The Use of Instructional Technology within Physical Education, Sport and Health

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As we race towards the end of the century, there is an unprecedented development in the availability of information. This information can, and when used appropriately, be an efficient and effective tool in the teaching/learning process. As in education generally, information within Physical Education, sport and health has been greatly enhanced by the use of instructional technology (IT). Instructional Technology refers to a wide range of resources which can be utilised in the process of teaching. With the inevitable and rapid expansion of these areas the wise educator will learn how to use these tremendous resources to augment their present teaching from both the preparation and delivery perspective. This article looks at a variety of resources available through personal computers; specifically through the Internet and CD-ROM programmes.

I.   Resources on the Internet

Physical Education, sport and health have a variety of resources on the Internet. These resources require a number of techniques1 procedures to access the information. For the purpose of this paper discussion will be limited to: mailing lists, information searches, news, and the World Wide Web (the Web).

Mailing lists (listserv lists)

The predominant method for people to communicate with groups of people with similar interests on the net is by way of Listserv lists.

A Listserv is an automated mailing list, kept on a computer. You use your mailing software programme to put your name on the list, and remove your name when you no longer want to receive mail from that particular list. When you add your name to a Listserv you start receiving mail from that computer mailing list.

One subscribes to these lists by sending a message which reads 'subscribe listname firstname secondname' to 'listserv@address'. A selection of address lists follows:

fit-l@etsuadmn.bitnet	general discussion about fitness
biomch-l@nic.surfnet.nl	biomechanics of performance
sportpsy@vm.temple.edu	sport psychology
sportsoc@vm.temple.edu	sport sociology
sportmgt@unb.ca	sport management
athrn-l@iubvm.ucs.indiana.edu	athletic training
hast-l@vm.usc.edu	hast harriers
outdor-l@vm.temple.edu	camping, hiking, backpacking, outdoors
sporthist@pdomain.uwindsor.ca	sport history
ultra@listserv.dartmouth.edu	ultra marathoning

Orienteering. Discusses the sport of orienteering. To subscribe send a message to:

orienteering-request@graphics.cornell.edu

Your request will be forwarded to the list owner.

Track and Field. To subscribe send a message to:

istproc@gac.edu

In the body of the message put the line: 'subscribe-t-and-f Firstname Lastname'

Race Walkers. To subscribe send a request to:

racewalk-request@reed.edu

Sport Science. To subscribe send a message to:

majordomo@stonebow.otago.ac.nz

In the body of the message put the line: 'subscribe sportsci'

Weights. Discusses weightlifting of all types. To subscribe send a request to Michael Sullivan at:

weights-request@fa.disney.com

Information Searches

Here are two places to search for information on specific topics that have been written up as journal articles or placed as documents.

1.   Discus Database. This data base is kept at the Canadian Sports Centre in their Sport Information Resource Centre. The method of accessing this database is to enter the following URL into the location area of a net browser such as Netscape, Mosaic (these will be discussed further in the section about the Web):

http://www.sirc.ca/sirc/services.html

2.   ERIC Clearinghouse Search. Known on the Web as AskERIC. The URL is:

http://ericir.syr.edu/

News

News groups are found on Usenet and some people like to claim that Usenet is the net. There are thousands of news groups. No one knows precisely how many because groups are added and

deleted every day. You will need a newsnet reader (software) to subscribe to the news groups of your choice or you can subscribe using a web browser. Subscription details are included with the software. Specific areas of interest include:

rec.running

rec.sport.triathlon

rec.backcountry   hiking and outdoor activities

misc.fitness   general fitness topics

alt.hash.house.harriers   the original internet hashing newsgroup

rec.sport.baseball

rec.climbing

rec.outdoors.fishing

rec.windsurfing

rec.folk-dancing

rec.equestrian

rec.arts.dance

The World Wide Web (WWW or Web)

Although the above means of accessing the resources on the Internet are powerful and useful it is the Web which over the last year or so has made tremendous strides in development. The main reason for this is probably because it employs 'point-and-click' technology and this makes it so easy to use. As well as the ease of use the attractiveness of the display on the computer screen is also appealing. Developers of the material, on what are called sites, can

now use dramatic graphics, a range of fonts, and even ask readers to send information via customised reply forms. To add to the attractiveness of the Web the receipt of sound and moving images is possible and is available to anyone with powerful enough computer hardware and software.

A browser is used to see, use and interact with the information on the Web. These browsers are software packages and the two most commonly used are Netscape and Mosaic. Both are 'intuitive' and 'use-friendly'. As with the other aspects of the Internet new information is being added everyday and previously posted information is being updated. The address for a site is known as a URL (Uniform Resource Locator).

The Web has a number of facilities which allow you to search for information. These are called search engines. Two such search engines are Webcrawler at http://www.webcrawler.com/ and Yahoo at http://www.yahoo.com/. The results of the searches for your key words will give you dynamic links with sites which contain the information you have requested. You can also search for, and then download, software using the search engine at the Virtual Software Library using one of these URL's: http://vsl.cnet.com/about.html or http://sunsite.ust.hk/cgi-bin/vsl-front.

Here are a few sites (URL's) which deal with Physical Education, sport and health. The Sport Information Resource Centre (SIRC). They produce the SPORT Database, a thesaurus, bibliographies and provide document delivery services.

http://www.sirc.ca/sirc/services.html

Training/running:

http://www.infoshpere.com/clients/etj/index.html (Endurance Training Journal)

http://www.cs.hufi.ac.il/papers/rma/streching_toc.html

http://rocky.humboldt,edu/running/runweb.html(Running links)

http://www.yahoo.com/yahoo/Entertainment/Sports/Running/

http://www.math.ucla.edu/~kscanne/track.html (Track and Field)

Medical:

http://ch.nus.sg/CH/level1.html (NUS Medical School)

http://www.clark.net/pub/pribut/sport.html (Dr. Pribut Sports Page)

http://s2.com/html/etj/clinic.html (The Clinic)

http://riceinfo.rice.edu/~jenkins/medtent.html (The Medical Tent)

http://deja-vu.oldiron.cornell.edu/~jabbo.faqpart3.html (Sports nutrition)

http://www.nlm.nih.gov/extramural_research.dir/visible_human.html (The Visible Human Project)

Education sites:

http://www.ntu.ac.sg (Nanyang Technological University)

http://www.nie.ac.sg:8000/wwwnie/index.html

http://www.ntu.ac.sg/nie/phyEd/ (School of Physical Education)

http://www.ntu.ac.sg/nie/phyEd/lmlists.html (a web page of one of the authors which has links to some of the sites listed in this article)

http://www.shef.ac.uk/unit/projects/gpp/ip.html

http://cs1 miu.edu/exss/iahperd/IHPERD.html

http://www.ksu.edu/~kines/index.html (kinesiology)

http://www.unl.edu/tcweb/Faculty/sime/wes.html

http://www.cdc.noaa.gov/~jac/Sportpsy/ (Sport psychology)

http://137.142.20.1/~mirandma/sportmgt.html (Sport Management)

http://www.ntu.ac.sg/nie/phyEd/olympic.html (Singapore Olympic Academy)

Miscellaneous:

http://fiat.gslis.utexas.edu/~lewisa/womsprt.htm (Women's Sports Page)

http://tns-www.lcs.mit.edu/cgi-bin/sports (World Wide Web of Sports)

http://infoweb.magi.com/~rwatt/cool.html

Sports Results:

http://www.usatoday.com/sports/si.htm

http://espnet.sportszone.com/

http://www.InstantSports./com/baseball.html (Baseball scores in real time)

Run a search using the sport for which you want the results. Sites are set up each year for tennis major tournaments, world cup football, region games including:

http://www.chiangmai.ac.th/SG/index.html (18th SEA Games, Chiang Mai)

http://www.altanta.olympic..org/ (1996 Olympic Games, Atlanta)

http://www.syndey.olympic.org/index.html (Sydney 2000 Olympic Games)

Examples of URL Trails.

Let us explore three of the URL's and describe some of the information to which you would have access. Time for a warning; many sites have their URL changed and so if any of these trails do not work for you use one of the search engines to find the page.

1.   The Visible Human Project.

a.   Type: <http://www.nlm.nih.gov/extramural_research.dir/ visible_human.html> and press ENTER and you will be taken to the

Home Page headed 'National Library of Medicine: The Visible Human Project'.

Introductory paragraphs includes, '... It (The Visible Human Project) is creating a complete, anatomically detailed, three-dimensional representations of the male and female human body...'.

b.   Scroll down the page and then select The Dissectable Human which will take you to

c.   URL: <http://www.eai.com/DH_human/home.html> and then select the link to the Dissectable Human; select your screen size and you will be ready to explore the human body through images and short movies.

2.   Sport Information Resource Centre.

a.   Type<http://www.sirc.ca/sirc/sirc.html> and press ENTER and you will reach the home page headed: Sport Information Resource Centre – A world of sport information at your fingertips.

b.   Select and click Product and Services. Then you will have a choice between SPORT Database; thesaurus, bibliographies; current awareness publication; document delivery services. Selecting and clicking on any of these will scroll you down the page for more information and access to resources.

3.   1996 Olympic Games.

a.   Type <http://www.mindspring.com/atlanta.html>and press ENTER and you will be welcomed to the official web page of the Centennial Olympic Games. You will have a wide choice of pages to visit including tickets, programme and schedules, history, travel, sports and venues, news. Just select and click.

II.   CD ROM & Other Programmes

1.   Nutritionist IV by N^2 Software.

This is a software package, in versions for Windows and DOS, which analyses food for its nutrients, helps the user to create recipes and menus and prepares recommendations for an individual diet from personal detail and information provided.

2.   A.D.A.M.: The Inside Story.

The viewer dissects and learns about the human body on screen. Information is provided regarding the skeletal, and circulatory systems, as well as all the internal organs.

3.   A.D.A.M.: The Nine Month Miracle.

This programme takes the viewer inside the womb to look at fetal development from conception to birth. Using in-utero photographs, animation, and great art work, the CD covers all scientific and social information needed to prepare for pregnancy and birth. Also included is an interactive children's book to teach about pregnancy and how to deal with a new sibling.

Both A.D.A.M. titles use humour, outstanding illustrations and animations to convey information about the human body. Curriculum guides have recently been added so they could be used in the classroom, ideally for students 13 years old and above.

4.   Miscellaneous

There are software packages, many freeware or shareware, which can be used to plan and organise sports events such as basketball and tennis tournaments or track and field competitions.

As readers will have seen in computer stores, companies have produced a range of packages with which the user interacts in sports such as golf, basketball, and soccer.

It is also appropriate to mention the virtual reality game arcades which attract many people. Many of these feature interaction with sports such as basketball and football. Very little research has been conducted on the effects of these attractions, but the involvement by the participants resembles 'reality' for them. Although they develop motor skills, both fine and gross, and the ability to deal with and discriminate between large pieces of data, questions need to be asked about the effects on their social skills, physical development and aerobic fitness levels.

Conclusion

This is a very small sampling of the resources available using personal computers which deal with Physical Education, sport and health. You can easily spend a lot of time on the Net searching for and reading material which covers the areas in which you have an interest. It is also possible, more likely probable, that you will visit sites and read information about topics and subjects which are marginally related to the original one you were looking for. You can also spend much time interacting with the software mentioned. All of this has the potential to expand our knowledge base and understanding of various topics but we must be selective as to what we will spend time on. As in all aspects of life these resources and facilities can be of tremendous benefit to us but we need to approach them with a particular purpose in mind so that we can use the time to our best advantage. Happy hunting, reading and sharing of ideas, news and views. Enjoy this new technology.

You may wish to visit the Homepages of the authors or send an email message to their address below:

Homepage: Email:

http://www.ntu.ac.sg/nie/phyEd/lmcgill.shtml   mcgilll@nievax.nie.ac.sg

http://www.ntu.ac.sg/nie/phyEd/stevehp.html   wrights@nievax.nie.ac.sg

References

Butler, Mark (1994). *How to Use the internet.* Emeryville, CA: Ziff-Davis Press.

Ellsworth, J. H. (1994). *Education on the internet.* Indianapolis, IN: Sams Publishing,

Engst, A. C. (1994). *Internet Starter Kit.* Indianapolis, IN: Hayden Books. (A version for PC's and for Macintosh).

Engst, A. C. and W. Dickson (1994). *Internet Explorer Kit.* Indianapolis, IN: Hayden Books. (A version for PC's and for Macintosh).

Gibbs, M. and R. Smith (1993). *Navigating the internet.* Indianapolis, IN: Sams Publishing.

Key, J. (1994). 'Reaching Out With Internet' in *Journalof Physical Education, Recreation & Dance,* February, pp. 21-24.