quality of the text. Of the six subjects that rated the quality of the text as excellent, six also indicated the writing style was excellent.

6) Question six asked the subjects to evaluate the designers writing style. Of the six subjects that rated writing style as excellent, five indicated an overall impression of excellent.

7) Question seven examined the use of hyperlinks in the document. Of the seven subjects that rated hyperlinks as excellent, six reported an excellent overall impression.

8) Question eight allowed the subject to respond to the background color of the web site. Of the four subjects rating background color very good, three indicated their overall impression as excellent.

9) Question nine allowed the subjects to provide feedback on the ability to find information desired by the user. Of the five subjects that indicated being able to find information as excellent, seven subjects that rated breadth as excellent.

10) Question ten asked the subjects to give their overall impression of the web site. Of the seven subjects that rated their overall impression as excellent, five indicated being able to find the information desired as excellent. The comparison of overall impression and ability to find the information desired was chosen to see if the subject could find all information with ease.

Table 3

Crosstabulation of Status and Web Site Survey

<u>Question</u>	<u>Student</u>			<u>Athletic Trainer</u>			<u>Instructor</u>		
	^a F	^b G	^c E	^a F	^b G	^c E	^a F	^b G	^c E
Breadth?		1	3			4		1	1
Specificity?		1	3		1	3		1	1
Graphics?		2	1		3	1		2	
Navigation Ease?		3	1		1	3		1	1
Text Quality?		2	2		1	3		1	1
Writing Style?	1	1	2		1	3		1	1
Hyperlinks?		2	2			4		1	1
Background?	1	3			2	1		2	
Desired Info?		2	2		1	3		2	
Overall?		1	3			4		2	

^aF = Data from "poor" and "fair" survey responses.

^bG = Data from "good" and "very good" survey responses.

^cE = Data from "excellent" survey responses.

Table 4

Crosstabulation of Breadth and Specificity

<u>Breadth</u>	<u>Specificity</u>	
	Very Good	Excellent
Good	1	
Very Good		1
Excellent	2	6

Table 5

Crosstabulation of Navigation and Hyperlinks

<u>Navigation</u>	<u>Hyperlinks</u>	
	Very good	Excellent
Good	1	
Very Good	1	3
Excellent	1	4

Table 6

Crosstabulation of Text Quality and Writing Style

<u>Text Quality</u>	<u>Writing Style</u>			
	Fair	Good	Very Good	Excellent
Good	1	1		
Very Good			2	
Excellent				6

Table 7

Crosstabulation of Background Color and Overall Impression

<u>Background Color</u>	<u>Overall Impression</u>	
	Very Good	Excellent
Poor	1	
Good	1	3
Very Good	1	3
Excellent		1

Content Analysis

The survey consisted of a second section that allowed subjects to fill in information regarding suggestions for improvement of the web site. The content analysis of the four questions yielded the following information:

1) The web page had good balance, transition from topic to topic, and a lot of very accessible information.

2) The web page had good graphics, and the neutral color assisted in the selection of hyperlinks. With a neutral background the reviewees felt that more color or graphics could be added to make the presentation more pleasing to the eye.

3) The writing style and textual material presented were clear, concise, understandable, and interesting. One observation by a reviewee was that some of the information might be too broad for the high school student.

4) The site was fun and interesting to use. Reviewees were able to access information they were unaware existed. Suggestions given to increase use were to include more pictures, graphics, and a self-diagnosis web site to assist the user in accessing information regarding personal injury and self-treatment.

Member Checking and Triangulation

During this project, member checking included three distinct groups of individuals in the review of the web site. Member checking was accomplished by having the following panels evaluate the site in terms of accuracy, applicability, and efficiency: (a) four high school students, (b) four experts in the field of athletic training, and (c) two high school instructors.

Triangulation was applied to this project by having information presented in the web site critiqued by students, athletic trainers, the auditor, and the designer. The use of triangulation in this project helped to establish internal validity (see Table 3).

Peer Debrief

For the purpose of questioning the researcher's methods during the production of the Educational Web Page for Homestead High School Athletic Training, Bethany Shifflett, Ph.D. was chosen as the peer debriefer. The writer met with the peer debriefer eight times. During the meetings, the debriefer evaluated the researcher's notes, and evaluated the process and methodology of the project and paper. After evaluation of the reflexive journal and methodology, the debriefer examined the process of developing the Educational Web Page for the Homestead High School Athletic Training Room. The critique determined if the design was consistent with what the researcher stated in the reflexive journal. The meetings with the debriefer

provided the researcher with feedback on the process and progress of the web site production.

During the first meeting the researcher and Dr. Shifflett discussed the process, literature review, basic methodology and beginning of the production of the web site. During the meeting three key points were addressed: (a) the time frame of the project, (b) the breadth of the topic to be covered, and (c) the elements involved in the web site.

The second meeting consisted of a thorough review of the methodology. Based upon the discussion, it was determined that a change would occur in terms of the research process. The researcher would attend two seminars at San Jose State University regarding the use of HTML formatting and graphics.

In meeting number three, the debriefer critiqued the methods, and the basic content of the web page. The debriefer's evaluation lead to the researcher adding more sites to increase the breadth of presentation.

Meeting number four consisted of reviewing production principles. The following changes were made in the web site presentation: (a) the pages would each be able to stand alone; (b) the pages would be linked to an index page that would serve as a home page; and (c) the pages would have simple navigation to the index and internally.

Meeting number five consisted of a continued review of methodology and design. The following recommendation from the debriefer was made

and carried out by the researcher: the formulation of the web page should take place with a web page editor to speed the process.

Meeting number six consisted of the debriefer reviewing the content of the web page. Based upon the debriefer's recommendations, the following decisions were made: (a) a new page would be created to contain information regarding the athletic training opportunities in the Bay Area; (b) a separate page would contain educational programs in the allied health care professions; and (c) the web sites of interest page would include information regarding links to other sites only.

The seventh meeting consisted of the debriefer and the committee viewing the entire web site contents. Based on the debriefer and committee's critique, the following decision were made: (a) a tracker would be added to count the number of hits encountered by the web site; and (b) the designer would invite Scott Barker, A.T., C. to serve as the auditor of the project.

The eighth meeting consisted of the debriefer reviewing the material for strength of representation and reproducibility. Based on the debriefer's critique, the following decisions were made: (a) the URLs would be listed in a separate appendix; and (b) the project would be sent to the server from Homestead High School and be maintained by the staff athletic trainer.

Auditor

The auditor (Scott Barker, A.T., C.) evaluated the researcher's paper as well as the web site. The audit involved two main objectives: (a) to determine if an audit trail was apparent through each chapter of the research paper and the Educational Web Site for Homestead High School Athletic Training; and (b) to determine if the methodology and findings in relation to the Educational Web Page for Homestead High School Athletic Training Program were logical and coherent. The auditor's evaluation (see Appendix F) provided the following recommendations:

- 1) All of the pages should have the same background color to maintain constancy and repetition.
- 2) The hyperlinks on the Index.htm page should be moved from an align-center to an align-left format. The information in the hyperlinks should be shortened to one or two words with a brief description of the link to follow.
- 3) The mustang logo should be adjusted in size to minimize the users need to scroll down to see the information presented in the document.
- 4) The logos included on the web page should be in an interlaced gif. format. The interlaced gif. would allow the user to see the image as it downloads sequentially rather than waiting for the whole image to load.

The researcher adopted all recommendations presented by the auditor. After the incorporation of the auditor's recommendations, the auditor

concluded that the Educational Web Site for Homestead High School Athletic Training Program was developed in a logical and coherent manner. The auditor also concluded that the methodology undertaken by the designer in the creation of the Educational Web Page for Homestead High School was reliable and valid. The auditor further determined that an audit trail existed throughout the entire research paper and reflexive journal related to the Educational Web Site for Homestead High School Athletic Training Program.

Researcher's Review

The process undertaken and design choices made for the web site were based on the literature search. In particular, the key elements identified by researchers as important in the design and presentation of information in web pages were incorporated in the athletic training web site. For example, an important point brought out in the literature search was that use of a web site by students may depend on its presentation. Perez and White (1985) and Guthrie and McPherson (1992) agree that an effective computer presentation results in perceived enjoyment from the user. In this project, the designer attempted to combine information that would stimulate the student's interest. Considering the results found in the survey, the designer was successful in combining elements to allow student enjoyment.

Designing simulated realities in which students may practice skills without real world ramifications is another important application of the internet. Simulations may be designed to allow students to gain insights into

the human body through review, diagnostic tests, or interactive realities (DeJong, Van Andel, Leiblum & Mirande, 1992; Guthrie & McPherson, 1992; Schlechter & Bessemer, 1992). In this project, the designer provided access to web sites with information and simulations based on medical procedures for the human body.

Another point brought out in the literature related to the context of medical research and online publications is the need for data on the internet to be scrutinized for content due to the lack of traditional review board procedures (Glowiniak, 1995). This principle was applied by providing links primarily to professional associations to increase the chances that the information would have good integrity as well as be maintained and updated regularly.

In summary, the designer applied principles found in the literature for a more effective presentation of information. The layout was subject specific but enabled a breadth of information to be accessed (Chiou, 1992; Contovoris, 1992). As suggested by Chiou (1992), the designer employed an integrated learning approach using non-specific pathways allowing the student to relate to information individually. A variety of font styles and sizes as described by Sawyer (1985), allowed the user to find the desired emphasis in the text. Writing style was in the active voice, familiar and easily comprehensible (Child, 1996). Images presented in the web site were adjusted to be small in size and in an interlaced gif. format, following the auditor's review, to allow

for more expedient downloading. Adjusting the images to a more feasible size was consistent with parameters described by Child (1996) in the review of literature. The background was neutral to not detract from the message conveyed and allow for individual color preferences to take precedence. Barker and Manji (1992) and Cates (1992) agree on the need for simple presentation and ease of use of computer programs. Using information found in the designer's literature search, the web site format had a simple presentation, allowed a sense of achievement, and provided easy navigation. The main goal of the researcher, to allow for visual stimulation, was accomplished.

In review of the project, the designer acknowledges the need, requirement and support of the peer debriefer and auditor. The peer debriefer was essential in the discussion and questioning of methodology to increase the strength of the project. Peer debriefing was undertaken as needed to review the contents and procedures. The use of an audit inquiry established dependability and confirmability with a thorough review of all of the written material, reflexive journal, and web site. The depth and thorough nature in which the auditor (Scott Barker, A.T., C.) carried out the critique allowed the designer to apply necessary changes to the web site design based upon research and expert experience. The peer debriefer and the auditor were found by the designer to be invaluable.

Chapter 5

CONCLUSIONS

The conclusions from the survey indicated that the designer accomplished a majority of the goals set at the beginning of the project. The web site was found to be not only effective in specificity, but also in the breadth of presentation. The use of effective textual presentation and writing style allowed the subjects to obtain information quickly and easily. The use of effective hyperlinks allowed the subject to find information effectively by providing access to tangential information. The overall impression of the subjects leads the researcher to believe that the web site had an effective presentation. To improve the web site the subjects recommended the addition of graphics and a change in the background from neutral to a more visually pleasing color.

The constructivist approach to instruction was found to be very applicable to web site use. As Nicaise and Barnes (1996) point out, "When students are in student-centered, student-directed, collaborative classrooms supported with teacher scaffolding and authentic tasks, they learn more. Classrooms are then consistent with the inherent way humans learn" (p. 205). This web site and the environment it will be employed in accomplish exactly what Nicaise and Barnes (1996) advocate. Employing a constructivist framework with this web site, the role of the athletic trainer for high school students using this web site can change from information provider, to a guide

or coach through the interactive and information rich environments of the internet.

The use of the content analysis allowed the designer to identify properties of the web site that needed to be changed to allow a more effective presentation. In response to the question regarding the use of graphics, selection of background colors, and hyperlinks, the subject's identified the need for more color. The designer inserted the "changing green ball" (grnball.gif) icon to emphasize the page title, and each subject in the page's table of contents. The designer did not follow the subject's recommendation of adding background color to the web site. Keeping the background adjustable by the user's default color selection allows for individual preferences to take precedence. In response to the question regarding writing style and textual material presented, the subject's indicated that some of the language was out of context for high school students. The information identified by the subjects was changed by the designer to allow for ease of assimilation.

The production of the Educational Web page for Homestead High School provided a challenge for the designer which raised concerns for the profession of athletic training. It is the feeling of the designer that more of the athletic training facilities should invest in the use of the internet for dissemination of information, as well as collaboration and communication between colleagues. Due to the lack of resources, computer systems, training,

and/or lack of administrative support, athletic trainers are being left out of the global network. During the research of this project many of the various training rooms contacted experienced problems in obtaining access to internet sources.

Recommended additions to the web site are few. The designer recommends that the athletic training opportunities section be expanded to include a listing of all northern California opportunities. The scope of the allied health care education page can also be expanded to include more opportunities. The designer recommends the continued use of Netscape Composer as the Editor to avoid changes in the HTML coding and to maintain the ease of use. If the site is expanded, the designer also recommends that meta-sites, or sites maintained by associations or organizations be used exclusively to decrease the need for more than regular updating and preserve longevity of the information presented. It appears to the designer that the most difficult time constraints are involved in searching for web sites. If another researcher comes across a web site while accessing the internet, it is recommended that the site be bookmarked for future reference and possible inclusion during a future update.

REFERENCES

- Adam, J. (1996). Architects of the net of nets. IEEE Spectrum, 33(9), 56-63.
- Aspray, W. (1997). Inventing the internet. IEEE Spectrum, 34(2), 12.
- Askar, P., Yavuz, H., & Köksac, M. (1992). Students' perceptions of computer assisted instruction environment and their attitudes towards computer assisted learning. Educational Research, 34(2), 133-139.
- Barker, S., & Barker, A. (1996). Multimedia uses in educational settings. Athletic Training: Sports Health Care Perspectives, 21(1), 7-13.
- Barker, P., & Manji, K. (1992). Computer-based learning: An institutional approach. Education & Computing, 8, 229-237.
- Benson, M., Kjellmer, I., Rosberg, S., & Billig, H. (1997). Can paediatricians benefit from the internet? Archives of Diseases in Childhood, 77, 179-182.
- Biesecker, L., & DeRenzo, E. (1995). Internet solicitation of research subjects for genetic studies. American Journal of Genetics, 57, 1255-1256.
- Brown, J., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. Educational Research, 18(1), 32-42.
- Cates, W. (1992). Fifteen principles for designing more effective instructional hypermedia/multimedia products. Educational Technology, 32(12), 5-11.
- Child, D. An introduction to world wide web page design. *T.H.E. Journal*, 24(8), Available: <http://www.thejournal.com/past/aug/896exclu2.html> [1998, January 29].
- Chiou, G. (1992). Situated learning, metaphors, and computer-based learning environments. Educational Technology, 32(8), 7-11.
- Chodorow, S. (1996). Educators must take the electronic revolution seriously. Academic Medicine, 71(3), 221-226.
- Contovoris, R. (1992). Hypermedia for training: A software and instructional engineering model. Educational Technology, 32(7), 47-51.

- Dede, C. (1992). The future of multimedia: Bridging to virtual worlds. Educational Technology, 32(5), 54-60.
- Dejong, T., Van Andel, J., Leiblum, M., & Mirande, M. (1992). Computer assisted learning in higher education of the Netherlands: A review of the findings. Computers & Education, 19(4), 381-386.
- Draper, D. (1987). An evaluation model of the student athletic trainer's clinical experience. Athletic Training, 22(2), 111-114.
- Fawcett, J. & Buhle, L. (1995). Using the internet for data collection. Computers in Nursing, 13(6), 273-279.
- Fincher, L. & Wright, K. (1996). Use of computer-based instruction in athletic training. Journal of Athletic Training, 31(1), 44-49.
- Friedman, E., Baron, J., & Addison, C. (1996). Universal access to science study via internet. T. H. E. Journal, 23(11), 83-86.
- Glowiniak, J. (1995). Medical resources on the internet. Annals of Internal Medicine, 123(2), 123-131.
- Grove, A. (1996). Is the internet over hyped?. Forbes, 158(7), 108-115.
- Guba, E. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. Educational Communication and Technology, 29(2), 75-91.
- Guthrie, B., & McPherson, M. (1992). The efficacy of a customized approach to computer assisted instruction. Journal of Computer-Based Instruction, 19(3), 100-104.
- Hanson, T. & Newburg, D. (1992). Naturalistic inquiry as a paradigm for doing allied performance enhancement research. Performance Enhancement, 1, 26-40.
- Heise, D., & Grandgenett, N. (1996). Perspectives on the use of the internet in art classrooms. Art Education, 49(6), 12-18.
- Hutchings, G., Hall, W., Briggs, J., Hammond, N., Kibby, M., McKnight, C., & Riley, D. (1992). Authoring and evaluation of hypermedia for education. Computers & Education, 18(1-3), 171-177.

Ingersoll, C. (1996). The athletic trainer and the internet. Athletic Training: Sports Health Care Perspectives, 21(1), 14-24.

Leiner, B., Cerf, V., Clark, D., Kahn, B., Kleinrock, L., Lynch, D., Postel, J., Roberts, L., Wolff, S. (1997). The past and future history of the internet. Communications of the ACM, 40(2), 102-108.

Lincoln, Y., & Guba, E. (1985). Naturalistic Inquiry. Beverly Hills, CA: Sage Publications.

Luckey, R., Sweet, J., & Knupp, B. (1996). The internet: An essential tool for college health networking. Journal of American College Health, 45(7), 6-10.

Malec, M. (1995). The wonderful "world wide web" of sports: An internet resource. Journal of Sport and Social Issues, 19(3), 323-326.

McGovern, M. (1996). Fast times at web-site high. Inc., 18(6), 29-30.

Mikita, E., & Drusedum, L. (1993). Introducing health sciences librarians to the internet. Medical References Services Quarterly, 12(3), 1-12.

Nicaise, M., & Barnes, D. (1996). The union of technology, constructivism and teacher education. Journal of Teacher Education, 47(3), 205-212.

Perez, E., & White, M. (1985). Student evaluation of motivational and learning attributes of microcomputer software. Journal of Computer-Based Instruction, 12(2), 39-43.

Pryor, A., Galardi, R., Conger, J., Hetter, K., Huebel-Drake, M., Mouradian, M., Stern, E., Riley, J., Soloway, E. (1996). Putting trust in change: A partnership for better science education. T. H. E. Journal, 24(3), 74-76.

Quinlan, L. (1996). Crafting a web-based lesson. Part one: Setting instructional goals and finding sources. Techtrends, 41(6), 6-8.

Sawyer, T. (1985). Human factors considerations in computer assisted instruction. Journal of Computer Based Instruction, 12(1), 17-20.

Schlechter, T., & Bessemer, D. (1992). Computer-based simulation systems and role-playing: An effective combination for fostering conditional knowledge. Journal of Computer-Based Instruction, 19(4), 110-114.

Schrum, L. (1995). Educators and the internet: A case study of professional development. Computers & Education, 24(3), 221-228.

Smith, R. (1993). Computer-assisted functional assessment and documentation. The American Journal of Occupational Therapy, 47(11), 988-992.

Stahl, G., Sumner, T., & Owen, R. (1995). Share globally, adapt locally: Software assistance to locate and tailor curriculum posted to the internet. Computers & Education, 24(3), 237-246.

Tatters, W. & Colburn, R. (1997). Teach yourself netscape web publishing in a week (2nd ed.). Indiana: Sams.net.

Whitehill, W., Norton, P., & Wright, K. (1996). Navigating the library maze: Introductory research and the athletic trainer. Journal of Athletic Training, 31(1), 50-52.

Wilmoth, M. (1995). Computer use and nursing research. Western Journal of Nursing Research, 17(3) 335-337.

Appendix A Web Page URL's

<u>Web Page Title</u>	<u>URL</u>
• Acupuncture.com	http://www.Acupuncture.com
• Acupuncture Home Page	http://www.demon.co.uk/acupuncture/
• Acupuncture Links	http://pessoal.mandic.com.br/voli/acupvil.htm
• Advanced Tissue Science	http://www.advancedtissue.com/
• Agency for Health Care Policy and Research	http://www.ahrpr.gov/
• Alternative Medicine	http://www.altcare.com/index.html
• American Association of Oriental Medicine	http://www.aaom.org/
• American Chiropractic Association	http://www.amerchiro.org/
• American College of Sports Medicine	http://www.acsm.org/sportsmed/
• American College of Traditional Chinese Medicine	http://www.actcm.org/
• American Health Information Management Association	http://www.ahima.org/

• American Heart Association	http://www.amhrt.org/
• American Journal of Chinese Medicine	http://www.allempress.com/catalogue/index/ajcm/index.html
• American Massage Therapy Association	http://www.amtamassage.org/
• American Occupational Therapy Association	http://www.aota.org/
• American Physical Therapy Association	http://www.apta.edoc.com/
• American Polarity Association	http://www.livelinks.com/sumeria/health/polarity.html
• American Public Health Association	http://www.apha.org/
• American Psychosomatic Society	http://www.electriciti.com/~medicine/index.htm
• American Red Cross	http://www.redcross.org/
• American Nurses Association	http://www.redcross.org/ojin/index.htm
• American Yoga Association	http://members.aol.com/amyogaasn/index.htm
• Andy's Art Attack (Up Button)	http://www.andyart.com/f_arrows.htm
• Association of Operating Room Nurses	http://www.aorn.org/

• Association of University Programs in Health Administration Education	http://www.aupha.org/
• Aston Patterning	http://members.aol.com/SVUmessage/Aston.html
• Athletic Training Home Page	http://members.aol.com/ATC4STA/index.html
• Athletic Training Research and Education Foundation	http://www.nata.org/ref/index.html
• Ayurvedic Foundation	http://www.ayuvr.com/
• Berkeley Orthopaedic Biomechanics	http://biomech2.me.berkeley.edu/
• Biofeedback Pages	http://pathways.kept-secret.com/index.html
• Biomechanics Home Page	http://gpu.srv.ualberta.ca/~pbaudin/biomech.htm
• Biomechanics Research & Consulting, Inc.	http://www.brcinc.com/
• Body Quest	http://library.advanced.org/10348/
• Botanicals.Com	http://www.botanical.com/
• Bruce Morgan, A.T., C.	http://www.clash.com/staff/Morgan.html
• California Athletic Trainers' Association	http://www.netmktplc.com/cata/

<ul style="list-style-type: none"> California State University, Hayward (Kinesiology) 	http://edschool.csuhayward.edu/Departments/KPE/departement/HTML
<ul style="list-style-type: none"> California State University, Hayward 	http://www.isis.csuhayward.edu/ALSS/puad
<ul style="list-style-type: none"> California State University, Sonoma (Athletic Training) 	http://www.sonoma.edu/clubs/athletictrainers/
<ul style="list-style-type: none"> California State University, Sonoma (Kinesiology) 	http://www.sonoma.edu/Kinesiology/
<ul style="list-style-type: none"> California State University, Sonoma (Nursing) 	http://www.sonoma.edu/Nursing/
<ul style="list-style-type: none"> Camino Medical Group 	http://www.caminomedicalgroup.com/
<ul style="list-style-type: none"> Center for Disease Control 	http://cdc.gov/
<ul style="list-style-type: none"> Chabot College (Athletic Training) 	http://clpccd.cc.ca.us/cc/maj/pe/training.htm
<ul style="list-style-type: none"> Chabot College (Nursing) 	http://www.clpccd.cc.ca.us/cc/maj/heal/nurs.html
<ul style="list-style-type: none"> Charlie Murdach-Email Address 	thumbsupspanky@hotmail.com
<ul style="list-style-type: none"> Chiropractic Techniques 	http://www.wwilkins.com/CT/

• Chiro Web	http://pages.prodigy.com/CT/doc/doc.html
• ChiroZone	http://www.chiro.org/ChiroZine/home.shtml
• City College of San Francisco	http://www.ccsf.ca.us/
• City College of San Francisco (EMT)	http://www.ccsf.cc.ca.us/voced/health/emtech.html
• City College of San Francisco (RN)	http://www.ccsf.ca.us/~voced/health/rn.html
• City College of San Francisco (LVN)	http://www.ccsf.ca.us/~voced/health/lvn.html
• Clinical Nurse Specialist:	http://www.wwilkins.com/NUR/
The Journal for Advanced Nursing Practice	
• Coaching Science Abstracts	http://www.rohan.sdsu.edu/dept/coachsci/intro.html
• College of Marin (Nursing)	http://www.marin.cc.ca.us/~lang/nursing/
• College of San Mateo	http://www.smcccd.ca.us/csm/csm.html
• Commission on the Accreditation of Allied Health Education Programs	http://www.aama_ntl.org/ed/approved.html
• Contra Costa College	http://www.contacosta.cc.ca.us/

• Contra Costa College (EMT)	http://www.contacosta.cc.ca.us/tablecon/courses/emed.htm
• Contra Costa College (Nursing)	http://www.contacosta.cc.ca.us/tablecon/courses/nurses.htm
• Cramer Sports Medicine Inc.	http://www.cramersportsmed.com/
• Craniosacral Therapy	http://upledger.com
• De Anza College	http://www.deanza.fhda.edu/
• De Anza College (Nursing)	http://www.deanza.fhda.edu/Depts/nursing/nurse.html
• De Anza College (Physical Therapy Assistant)	http://saturn.atc.fhda.edu/instructor/quaratop/index.htm
• Digital Anatomist Program	http://www1.biostr.washington.edu/DigitalAnatomist.html
• Do It Sports	http://www.doit sports.com/index.html
• Dr. Trieb	http://www.clash.com/team/staff/martin-trieb.html
• Emergency Nursing World	http://www.hooked.net/~ttrimble/enw/index.html

• Emergency Services Access Network	http://www.esanetwork.com/
• Emergency Services WWW List	http://www.district.north-van.bc.ca/eswsl/Www-911.htm
• Ergoweb	http://www.ergoweb.com
• Evergreen Valley College	http://www.evc.edu/
• Eye Movement Desensitization and Reprocessing	http://www.emdr.org/
• Exercise and Sport Psychology	http://www.psych.unt.edu/apadiv47/
• Exercise Physiology	http://www.krs.hia.no/~stephens/exphys.htm
• Far West Athletic Trainers' Association	http://www.csochico.edu/~sbarker/nata/faw/farw.html
• Feldenkrais	http://www.feldenkrais.com
• First Aider	http://www.ccsd.k12.wy.us/cchs_web/sptmed/fstaider.htm
• Five Branches Institute	http://www.fivebranches.com/
• Food and Nutrition Newsletter	http://www.ext.vt.edu/news/periodicals/foods
• Foot and Ankle Special Interest Group	http://jan.ucc.nav.edu/~cornwall/fasig/fasig.html

• Foothill College	http://www.fh.fhda.edu/foothill
• Foothill College (Athletic Injury Care)	http://www.fhda.edu/foothill/programs/Physical_Education/athletic_injury_care.html
• Foothill College (Paramedic)	http://www.fh.fhda.edu/foothill/programs/Bio_and_Health/paramedic.html
• Fremont Union High School District	http://www.fuhsd.org/
• Gatorade Sport Science Institute	http://www.gssiweb.com/
• Hanna Somatic Education	http://www.somatics.com/
• Health Web	http://www.teleport.com/~amrta/
• Hellerwork	http://www.hellerwork.com/
• Herb Guild	http://www.healthy.net/herbalists/
• Herb Net	http://www.herbnet.com/
• HHS Athletic Training Room Email	hhssportsmed@hotmail.com
• Homeopathic FAQ	http://community.net/~neils/faqhom.html
• Homestead High School Frontpage	http://www.hhs.fuhsd.org/

• Howard Hughes Medical Center	http://www.hhmi.org/
• Icon Bazaar (Home Image)	http://www.iconbazaar.com/symbols
• Internet Athletic Trainer	http://pages.prodigy.com/NV/unlvatc.html
• Inernet Grateful Med	http://igm.nlm.nih.gov/
• Introduction to Muscle Physiology and Design	http://muscle.ucsd.edu/musintro/
• KICU Sports Focus	http://www.kicu.com/hssf/index.htm
• Larry Davis, A.T., C.	http://www.pbats.org/teams/athletics.html
• Life Chiropractic College West	http://www.lifewest.edu/
Los Gatos Community Hospital	http://www.tenethealth.com/LosGatos/
• Lower Extremity Case Studies at Harvard	http://www.meddean.luc.edu/lumen/MedEd/GrossAnatomy/LowerLimb/LECases.html
• Manual Lymph Drainage	http://www.vodderschool.com/
• Mark Letendre, A.T., C.	http://www.pbats.org/trainers/mletendre.html

• Massachusetts General Hospital	http://emergency.mgh.harvard.edu/wicc.htm
Emergency Medicine Cases	
• Massachusetts Medical Society	http://www.massmed.org/
• Medical Matrix	http://www.medmatrix.org/index.asp .
• Medicine & Science in Sports and Exercise	http://www.wwilkins.com/msse
• Medicine and Sports related links	http://www.mspweb.com
• Medline	http://www.nlm.nih.gov/databases/medline.html
• Medscape	http://www.medscape.com/
• Medsite	http://www.medsite.com/
• Medweb	http://www.gen.emory.edu/MEDWEB/medweb.html
• Merritt College (EMT, Nursing)	http://www.merritt.edu/
• Monica's Physical Therapy Page	http://www-eden.rutgers.edu/~sundae/PT_Page.html
• Muscle Charts of the Human Body	http://www.ptcentral.com/muscles/
• Myofascial Release	http://vll.com/MFR/index.html

• National Association of Clinical Nurse Specialists	http://www.nacns.org/
• National Athletic Trainers' Association	http://www.nata.org/
• National Athletic Trainers' Association Accredited Programs	http://www.nata.org/apprpved.html
• National College of Chiropractic	http://www.national.chiropractic.edu/
• National Football League	http://www.nfl.com/
• National Institute of Health	http://www.nih.gov/index.html
• National Institute of Health-Office of Alternative Medicine	http://altmed.oa.nih.gov/
• National Holistic Institute	http://www.nhimassage.com
• National Library of Medicine	http://www.nlm.nih.gov/
• National Strength and Conditioning Association	http://www.nsca.org/
• Naturopathic Medicine Network	http://www.pandamedicine.com/

• Nurses' Call	http://www.nurses-call.org/
• Nurseweb	http://nurseweb.ucsf.edu/srch.htm
• Nursing	http://www.nursingworld.org/ojin/index.htm
• Nursing Net	http://www.nursingnet.org/
• Occupational Therapy Internet Links	http://www.iop.bpmf.ac.uk/home/trust/ot/otlinks.htm
• Occupational Therapy Internet World	http://www.mother.com/~ktherapy/ot/
• Occupational Therapy Links	http://www.aotf.org/html/ot_links.html
• Palmer College of Chiropractic	http://www.palmeredu/PCCW/pcwm.ain.htm
• Pediatric Physical Therapy	http://www.wwilkins.com/PEP/
• Physical Therapy	http://www.apta.org/pt_journal/index.html
• Physical Therapy WWW Page	http://www.mindspring.com/~wbrock/pt.html
• Physiology Links	http://www.physiology.demon.co.uk/other-sources.html
• PubMed	http://www.ncbi.nlm.nih.gov/PubMed/
• Professional Baseball Athletic Trainers' Society	http://www.pbats.org

<ul style="list-style-type: none"> Professional Football Athletic Trainers' Society 	http://www.nfl.com/news/train
<ul style="list-style-type: none"> Professional Skills Institute (Physical Therapy Assistant) 	http://www.proskills.com/eastbay.htm
<ul style="list-style-type: none"> Psychosomatic Medicine 	http://www.wwilkins.com/PSY/
<ul style="list-style-type: none"> PT Central 	http://www.ptcentral.com/
<ul style="list-style-type: none"> Ray Tufts, A.T., C. 	http://www.sj-sharks.com/sharks/office/tufts.html
<ul style="list-style-type: none"> Rehab Links 	http://www.rehablinks.com
<ul style="list-style-type: none"> Rehab World 	http://www.rehabworld.com/
<ul style="list-style-type: none"> RHEMA-Acupuncture Information 	http://www.rhemamed.com
<ul style="list-style-type: none"> Samuel Merritt College 	http://www.aiccu.edu/Guidebook/SCHOOLS/SamMC.html
(Nursing)	
(Occupational Therapy)	
(Physical Therapy)	

<ul style="list-style-type: none"> • San Francisco State University (Athletic Training) 	http://userwww.sfsu.edu/~mitchw/Welcome.htm
<ul style="list-style-type: none"> • San Francisco State University (Kinesiology) 	http://www.sfsu.edu/~kinesiol/welcome.htm
<ul style="list-style-type: none"> • San Francisco State University • (Health Services Administration) 	http://thecity.sfsu.edu/~mpa/
<ul style="list-style-type: none"> • San Francisco State University (Nursing) 	http://www.nursing.sfsu.edu/
<ul style="list-style-type: none"> • San Francisco State University (Physical Therapy) 	http://itsa.ucsf.edu/~ptprog/
<ul style="list-style-type: none"> • San Jose City College 	http://www.sjcc.cc.ca.us/
<ul style="list-style-type: none"> • San Jose City College (EMT) 	http://www.sjcc.cc.ca.us/APBSemet.htm
<ul style="list-style-type: none"> • San Jose State University (Health Sciences) 	http://www.sjsu.edu/depts/casa/hs/index.html
<ul style="list-style-type: none"> • San Jose State University (Nursing) 	http://www.sjsu.edu/depts/casa/nursing/index.html
<ul style="list-style-type: none"> • San Jose State University (Occupational Therapy) 	http://www.sjsu.edu/depts/OT/top1.html

• San Jose State University (Kinesiology)	http://www.sjsu.edu/depts/casa/hup/index.htm
• Santa Rosa Junior College (EMT)	http://www.sonic.net/cal/emergnc.htm
• Santa Rosa Junior College (Paramedic)	http://www.sonic.net/cal/paramedic.htm
• Skyline College	http://www.smcccd.cc.ca.us/smcccd/skyline/skyline.html
• Sports Doc	http://www.medfacts.com/sportsdoc.htm
• Stanford University (Physician Assistant)	http://www.leland.stanford.edu/dept/medfm/pca/tofc.html
• Structural Integration (Rolfing)	http://www.rolf.com
• Society for Neuroscience	http://www.sfn.org/
• Southern California Orthopaedic Institute	http://www.scoi.com/
• Tamara Poole, A.T., C.	http://www.sjlasers.com/trainingroom/pooleframe.html
• The Alexander Technique	http://www.wprarienet.org/alexandrtch/nastat1.html
• The American Association of Naturopathic Physicians	http://www.naturopathic.org/Welcome.html

• The Chiropractic Page	http://www.mbnet.mb.ca/~jwiens/chiro.html
• The Clinical Letter for Nurse Practitioners	http://www.wwilkins.com/esources/journdex/clin-np/
• The Interactive Patient	http://musom.marshall.edu
• The Journal of Athletic Training	http://www.nata.org/jat/index.html
• The Journal of Chinese Medicine	http://www.pavilion.co.uk/jcm/
• The Journal of Physiology	http://physiology.cup.cam.ac.uk/JPhysiol/
• The Journal of Sports Chiropractic and Rehabilitation	http://www.wwilkins/CSM/
• The Journal of Medicine & Science in Sports and Exercise	http://www.wwilknis.com/msse/
• The Journal of Neuroscience	http://www.jneurosci.org/
• The Journal of Orthopaedic and Sports Physical Therapy	http://www.wwilkins.com/JOP/
• The Mining Company	http://horses.miningco.com/msub7.htm
• The New England Journal of Medicine	http://www.nejm.org/

The Neuroscientist	http://www.theneuroscientist.com/
• The Occupational Therapy Journal of Research	http://www.aotf.org/html/otjr.html
• The Physician and Sports Medicine	http://www.physsportsmed.com/
• The Physiological Society	http://physiology.cup.cam.ac.uk/
• The Emergency Medicine and Primary Care Home Page	http://www.embbs.com
The Reiki Page	http://www.crl.com/davidh/reiki/
• The Running Page	http://www.sunsite.unc.edu/dears/running/running.html
• The Virtual Hospital	http://vh.radiology.uiowa.edu
• The Visible Human Project	http://www.nlm.nih.gov/research/visible/visible_human.html
• The Virtual Body	http://www.columbia.net/vbody/
• The Virtual Nurse	http://www-sci.lib.uci.edu/HSG/Nursing.html

• The World of Chiropractic	http://wcoil.com/~innate/links.html
• Tragerwork	http://www.wax.apc.org/~bapera/trager1.htm
• Typing Injury FAQ	http://www.tifaq.com
• United States Olympic Committee	http://www.usoc.org/
University of California, Berkeley	http://www.berkeley.edu/
• University of California, Berkeley (Health Services Administration)	http://garnet.berkeley.edu/~sph/
• University of California, San Francisco (Nursing)	http://nurseweb.ucsf.edu/www/ucsfson.htm
• University of California, San Francisco (Physical Therapy)	http://itsa.ucsf.edu/~ptprog/
• University of San Francisco (Health Service Administration)	http://www.usfca.edu/cps/grad.html
• University of San Francisco (Kinesiology)	http://www.usfca.edu/ess/home.htm
• University of San Francisco (Nursing)	http://www.usfca.edu/graduate/prog20-23.html

• USA Today	http://www.usatoday.com/
• US News and World Report	http://www.usnews.com/usnews/home.htm
• Vesalius Interactive Anatomy	http://www.vesalius.com/
• Web PT.com	http://www.webpt.com
• Web Tracker	http://www.fxweb.com/tracker/
• West Valley College Athletic Training	http://www.wvmccd.cc.ca.us/wvc/pe/athl/train/index.htm
• Western Institute of Science and Health (Occupational Therapy Assistant)	http://www.sonic.net/wish/OTP-overview.html
• Western Institute of Science and Health (Physical Therapy Assistant)	http://www.sonic.net/wish/PTA-overview.html
• World Health Organization	http://www.who.ch/
• Z's Medical and Pharmacy Icon Collection	http://pw1.netcom.com/~Z_pham/icons.html

Appendix B-1

Home Page

Homestead High School

Athletic Training

Homestead High School
Athletic Training Department
21370 Homestead Road
Cupertino CA. 95014-0292
Training Room: (408) 522-2542
Fax: (408) 738-8631

hssportsmed@hotmail.com

This web site has been created for the high school student wishing to find more information in the allied health care profession. Please explore and use the various links to find information on subjects ranging from acupuncture to emergency medicine.

The student athletic trainer at Homestead High School has the opportunity to experience athletic medicine first hand while assisting the head athletic trainer and athletes in 18 varsity sports. If you are interested in participating in an internship with the on-campus athletic training facility, one of the clinical affiliations, or just want to broaden your experience in the allied health care professions please stop by the on campus training room or contact the head athletic trainer through phone or email.

CONTENTS:

- ❶ Info: Information regarding the on-campus Athletic Training facility.
- ❷ Classes at Homestead: A listing of classes to expand the students horizons in Athletic Training.
- ❸ Education in the Bay Area: A listing of allied health care education programs from acupuncture to EMT.

② Accredited Athletic Training Programs: Provides access to all accredited programs via the NATA.

② Opportunities in the Bay Area: A listing of contacts for colleges, universities, and professional teams.

② Associations: A listing of associations in sports medicine and their links.

② Journals: A listing of journals in sports medicine and their links.

② Volunteer Experiences: A listing of sports medicine specialists the student may visit with.

② Links: A listing of links to various sports medicine specialties.

created by c.murdach thumbsupspanky@hotmail.com

The included links are for the explicit use of browsing and do not represent the endorsement of the Homestead High School administration, athletic training staff, or Fremont Union High School District.

Athletic Training Room Information

Homestead High School

Athletic Training

●ATHLETIC TRAINING ROOM INFORMATION●

CONTENTS

- What is an Athletic Trainer?: Information on the profession of athletic training.
 - Why is Athletic Training Important?: Information on the effects of athletic training.
 - What could I learn in the Athletic Training Room?: Information for the student on learning experiences.
 - What kind of qualities do I need?: Information on necessary student qualities.
 - What will be expected of me?: Expectations of the student athletic trainer.
 - What will my responsibilities be?: The responsibilities of the student athletic trainer in the training room.
 - When is the Athletic Training Room open?: Hours the on-campus athletic training room is open.
-

THE ROLE AND FUNCTION OF THE ATHLETIC TRAINER

The athletic trainer is a well educated professional who is an integral part of the complete athletic program. The athletic trainers duties consist of implementing injury prevention programs and to provide immediate treatment and rehabilitation of the injured athlete as directed by the team physician.

The athletic trainer must posses a variety of skills. A certified athletic trainer must have a complete and thorough knowledge of anatomy, physiology, psychology, hygiene, nutrition, taping and bracing, conditioning, injury prevention, and protective equipment. All of these skills will be addressed in some form during an internship.

In addition to all of these skills, the athletic trainer must be a diplomat. The athletic trainer must have excellent rapport with the team physician, coaches,

administration, and the athletes in order to perform the job adequately. Working with the physician, the athletic trainer carries out the treatments prescribed in addition to keeping the coach informed of their athletes' physical and emotional condition. It is vital the athletic trainer possess and develop good communication skills.

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WHY ATHLETIC TRAINING IS IMPORTANT

Even under the most ideal conditions, all those who engage in physical activities risk injury at some time or another. Given the nature of competition injuries are likely to occur.

With the addition of an athletic trainer to an athletics program, many important services can be extended. The athletic trainer can supply efficient medical management and add to the prevention and treatment of athletic related injuries. Under the direct supervision of a certified athletic trainer, competition is safer, team morale is higher, and an increased level of performance is achieved.

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WHAT YOU COULD LEARN IN THE ATHLETIC TRAINING ROOM

Students will have the opportunity to experience, experiment with, and learn techniques in the training room to benefit themselves as well as student athletes.

The student trainer has the opportunity to learn and participate in the following procedures:

- Primary evaluation, emergency first aid, and transportation of injured athletes.
- Prevention and protective measures such as strapping, bandaging, application of protective pads and devices designed to protect or prevent existing injuries.
- Application of cryotherapy (cold packs, ice massage, ice water, immersion, and spray coolants).
- Application of thermotherapy (analgesic lotions, moist heat packs, and heating pads).
- Application of hydrotherapy (warm and cold whirlpool).
- Application of compression bandages (elastic wraps, and pressure pads).
- Application of active and passive muscular stretching.

- Muscle and joint tissue testing and evaluation.
- Administration of rehabilitation exercises for post-operative and non operative treatments.

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QUALITIES OF THE STUDENT INTERN

The student intern is one of the direct links to the athlete's general well being. The intern must have a sincere interest in the athletes health care. Other skills necessary to successful in the program will include confidence, integrity, good sense of humor, communication skills, the ability to get along with others, and common sense. The student intern must also posses ingenuity, manual dexterity, and the ability to remain motivated to work until the job is finished.

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EXPECTATIONS OF THE STUDENT INTERN

The following expectations will be made of the student intern to increase their learning experience:

- Education comes first. If you cannot report to the training room because you have too much homework, let the staff athletic trainer know.
- Learn something new everyday.
- Ask questions.
- Have personal motivation. The quality of learning a student may gain is based solely on the program he or she wishes to make for themselves. The more motivated you are to learn, ask questions, and spend time with the athletes, the more well rounded your experience in the athletic setting will be.
- Become involved. When evaluations, treatments, or rehabilitation techniques are in process, observe as closely as possible and take part if necessary. Unless it is a private discussion which might cause embarrassment to the athlete you need to be involved.
- Arrive on time. Practices do not wait for late athletes, and will definitely not wait for late trainers. If you are late to a practice the possibility of an injury becoming more severe because of delayed response time arises.
- You will never be asked to participate in anything you are not comfortable doing.
- Dress professionally. No skirts, tank tops, or sandals in the training room.

Jeans are acceptable if there are no rips or holes.

- If a problem arises with a student intern and an athlete, the student intern should bring the matter to the staff athletic trainer immediately. The staff athletic trainer will support the student as much as possible and rectify the problem.
- Use common sense and good judgment.
- Have fun.
- Keep open lines of communication between the staff athletic trainer and yourself. Remember: We are not only here for the athletes, but also for each other.
- Be able to accept constructive criticism. Everyone has different experiences and skills. People see things differently. Some of the skills you will be shown will be new, difficult, and accomplished in many ways. Never close the door on a new way of doing something.
- When unsure, act with confidence and clarify the situation with the staff athletic trainer as soon as possible so the problem may be rectified.
- No pagers or cellular phones are allowed on the practice field with the exception of the staff athletic trainer.
- Dating athletes is not recommended. Do not allow your personal life to influence your professional life in the training room.
- Commitment. If you have committed to a certain schedule, you will be expected to stick to it. If you have committed to working an athletic event, you will be expected to be present, unless another intern can cover it for you.
- Dedication. The student must demonstrate a sincere desire to further their educational goals in the field of sports medicine.
- Do not be afraid to get dirty. Athletic training involves working in varied conditions such as rain, heat, wind, dirt, mud, and sometimes snow.

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RESPONSIBILITIES OF THE STUDENT INTERN

- Learn the correct and effective application of all taping, bandaging, and padding.
- Attain the knowledge of the correct application of therapeutic modalities and the precautions involved. Do not use a piece of equipment until given permission to do so. Direct supervision is necessary for the administration of all treatments.
- Familiarize yourself with the proper first aid procedures and emergency care. Know the emergency procedures for every site you attend as a student intern.
- Familiarize yourself with the general training room procedures and records.
- Assist and cooperate fully with the staff athletic trainer, other students, team physicians, coaches, administrators, and athletes.
- Familiarize yourself with the daily cleaning duties and contribute your

share. The training room is a medical facility, and must be kept clean at all times.

- Refer all injuries to the staff athletic trainer. As you gain experience, you will be able to recognize and deal with more significant injuries. During your internship, it is important to be conservative, and to not overstep your limitations.
- Familiarize yourself with practice, and game procedures. Carry out all of your duties efficiently and effectively.
- Familiarize yourself with all of the training room policies and procedures.
- Enforce all training room rules to the best of your ability.

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HOURS OF THE TRAINING ROOM

The hours of operation vary by semester and in season sports. The training room will generally follow the school schedule, and be open on weekdays from 2:00 until the conclusion of practices. Weekends will vary according to competitive schedules. Other times are arranged by appointment only.

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HOMESTEAD HIGH SCHOOL ATHLETIC TRAINING HOME PAGE

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Appendix B-3

Recommeneded Classes to Increase a Students Understanding of the Athletic Training Profession

Homestead High School

Athletic Training

RECOMMENDED CLASSES TO INCREASE A STUDENT'S UNDERSTANDING OF THE ATHLETIC TRAINING PROFESSION

CLASSES

❶ What classes can I take at Homestead High School?: A short listing of classes that can assist the student in preparing for an education in the allied health care professions.

❷ Where can I take CPR and First Aid?: A listing of opportunities for the student to obtain and maintain a certification in CPR and First Aid.

CLASSES OFFERED BY FREMONT UNION HIGH SCHOOL DISTRICT

All of the classes listed below may be confusing when taken one at a time. When you consider the larger picture it will make more sense. All of the following classes play an integral part in how athletic training functions as a whole.

None of these classes are required to work in the training room. Classes taken in conjunction with your internship, can enhance your knowledge with hands on experience. The following class listing is taken from the 1997-1998 Course Selection Guide, Fremont Union High School District, Sunnyvale CA 94087.

Art

Art Appreciation
Compugraphics

Business

Introduction to Business
Economic Issues
Business Law
Marketing and Advertising
Computer Applications

Industrial Technology
Introduction to Industrial Technology
Drafting
Wood 1-3

Living Skills
Health and Life Skills

Mathematics
Math
Algebra
Geometry
Calculus
Computer Programming

English
Writing for Communication
Creative Writing
Literature and Writing
Writing
Mythology and Folklore
Writing for College
Humanities
Journalism

Science
Biology
Physiology
Chemistry
Physics

Social Sciences and History
Global Issues
World History
US History
Contemporary Issues
Psychology
Sociology
US Government
Economics

Modern Language

French
German
Spanish

Music

Music Appreciation

Physical Education

PE
Tae Kwon Do
Weight Training

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OFF CAMPUS INSTRUCTION

Classes may be taken at other institutions to allow the student to increase their knowledge and expertise in the athletic training room. More information on educational programs for the allied health care professions can be found at various institutions throughout the Bay Area.

Cardiopulmonary Resuscitation (CPR)

Available through The American Red Cross or The American Heart Association

First Aid and Advanced First Aid

Available through The American Red Cross or The American Heart Association

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Appendix B-4

Allied Health Care Professional Education in the Bay Area

Homestead High School

Athletic Training

● ALLIED HEALTH CARE PROFESSIONAL ● EDUCATION IN THE BAY AREA

EDUCATIONAL PROGRAMS

- Acupuncture: A listing of the two accredited acupuncture schools in the bay area.
- Chiropractic: A listing of the two accredited chiropractic schools in the bay area.
- Complimentary Therapy: A listing of thirteen styles offering training courses in the bay area.
- Emergency Medical Technician: A listing of eight local training programs.
- Exercise Science and Kinesiology: A listing of six college programs in the bay area.
- Nursing: A listing of sixteen college programs in the bay area.
- Occupational Therapy: A listing of the two colleges in the bay area offering degree programs.
- Occupational Therapy Assistant: The one private institution offering a local degree program.
- Paramedic: A listing of the two college programs in the bay area.
- Physical Therapy: A listing of the two programs with degree programs in the bay area.
- Physical Therapy Assistant: A listing of the four college programs in the bay area.
- Physician Assistant: The link to the only PA program in the bay area.
- Public Health Administration: A listing of the five, primarily graduate degrees in the bay area.

ACUPUNCTURE

<u>American College of Traditional Chinese Medicine</u>	Masters degree in traditional chinese medicine, license in acupuncture.
<u>Five Branches Institute</u>	Masters degree in traditional chinese medicine, license in acupuncture.

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[\[Physical Therapy Assistant\]](#) [\[Physician Assistant\]](#) [\[Public Health Administration\]](#)

CHIROPRACTIC

<u>Life Chiropractic College West</u>	Education in the field of chiropractic health care. Degree program in Doctor of Chiropractic.
<u>Palmer College of Chiropractic</u>	Education in the field of chiropractic health care. Degree program in Doctor of Chiropractic.

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[\[Physical Therapy Assistant\]](#) [\[Physician Assistant\]](#) [\[Public Health Administration\]](#)

COMPLIMENTARY THERAPIES

<u>American Polarity Therapy Association</u>	Dedicated to the promotion and use of polarity therapy. Polarity therapy consists of gentle contacts and manipulations to stimulate and balance the bodies electromagnetic field.
<u>American Yoga Association</u>	Dedicated to providing the highest quality of Yoga instruction available.
<u>Aston Patterning</u>	A comprehensive, integrated approach to deep tissue release and movement education recognizing the body, mind and spirit.
<u>Craniosacral Therapy</u>	A gentle, non-invasive form of light touch therapy which uses the craniosacral system's rhythm to detect and balance restrictions that can cause pain and dysfunction throughout the body.
	Using the awareness of ones self to

<u>Feldenkrais</u>	improve movement and enhance human functioning.
<u>Hanna Somatic Education</u>	Uses gentle and controlled movements to improve natural control of the muscular system, physical functioning, and stress reduction.
<u>Hellerwork</u>	A series of deep tissue bodywork and movement education sessions designed to realign the body and release chronic tension and stress.
<u>Structural Integration (Rolfing)</u>	Manipulation of the body's myofascial system through soft tissue manipulation and movement education to organize the whole body in gravity.
<u>Manual Lymph Drainage</u>	A manual, therapeutic method of stimulating the movement of fluids in the body's tissues to combat lymphedema.
<u>Myofascial Release</u>	A gentle and consistent hands on technique providing sustained pressure into myofascial restrictions to eliminate pain, headaches, and restore lost motion.
<u>National Holistic Institute</u>	A 500+ hour certification program in massage therapy approved by <u>The American Massage Therapy Association</u> .
<u>The Alexander Technique</u>	Conscious movement with skilled observation to improve performance and physiological functioning.
<u>Tragerwork</u>	Uses gentle non-invasive light touch and movement therapy to relieve stress and improve physiological functioning.

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EMERGENCY MEDICAL TECHNICIAN

<u>San Jose City College</u>	Certificate EMT program.
<u>Santa Rosa Junior College</u>	Certificate EMT program.
<u>Skyline College</u>	Certificate EMT program.
<u>City College of San Francisco</u>	Certificate EMT program.
<u>College of San Mateo</u>	Certificate EMT program.
<u>Contra Costa College</u>	Certificate EMT program.
<u>Merritt College</u>	Certificate EMT program.
<u>Chabot College</u>	Contact the Health Sciences Department: (510) 786-6898

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EXERCISE SCIENCE AND KINESIOLOGY

<u>California State University, Hayward</u>	B.S and M.S degrees available.
<u>San Francisco State University</u>	B.S and M. S degrees available.
<u>San Jose State University</u>	B.S and M.S degrees available.
<u>Sonoma State University</u>	B.S and M.S degrees available
<u>University of San Francisco</u>	B.S degree available.
<u>University of California, Berkeley</u>	Contact the Department of Integrative Biology: (510) 642-3281

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NURSING

<u>Chabot College</u>	Offers an RN degree.
<u>City College of San Francisco</u>	Offers an RN or LAN degrees.
<u>Contra Costa College</u>	Offers an to RN degree.
<u>College of Marin</u>	Offers an RN degree.
<u>College of San Mateo</u>	Offers an RN degree.
<u>De Anza College</u>	Offers an RN degree.
<u>Evergreen Valley College</u>	Offers an RN degree.
<u>Merritt College</u>	Program leads to an RN degree.
<u>Samuel Merritt College</u>	Offers BS, and MS degrees in nursing.
<u>San Francisco State University</u>	Offers B.S and M.S degrees.
<u>San Jose State University</u>	Offers B.S, M.S. and Nurse Practitioner programs.
<u>Sonoma State University</u>	Offers B.S and M.S degrees.
<u>University of California, San Francisco</u>	Offers M.S and Ph.D. degrees.
<u>University of San Francisco</u>	Offers B.S and M.S degrees.
<u>California State University, Hayward</u>	Offers B.S and M.S. degrees. Contact the Health Sciences Department: (510) 885-3481
<u>Ohlone College</u>	Offers an RN degree . Contact the Health Sciences Department: (510)659-6030

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OCCUPATIONAL THERAPY

<u>Samuel Merritt College</u>	Offers an M.S degree in occupational therapy.
<u>San Jose State University</u>	Offers B.S and M.S degrees in occupational therapy.

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OCCUPATIONAL THERAPY ASSISTANT

<u>Western Institute of Science and Health</u>
--

Offers an A.A degree as an occupational therapy assistant.
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PARAMEDIC

<u>Foothill College</u>

Offers a professional program for working EMT's.
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<u>Santa Rosa Junior College</u>

Offers a professional program for working EMT's.
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PHYSICAL THERAPY

<u>Samuel Merritt College</u>

Offers an M.A, and M.S degrees in physical therapy.

<u>University of California, San Francisco and San Francisco State University.</u>
--

Offers an M.S degree in physical therapy.

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PHYSICAL THERAPY ASSISTANT

<u>De Anza College</u>	Offers an A.A. degree as a physical therapy assistant.
<u>Professional Skills Institute</u>	Offers an A.S degree as a physical therapy assistant.
<u>Western Institute of Science and Health</u>	Offers an A.S. degree as a physical therapy assistant.
<u>Ohlone College</u>	Offers an A.S. degree as a physical therapy assistant. Contact the Health Sciences Department: (650) 659-6030

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PHYSICIAN ASSISTANT

<u>Stanford University</u>	Offers a combined program with Foothill College leading to a degree as a Physician Assistant.
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PUBLIC HEALTH ADMINISTRATION

<u>California State University, Hayward</u>	Offers an M.P.A option in Health Care Administration.
<u>San Jose State University</u>	Offers a B.S in Health Science.
<u>San Francisco State University</u>	Offers an M.P.A option in Health Services Administration.
<u>University of California, Berkeley</u>	Offers B.S and M.S degrees.
<u>University of San Francisco</u>	Offers an M.P.A option in Health Services Administration.

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Appendix B-5

Colleges and Universities with Accredited Athletic Training Programs

Homestead High School

Athletic Training

• COLLEGES AND UNIVERSITIES WITH ACCREDITED ATHLETIC TRAINING PROGRAMS

Colleges and universities that utilize student athletic trainers in their athletic training rooms are accredited by the National Athletic Trainers Association (NATA) and the Commission on the Accreditation of Allied Health Education Programs (CAAHEP). The institutions maintaining accredited educational programs in athletic training can be found through the National Athletic Trainers' Accredited Program Web Site.

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Athletic Training Opportunities in the Bay Area

Homestead High School

Athletic Training

● ATHLETIC TRAINING OPPORTUNITIES ● IN THE BAY AREA

ATHLETIC TRAINING OPPORTUNITIES

● Accredited University Athletic Training Programs: A listing of the one accredited program in the bay area.

● Non-Accredited University Internships: A listing of the ten non-accredited programs in the bay area.

● Junior College Internships: A listing of the sixteen junior college programs in the bay area.

● Professional Sports Teams: A listing of the professional sports clubs in the bay area.

If you do not find your program listed, please contact the Homestead High School Athletic Training Department at hhssportsmed@hotmail.com.

UNIVERSITY ATHLETIC TRAINING PROGRAMS

A complete listing of nationwide opportunities in college and university programs may be found with the National Athletic Trainers' Association Accredited Programs web site.

ACCREDITED ATHLETIC TRAINING PROGRAMS

<u>San Jose State University</u>	Contact Bethany Shifflett, graduate coordinator: (408) 924-3016.
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NON-ACCREDITED ATHLETIC TRAINING INTERNSHIPS

California State University, Hayward	Contact the training room: (510) 885-3049
College of Notre Dame	Contact the training room: (650) 508-3488
<u>San Francisco State University</u>	Contact the training room: (415) 338-1576
San Jose State University	Contact the training room: (408) 924-3016
Santa Clara University	Contact the training room: (408) 554-4063
<u>Sonoma State University</u>	Contact the training room: (707) 664-2188
Stanford University	Contact the training room: (650) 723-1213
University of California, Berkeley	Contact the training room: (510) 642-4878
University of California, Santa Cruz	Contact the training room: (408) 459-4793
University of San Francisco	Contact the training room: (415) 422-6273

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JUNIOR COLLEGE ATHLETIC TRAINING INTERNSHIPS

Canada College	Contact the training room: (650) 306-3344
Chabot College	Contact the training room: (510) 786-6989
College of Marin	Contact the training room: (415) 485-9588
College of San Mateo	Contact the training room: (408) 574-6451
Contra Costa College	Contact the training room: (510) 235-7800 x 317
De Anza College	Contact the training room: (408) 864-8746
Foothill College	Associate Science Degree in Athletic Injury Care. Contact the training room: (650) 949-7324
Laney Junior College	Contact the training room: (510) 464-3580
Napa Valley College	Contact the training room: (707) 253-3230
Menlo College	Contact the training room: (650) 617-2351
Ohlone College	Contact the training room: (510) 659-0644
San Francisco City College	Contact the training room: (415) 239-3412 x 3413
San Jose City College	Contact the training room: (408) 298-2181 x-3905
Santa Rosa Junior College	Contact the training room: (707) 527-4457
Skyline College	Contact the training room: (650) 738-4283
West Valley College	Contact the training room: (408) 741-2005

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PROFESSIONAL SPORTS TEAMS

<u>Golden State Warriors</u>	Head Athletic Trainer: <u>Tom Abdenour</u>
<u>Oakland A's</u>	Head Athletic Trainer: <u>Larry Davis</u>
<u>Oakland Raiders</u>	Head Athletic Trainer: <u>Rod Martin</u>
<u>San Francisco 49ers</u>	Head Athletic Trainer: <u>Lindsay McLean</u>
<u>San Francisco Giants</u>	Head Athletic Trainer: <u>Mark Letendre</u>
<u>San Jose Clash</u>	Head Athletic Trainer: <u>Bruce Morgan</u>
<u>San Jose Giants</u>	Head Athletic Trainer: <u>Dave Groeschman</u>
<u>San Jose Lasers</u>	Head Athletic Trainer: <u>Tamara Poole</u>
<u>San Jose Sabercats</u>	Head Athletic Trainer: <u>Steve Bartlinski</u>
<u>San Jose Sharks</u>	Head Athletic Trainer: <u>Ray Tufts</u>

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Professional Associations in Sports Medicine

Homestead High School

Athletic Training

● PROFESSIONAL ASSOCIATIONS ●
IN SPORTS MEDICINE

<u>American Academy of Physician Assistants</u>	Dedicated to representing the physician assistant in education and the field.
<u>American Association of Oriental Medicine</u>	Supports the practitioner of oriental medicine by advocating professional standards.
<u>American Chiropractic Association</u>	Preserves, protects, improves, and promotes the chiropractic profession.
<u>American College of Sports Medicine</u>	Researches methods to allow everyone to live longer and more productively.
<u>American Massage Therapy Association</u>	Develops and advances the art, science, and practice of massage therapy.
<u>American Nurses Association</u>	Promotes and advances the art and skills in the nursing profession.
<u>American Occupational Therapy Association</u>	Supports the practice, research, and science of occupational therapy.
<u>American Physical Therapy Association</u>	Interested in fostering the advancement in physical therapy practice, education, and research.
<u>American Society of Exercise Physiologists</u>	Dedicated to the advancement and improvement of exercise physiology.
<u>Athletic Training Research and Education Foundation</u>	To enhance the health care of the physically active through funding and support of research and education.
<u>California Athletic Trainers' Association</u>	Advancement of athletic training in California.

<u>Far West Athletic Trainers' Association, District 8</u>	Advancement of athletic training in California, Nevada, Hawaii and Guam.
<u>National Association of Clinical Nurse Specialists</u>	Promotes the unique contributions of the clinical nurse specialists.
<u>National Athletic Trainers' Association</u>	Certifies, and aims to advance the athletic training profession world wide.
<u>National Strength and Conditioning Association</u>	A world wide authority on strength and conditioning for improved physical performance.

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Journals in Sports Medicine

Homestead High School

Athletic Training

● JOURNALS IN SPORTS MEDICINE ●

<u>American Journal of Chinese Medicine</u>	Publishes articles and essays on traditional and ethnomedicine in all cultures. Peer reviewed.
<u>Chiropractic Techniques</u>	Subscription information on articles and information regarding chiropractic. Publication of the <u>National College of Chiropractic</u> .
<u>ChiroZone</u>	An on-line magazine addressing topics in the field of chiropractic.
<u>Clinical Nurse Specialist: The Journal for Advanced Nursing Practice</u>	Subscription information on topics in the field of nursing, and nursing specialty areas. Official journal of the <u>National Association of Clinical Nurse Specialists</u> .
<u>Medicine & Science in Sports and Exercise</u>	Listing of articles, and full text abstracts in the field of exercise physiology. Official publication of <u>The American College of Sports Medicine</u> . Peer reviewed.
<u>Nursing</u>	Full text articles and abstracts on topics in the nursing profession. Official publication of the <u>American Nurses Association</u> .
<u>Pediatric Physical Therapy</u>	Subscription information on articles regarding the practice of physical therapy with adolescents. Official publication of the <u>American Physical Therapy Association</u> . Peer reviewed.

<u>Physical Therapy</u>	Listing of articles, and full text abstracts in the field of physical therapy. Official publication of the <u>American Physical Therapy Association</u> . Peer reviewed.
<u>Psychosomatic Medicine</u>	Subscription information on topics in psychology, psychiatry, behavioral sciences, pediatrics, and psychosomatic disorders. Official journal of the <u>American Psychosomatic Society</u> .
<u>The Clinical Letter for Nurse Practitioners</u>	Subscription information on topics in the field of clinical nursing. Peer reviewed.
<u>The Journal of Athletic Training</u>	Listing of valuable articles in the field of athletic training. Official publication of the <u>National Athletic Trainers' Association</u> . Peer reviewed.
<u>The Journal of Chinese Medicine</u>	Listing of articles and sample full text on oriental medicine. Includes web sites on oriental medicine. Peer reviewed.
<u>The Journal of Neuroscience</u>	Listing of abstracts and full text articles (with subscription) in the field of neuroscience. Official publication of the <u>Society for Neuroscience</u> . Peer reviewed.
<u>The Journal of Orthopaedic and Sports Physical Therapy</u>	Subscription information on articles regarding sports and orthopedic concerns in physical therapy. Official publication of the <u>American Physical Therapy Association</u> . Peer reviewed.
<u>The Journal of Physiology</u>	Full text and abstracts on topics in the research and development of physiological information. Official publication of <u>The Physiological Society</u> .
<u>The Journal of Sports Chiropractic and Rehabilitation</u>	Subscription information on topics in the field of athletic training, physical therapy, injury prevention, and physiotherapeutic methods. Official journal of the <u>American Chiropractic Association</u> .
<u>The Neuroscientist</u>	Listing of abstracts and full text articles (with subscription) in the field of neuroscience. Peer reviewed.

<u>The New England Journal of Medicine</u>	Listing of articles, and full text abstracts in the field of medicine and medical research world wide. Official publication of the <u>Massachusetts Medical Society</u> . Peer reviewed.
<u>The Occupational Therapy Journal of Research</u>	Listing of past articles and information regarding the field of occupational therapy. Official publication of the <u>American Occupational Therapy Association</u> .
<u>The Physician and Sports Medicine</u>	Full text source of primary care sports medicine and personal health care articles. Peer reviewed.

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Appendix B-9

Volunteer Clinical Affiliations

Homestead High School

Athletic Training

● VOLUNTEER CLINICAL AFFILIATIONS ●

The following facilities have agreed to allow high school students to observe, and become familiar with the procedures that are followed. In order to provide the student with a variety of settings and experiences in the sports medicine field any of these opportunities may be arranged with the assistance of the staff athletic trainer.

Profession	Clinical Site	Contact
Physical Therapy	Santa Clara Sports Physical Therapy Physical Performance Institute	John Ceglia Terry Rutledge
Exercise Science	Physical Performance Institute	Terry Rutledge
Occupational Therapy	Physical Performance Institute	Terry Rutledge
Sports Psychology	Physical Performance Institute	Dr. Barbara Conry
Physiatry	Sports & Occupation Medical Association	Dr. Kahan
Pediatrics	Camino Medical Group	Dr. Vereschagin
Sports Medicine	Camino Medical Group Camino Medical Group	Dr. Vereschagin Dr. Sandor
Orthopedics	Los Gatos Community Hospital	Dr. Trieb
Chiropractic	Waisblatt Chiropractic	Dr. Waisblatt
Surgical Observation (1)	Good Samaritan Hospital	Dr. Trieb

Surgical Observation (1)	Los Gatos Community Hospital	Dr. Trieb
Paramedic (2)	AMR Ambulance	Chuck English

The clinical experience will be coordinated through the staff athletic trainer at Homestead High School and the clinical site requested by the student. When the student has accepted a site for clinical observation, the student must supply their own transportation to and from the clinical site.

(1) The observation of surgery requires working one full semester in the training room, a permission slip from the students' parents, and a phone or personal interview with Dr. Trieb.

(2) Observation with AMR requires that the student be 18 years of age or a member of the Boy Scouts of America Medical Explorer Unit.

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Links

Homestead High School

Athletic Training

● LINKS ●

INFORMATIONAL LINKS

- Acupuncture: Four links and information regarding acupuncture.
 - Anatomy: Six links to a variety of interactive anatomy sites.
 - Athletic Training: Sixteen links in athletic training from orthopedics to the olympics.
 - Biomechanics: Five sites in the field of biomechanics from meta-sites to ergonomics.
 - Chiropractic: Four sites on chiropractic health care, with one dedicated to chiropractic with animals.
 - Complimentary Therapy: A listing of thirteen site related to complimentary health care.
 - Emergency Medicine: A listing of four large site dedicated to emergency medicine.
 - Exercise Science and Kinesiology: A listing of eight sites related to exercise science and kinesiology.
 - Nursing: A listing of nine site in the nursing field form patient care to diagnosis simulations.
 - Occupational Therapy: A listing of three large sites dedicated to occupational therapy.
 - Physical Therapy: A listing of eight sites in physical therapy from home pages to meta-sites.
 - Physiology: Two sites in the field of physiology on from muscle design to a meta-site.
 - Public Health Administration: Seven sites in public health from USA Today to various associations.
-

If you have not found the topic you would like to reference please use the Medsite Search Engine to access other topics.

ACUPUNCTURE LINKS

Acupuncture.com	Student and practitioner resources, information regarding acupuncture.
Acupuncture Home Page	An introduction to acupuncture, links, schools, research, and resources.
Acupuncture Links	Hundreds of links from acupuncture to education.
RHEMA-Acupuncture Information	Many links and services regarding acupuncture.

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ANATOMY LINKS

Body Quest	An exploration of the human body for students ages 11-16.
The Digital Anatomist	A digital database of anatomical images and three-dimensional animations.
The Interactive Knee	Viewable images with interactive labels.
The Virtual Body	An interactive presentation of the human body and information regarding common conditions.
The Visible Human Project	An on-going project of detailed anatomical images of the male and female human body.
Vesalius Interactive Anatomy	An on-line image archive for the medical community.

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ATHLETIC TRAINING

<u>Center for Disease Control and Prevention</u>	The home page for the <u>CDC</u> . Provides information regarding issues of disease control and research.
<u>Emory University Medweb</u>	A large database search engine on medical topics.
<u>Internet ATC</u>	Basic reference site for athletic training interests.
<u>Medical Matrix</u>	A large database containing information on various aspects of health and disease.
<u>Medicine and Sports Related Links</u>	A mega-site with many links and information sources regarding sports medicine.
<u>Muscle Charts of the Human Body</u>	A web site providing information on the human musculature with interactive diagrams.
<u>National Institute of Health</u>	The <u>NIH</u> home page and search engine on health issues.
<u>National Library of Medicine</u>	Access to information on health issues from multiple databases. Free <u>Medline</u> , <u>PubMed</u> , and <u>Internet Grateful Med</u> search engine access.
<u>Professional Baseball Athletic Trainers' Society</u>	An organization dedicated to the promotion of the athletic training in the professional baseball arena.
<u>Professional Football Athletic Trainers' Society</u>	An organization dedicated to the promotion of the athletic training in the professional football arena.
<u>Professional Football Athletic Trainers' Society-Questions and Answers</u>	Ask questions of the athletic trainers involved in the <u>National Football League</u> .
<u>Southern California Orthopedic Institute</u>	A site demonstrating anatomy, three dimensional images, and movies pertaining to orthopedics.
<u>Sports Doc</u>	An interactive site that allows the user to evaluate virtual patients in a game format.
	A personal home page providing links

<u>The Athletic Training Home Page</u>	and information to various aspects in athletic training.
<u>The First Aider</u>	An on-line publication by <u>Cramer</u> addressing issues of injury prevention to the coach, athletic trainer and student.
<u>United States Olympic Committee Online</u>	<u>USOC</u> home page providing information on all aspects of the olympic games.

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BIOMECHANICS LINKS

<u>Berkeley Orthopaedic Biomechanics</u>	The <u>UC Berkeley</u> Biomechanics home page with student and facility information.
<u>Biomechanics Research & Consulting, Inc.</u>	Definitions, resources, links, and related information on Biomechanics.
<u>Biomechanics World Wide</u>	Many links and informational resources regarding Biomechanics.
<u>ErgoWeb</u>	Information and links regarding the study of ergonomics.
<u>Typing Injury FAQ</u>	An informational web site on repetitive strain injuries.

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CHIROPRACTIC LINKS

<u>Chiro-Web</u>	Resources, research, links, and related sources in the field of chiropractic.
<u>The Chiropractic Page</u>	Resources and links related to chiropractic.
<u>The World of Chiropractic Online</u>	Resources, education, and links to chiropractic sites.
<u>Mining Company-Chiropractic Issues for Animals</u>	Links to information regarding the chiropractic and holistic health care of animals.

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COMPLIMENTARY THERAPY LINKS

<u>Alternative Medicine</u>	A home page devoted to alternative health care links.
<u>American Herbalists Guild</u>	Seeks to strengthen, legitimize, and support the use of sound practices in the field of herbology.
<u>Ayurvedic Foundation</u>	Information, links, and training in ayurvedic therapies.
<u>Biofeedback Pages</u>	Information, links, and resources in Biofeedback.
<u>Botanical.com</u>	Articles and links to topics related to herbal remedies.
<u>Eye Movement Desensitization and Reprocessing</u>	A technique used by psychotherapists to assist survivors of severe trauma.
<u>Health WWWeb</u>	A large database on health related information, schools, resources, and research.
<u>HerbNET</u>	Information regarding herbs, herbal remedies, educational programs and links.
<u>Homeopathics-FAQ</u>	A listing of information, abstracts, and links to information regarding homeopathy.
<u>National Institute of Health Office of Alternative Medicine</u>	The home page for the OAM. Provides information on the research of alternative therapies.

<u>Naturopathic Medicine Network</u>	Information, definitions, education, resources, and links in naturopathic medicine.
<u>The American Association of Naturopathic Physicians</u>	A governing body in the field of naturopathic medicine. The home page provides information on links, education and professional resources.
<u>The Reiki Page</u>	A method of natural healing based on the application of universal life force energy.

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EMERGENCY MEDICINE LINKS

<u>Emergency Services Access Network</u>	Information, resources and links to emergency medicine, law enforcement, and fire departments.
<u>Emergency Services WWW List</u>	Listings, resources, and information regarding emergency medicine and related topics.
<u>Massachusetts General Hospital Emergency Medicine Cases</u>	A listing of solved and unsolved case studies with the opportunity for the user to apply their knowledge as a medical detective.
<u>The Emergency Medicine and Primary Care Home Page</u>	In depth listings, libraries, links, and resources related to medical issues.

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EXERCISE SCIENCE AND KINESIOLOGY LINKS

<u>Coaching Science Abstracts</u>	Research information regarding the use of applied sport sciences in the field of coaching.
<u>Do It Sports</u>	A list of events, resources, and clubs involved in athletic participation.
<u>Exercise Physiology</u>	Information, links, resources, and topic listings in the field of exercise physiology.
<u>Exercise and Sport Psychology</u>	Information on psychological aspects of sport. Newsletters, issues, book reviews and conferences.
<u>Food and Nutrition Newsletter</u>	Information regarding nutrition, dietary guidelines and internet links.
<u>Gatorade Sports Sciences Institute</u>	Information for athletic trainers, physicians, coaches, nutritionists and others in the field of sports medicine, sports medicine, sports nutrition and exercise science.
<u>Howard Hughes Medical Institute</u>	Links, resources, and information regarding all aspects of biomedical research.
<u>The Running Page</u>	Links, resources, and information regarding running

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NURSING

<u>Association of Operating Room Nurses</u>	An association dedicated to the promotion and support of the nursing profession in the emergency room.
<u>Emergency Nursing World</u>	Information, resources, links, and sources regarding various aspects of the nursing profession.
<u>MedScape</u>	An on-line resource for medical professional and patient education. Provides various links, and resources regarding medical issues.
<u>The Virtual Hospital</u>	Allows the user to tour the hospital, use three dimensional images, and find resources within the hospital system.
<u>Nurses' Call</u>	Provides access to Nurseweb, research, links, education, and support of nurses in the field.
<u>Nurseweb</u>	A search engine devoted to accessing topics in a database of medical information.
<u>Nursing Net</u>	Provides information, links and resources to nursing professionals.
<u>The Interactive Patient</u>	Allows the user to participate in a working diagnostic procedures with a virtual patient.
<u>The Virtual Nursing Center</u>	A very large an comprehensive collection of resources, links and information regarding nursing. Contains a medical dictionary for on-line access.

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[\[Physiology\]](#)
[\[Public Health Administration\]](#)

OCCUPATIONAL THERAPY LINKS

<u>Occupational Therapy Internet Links</u>	Journals, home pages, student links, organizations, newsgroups, and web sites.
<u>Occupational Therapy Internet World</u>	Schools, internet directory, newsletters, listserves, book and product reviews, research, and surveys.
<u>Occupational Therapy Links</u>	Web sites, listserves, newsgroups, and chat rooms.

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[\[Physiology\]](#)
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PHYSICAL THERAPY LINKS

<u>Advanced Tissue Science</u>	Informational resources on a corporation pioneering tissue growth and application to the human body.
<u>Physical Therapy WWW Page</u>	Resources, educational information, links and treatment information in physical therapy.
<u>Foot and Ankle Special Interest Group</u>	A special interest group of the APTA providing information, links and resources on the foot and ankle.
<u>Monica's Physical Therapy Page</u>	Suggestions on how to apply to physical therapy school, links, web sites and related information.
<u>PT Central</u>	On-line information, links, resources, education, and schools in physical therapy.
<u>Rehab Links</u>	Articles, discussions, links, schools and resources in the field of rehabilitation.
<u>Rehab World</u>	A comprehensive collection of links in rehabilitation.
<u>Web PT.com</u>	Links, resources, listings, products, and books in the field of physical therapy.

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PHYSIOLOGY LINKS

Introduction to Muscle Physiology and Design	A collection of informational pages regarding muscle physiology.
Physiology Links	World sources, educational departments, societies, links, and references.

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PUBLIC HEALTH ADMINISTRATION LINKS

Agency for Health Care Policy and Research	National advisory council on health care policy and research. Provides links, and information resources in the field of public health administration .
American Public Health Association	Information, links, and resources on disease prevention and health promotion.
American Health Information Management Association	Information and resources in the planning and research of health care administration.
Association of University Programs in Health Administration Education	Educational programs, links, resources, and information in public health administration.
U.S News & World Report	Information, news and world issues in an on-line format.
USA Today	On-line edition containing information, news, and updated reports on present world trends.
World Health Organization	Provides information on health issues facing the entire globe. Informational links and resources.

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HOMESTEAD HIGH SCHOOL ATHLETIC TRAINING HOME PAGE

[\[Home\]](#) [\[Info\]](#) [\[Classes\]](#) [\[Education\]](#) [\[Programs\]](#) [\[Bay Area\]](#) [\[Associations\]](#) [\[Journals\]](#) [\[Volunteer\]](#) [\[Links\]](#)

Appendix C

Web Site Design Survey

Thank you for participating in a survey of the Homestead High School Athletic Training Web Site. The information you provide will allow your feedback to influence design considerations and changes before the web site is put on-line. Please evaluate the web site by responding to the following items honestly and to the best of your ability.

	Poor				Excellent
1. Breadth of the information accessible through the web site.	☐	☐	☐	☐	☐
2. Specificity of the information accessible through the web site.	☐	☐	☐	☐	☐
3. Graphics contained in the web site.	☐	☐	☐	☐	☐
4. Ease with which you were able to navigate the web site.	☐	☐	☐	☐	☐
5. Quality of the text (e.g., easy to read?).	☐	☐	☐	☐	☐
6. Writing style (e.g., easy to understand?).	☐	☐	☐	☐	☐
7. Hyperlinks (e.g., easy to find?).	☐	☐	☐	☐	☐
8. Background colors.	☐	☐	☐	☐	☐
9. Ability to find the information you want?	☐	☐	☐	☐	☐
10. Overall impression of the site?	☐	☐	☐	☐	☐

In this section please provide suggestions for improvement regarding the elements of the web site noted in each item.

1. Balance between the breadth and specificity of the information accessible through the web site.

2. Use of graphics, selection of background colors, and hyperlinks.

3. Writing style and amount of textual material presented.

4. Was the site fun to use? If not, what would help?

San José State
UNIVERSITY

College of Applied
Sciences and Arts
Department of Human
Performance

One Washington Square
San Jose, CA 95131-0064
Voice: 408-924-3010
Fax: 408-924-3053

Appendix D-1

Subject Consent Form-Minor

Agreement to Participate in Research

An Education Web Page for Homestead High School Athletic Training.

Responsible Investigators:

Charles Murdach, A.T., C.

Bethany Shifflett, Ph.D., Barbara Conry, Ph.D., Kyle Bodyfelt, MA, A.T., C.

My child has been asked to participate in a research study investigating the usefulness of a web site developed for high school students to access information regarding the allied health care professions.

My child will be asked to view an educational web page and answer simple survey questions regarding their likes and dislikes, effectiveness of presentation, and ease of navigation of the world wide web from this particular web site. The study will take place at the Homestead High School Athletic Training Room between March 15-31, 1998.

Participating in this study will allow the primary researcher (Charles Murdach, A.T., C.) to formulate a more effective presentation for the use of information reference by high school students interested in the allied health care professions.

The results of this study may be published. If in the event this material is accepted for publication every effort will be made to protect subject anonymity. I am aware that individual data will be kept confidential and destroyed after the study is completed.

Questions regarding this research study may be addressed to Charles Murdach, A.T., C., principle investigator, at (408) 522-2542. Complaints regarding this research study may be addressed to James Bryant, Ph.D., San Jose State University, Department of Human Performance, Department Chair, at (408) 924-3010. Questions or complaints about research, subjects' rights, or research related injury may be presented to Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408) 924-2480.

Consent is given voluntarily. I understand that there is no compensation or alternate form of testing. Your child may refuse to participate in the research study. If your child decides to participate in the study, he or she is free to withdraw at any time without prejudice to your child's relations with San Jose State University or Homestead High School. No service will be lost, or jeopardized if your child does not participate in the study.

At the time of acceptance, and signing of this form, a copy will be given to your child for you to reference.

- The signature of a parent or guardian on this document indicates approval for the child to participate in the study and a statement that the child is freely willing to participate.

The signature of a researcher on this document indicates agreement to include the above named subject in the research and attestation that the subject has been informed of his or her rights.

Name of Child	Parent or Guardian's Signature	Date
Relation to Child		Phone
Full Mailing Address		
Investigator's Signature		Date

The California State University:
Chico, Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San Jose, San Luis Obispo,
San Marcos, Stanislaus, Stanislaus

San José State
UNIVERSITY

**College of Applied
Sciences and Arts**

**Department of Human
Performance**

One Washington Square
San Jose, CA 95132-3054
Voice: 408-924-3010
Fax: 408-924-3053

Appendix D-2

Subject Consent Form-Adult

Agreement to Participate in Research

An Education Web Page for Homestead High School Athletic Training.

Responsible Investigators:

Charles Murdach, A.T., C.

Bethany Shifflett, Ph.D., Barbara Conry, Ph.D., Kyle Bodyfelt, MA, A.T., C.

I have been asked to participate in a research study investigating the usefulness of a web site developed for high school students to access information regarding the allied health care professions.

I will be asked to view an educational web page and answer simple survey questions regarding my likes and dislikes, effectiveness of presentation, and ease of navigation of the world wide web from this particular web site. The study will take place at the Homestead High School Athletic Training Room between March 15-31, 1998.

Participating in this study will allow the primary researcher (Charles Murdach, A.T., C.) to formulate a more effective presentation for the use of information reference by high school students interested in the allied health care professions.

The results of this study may be published. If in the event this material is accepted for publication every effort will be made to protect subject anonymity. I am aware that individual data will be kept confidential and destroyed after the study is completed.

Questions regarding this research study may be addressed to Charles Murdach, A.T., C., principle investigator, at (408) 522-2542. Complaints regarding this research study may be addressed to James Bryant, Ph.D., San Jose State University, Department of Human Performance, Department Chair, at (408) 924-3010. Questions or complaints about research, subjects' rights, or research related injury may be presented to Serena Stanford, Ph.D., Associate Academic Vice President for Graduate Studies and Research, at (408) 924-2480.

Consent is given voluntarily. I understand that there is no compensation or alternate form of testing. I may refuse to participate in the research study. If I decide to participate in the study, I am free to withdraw at any time without prejudice to my relations with San Jose State University or Homestead High School. No service will be lost, or jeopardized if I do not participate in the study.

At the time of acceptance, and signing of this form, a copy will be given to me for my reference.

- The signature of a subject on this document indicates agreement to participate in the study.
- The signature of a researcher on this document indicates agreement to include the above named subject in the research and attestation that the subject has been informed of his or her rights.

Subject's Signature

Date

Investigator's Signature

Date

The California State University:
Chandlers Office
Bakersfield Chico Dominguez Hills
Fresno Fullerton Hayward Humboldt
Long Beach Los Angeles Maritime Academy
Monterey Bay Northridge Pomona
Sacramento San Bernardino San Diego
San Francisco San Jose San Luis Obispo
San Marcos Sonoma Stanislaus

Appendix E

SPSS Data and File Information

File Information

AGE

GENDER Gender of the Subject

Value	Label
1.00	male
2.00	female

STATUS Status of the Subject

Value	Label
1.00	student
2.00	athletic trainer
3.00	instructor

Q1 Question 1 Breadth of information accessible through the web site.

Value	Label
1.00	poor
2.00	fair
3.00	good
4.00	very good
5.00	excellent

Q2 Question 2 Specificity of the information accessible through the web site.

Value	Label
1.00	poor
2.00	fair
3.00	good
4.00	very good
5.00	excellent

Q3	Question 3	Graphics contained in the web site.
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent
Q4	Question 4	Ease with which you were able to navigate the web site.
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent
Q5	Question 5	Quality of the text (e.g. easy to read?)
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent
Q6	Question 6	Writing style (e.g. easy to understand?)
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent
Q7	Question 7	Hyperlinks (e.g. easy to find?)
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent

Q8	Question 8	Background colors
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent
Q9	Question 9	Ability to find information you want?
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent
Q10	Question 10	Overall impression of web site?
	Value	Label
	1.00	poor
	2.00	fair
	3.00	good
	4.00	very good
	5.00	excellent

SPSS Data File

	Age	Gender	Status	q1	q2	q3	q4	q5	q6	q7
1	14.00	2.00	1.00	5.00	5.00	1.00	3.00	3.00	2.00	4.00
2	16.00	2.00	1.00	3.00	4.00	5.00	5.00	5.00	5.00	5.00
3	18.00	1.00	1.00	5.00	5.00	3.00	4.00	5.00	5.00	5.00
4	18.00	1.00	1.00	5.00	5.00	3.00	4.00	4.00	4.00	4.00
5	24.00	1.00	2.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00
6	24.00	1.00	2.00	5.00	5.00	4.00	4.00	4.00	4.00	5.00
7	23.00	2.00	2.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00
8	24.00	2.00	2.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00
9	35.00	1.00	3.00	5.00	4.00	4.00	4.00	3.00	3.00	5.00
10	32.00	1.00	3.00	4.00	5.00	3.00	5.00	5.00	5.00	4.00

q8	q9	q10
1.00	3.00	4.00
4.00	5.00	5.00
3.00	4.00	5.00
3.00	5.00	5.00
5.00	5.00	5.00
3.00	4.00	5.00
4.00	5.00	5.00
4.00	5.00	5.00
3.00	4.00	4.00
4.00	4.00	4.00

Appendix F

Inquiry Audit

Key Elements Checklist

"An Educational Web Page for Homestead High School Athletic Training"

Author: Charles Murdach

Auditor: Scott Barker, ATC

1. Subject specific

The information presented in the Homestead High School Athletic Training web site is very specific to the Athletic Training Profession. It allows the student to easily find accurate information pertaining to athletic training in an asynchronous medium.

2. Instructional Design

- Non-linear design

Through incorporating well organized hypertext links to various web pages and other web sites the student can explore information that meet their needs.

- Text Format

The text format is presented in a clear and sensible manner. Font selections and sizes are acceptable for the purpose of this web site.

- Writing Style

The writing style used in the Homestead High School Athletic Training web site is acceptable. It is very clear and legible.

- Graphic Design

The graphic design of the Homestead High School Athletic Training web site is acceptable. I do have these suggestions based on the four principles of design as described by Robin Williams, 1994. The four principals are: Contrast, Repetition, Alignment, Proximity.

1. The main home page uses a white background and therefor I feel the remaining pages should also use white as the background color to maintain constancy (repetition).

2. The links to the other pages use a center alignment. I would suggest as an alternative align left as well as condensing to a one or two words to represent the link. This "Button" could then be followed with a short description of the link.

3. The mustang logo is used on every page and even though it is attractive and helps maintain constancy (repetition), I feel the logo is too large. I would suggest decreasing the size of the logo. This would minimize the users need to scroll down on every page to see the content.

- Graphics Format

The logo is a "gif" format. The "gif" graphic file format is the accepted standard for web page graphics. However, I would suggest adding the extra benefit of an interlaced gif. Interlacing the "gif" allows the image to be downloaded sequentially. This allows the viewer to see the image while it is downloading rather than waiting for the entire image. The interlaced gif appears to become more in focus as it is downloaded.

3. Functionality

The Homestead High School Athletic Training web site is extremely functional and provides the viewer with a tremendous amount of information pertaining to the Athletic Training Profession.

Summary

The auditor has found an audit trail to be evident through the scholarly writing, reflexive journal, and web site content. With the completion of the inquiry audit, the auditor finds the research and project logical and coherent. The auditors critique and review finds this research project valid, and dependable.

The Homestead High School Athletic Training web site is one of the better high school web sites the auditor has seen in athletic training. It is evident through viewing the site as well as reading the paper and reflexive journal that the author has put an extreme amount of research and work into creating this site. This process far exceeds the average practices used in web page design. The quality and thoroughness of the Homestead High School Athletic Training web site is extremely high. This site will serve as a excellent resource to the students at Homestead High School. Due to the nature of the World Wide Web, it won't be long before other sites from around the country will also be linked to the Homestead High School Athletic Training web site.

Auditor:
Scott Barker, ATC
Head Athletic Trainer
California State University, Chico
Chico, CA 95973

IMAGE EVALUATION TEST TARGET (QA-3)

APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989

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