

The Medical Educator's Resource Guide

John R. Cotter, Ph.D.

The websites reviewed in the Medical Educator's Resource Guide are recognized by our reviewers as sites that can be used by medical educators and students for instruction and learning of the medical sciences. Nonetheless, before deciding to augment a course with an additional instructional tool, some thought should be given to the way a website or list of websites fits into the overall instructional plan of a course. It also helps to understand what prompts a student to use a site that has been recommended as a supplement to the instruction provided by an instructor.

Ali Ahmed, Stephanie Andrus and Helen Choi attend the University at Buffalo. At this stage in their training, they are about to complete the first year of medical school. The courses they have taken include gross anatomy, organ/system modules that integrate clinical knowledge and basic sciences and courses that teach clinical skills and emphasize problem solving.

In discussing with them the circumstances and factors that prompt a student to use a website, it is apparent the learning style of an individual has a lot to do with the extent to which a website or for that matter the Web is used for learning. Mr. Ahmed, for example, says websites can expand or reinforce concepts taught in class but are not all organized in ways that facilitate his learning or needs. Moreover, he contends searching the World Wide Web for images and information is faster and more productive than searching a website for specific bits of information.

According to Ms. Andrus, the most useful websites are those with images or those that help with understanding medical facts and clinical cases. One such site—eMEDICINE—which Ms. Andrus reviews below is a case in point. Another website—WebPath - which Ms. Choi favors for its images and case studies, was reviewed in an earlier edition of the Guide.

No one however uses the web extensively. Mr. Ahmed points out his instructors offer more than enough in the way of learning materials. The time spent on a website therefore has a lower priority than that given to lecture notes, reading assignments, textbooks, laboratory exercises and other materials. So, rather than provide students with long lists of websites, he suggests instructors limit the number of websites to one or two that mirror the content of a course. And according to Ms. Choi, instructors should stress the importance or usefulness of the sites in learning the material presented in a course. The implication is that students are more likely to use them, if they do.

The comments of all three first year medical students indicate learners need much more than a list of websites appended to a course's webpage. Although students each have different approaches to learning, they are looking for the most efficient means of learning, communicating and doing well on examinations. Given the freedom of creativity permitted by the web, the difficulty for users, of course, is in finding a website that matches their needs. The role of an instructor is to provide some direction. This can be done by drawing their students' attention to a site, emphasizing the importance of a website and explaining how the subsections of a website specifically fit the instructional goals of a course.

If you are aware of a website that has the potential for being used by educators and students of the medical sciences, please consider contributing to the Guide. Instructions for submitting a review may be found at http://www.iamse.org/jiamse/author_info.htm. Send all submissions to jrcotter@buffalo.edu.

American Association of Anatomists. Bethesda, Maryland.
<http://www.anatomy.org/>

The American Association of Anatomists (AAA) has created a website with excellent resources for anatomy educators and students. In the **Education and Teaching Tools** portion of the website, questions may be posted to experts in the "Ask the Expert" section. Previous questions and answers may be reviewed by exploring the categories listed as body region, organ/body system, development, histology and neuroanatomy. Another area of interest designed specifically for educators is the "Exam Question Database."

The user must obtain a password to enter this section but this is a simple procedure involving a quick email to AAA describing what and where you teach. A prompt email response gives the educator the password necessary for using the exam question database which contains exam questions listed under the following headings: NBME, Body Region, Tissue Type and Discipline. The site's "Virtual Organ Image Library" offers links to more than thirty websites and movies featuring pathologic, radiographic, cross sectional and gross anatomical animations and digital images. The format of the website is concise and easy to navigate and should prove to be useful to students as a resource to supplement classroom learning and professors

for in-class demonstration and sample exam questions. (Reviewed by Pamela Stein, D.M.D., University of Kentucky Chandler Medical Center, Lexington, KY.)

eMedicine. Instant Access to the Minds of Medicine.

<http://www.emedicine.com>

eMedicine is used commonly by medical students due to the wide range of clinical information that can be found in one easily accessible location. Although this internet resource is not as in depth as some written literature, it serves as a clinical guide for students covering a broad spectrum of topics. Medical students need to acquire and become familiar with much information while in medical school so it is convenient to have a reputable peer reviewed resource for clinical information. The website is also appropriate for health care providers and patients. A user can find articles, images, continuing medical education information and general background information with a search tool. Just type in the name of a disorder and you can choose from articles written from the perspectives of many different fields (e.g. pediatric or adult medicine). The articles generally contain many different topics including the author information, an introduction to the disease, the clinical manifestations of the disease, possible differentials (with links to more information about that particular diagnosis), a general work up, treatment options, specific medications, follow up information, some miscellaneous information and a bibliography. The website is free but a user name and password are required before the site can be entered. Once registered, the company personalizes the website based on whether you are a health care professional (includes your specialty), a student in the health related professions or a patient/consumer. Registration offers free personalized, specialty or consumer information, free educational updates, as well as CME/CE/CEH credits and picture database access. In summary, this website has been of great help to my classmates and me in assisting us in our school's case-based curriculum. (Reviewed by Stephanie Andrus, B.A., University at Buffalo.)

Histology Home Page. Paul B. Bell, Jr. and Barbara Safiejko-Mroczka.

<http://casweb.cas.ou.edu/pbell/Histology/histo.home.html>

This site services a histology course in the Department of Zoology at the University of Oklahoma. Potential users should visit The "Virtual Histology Lab" and "Self-Tests - Menu". The virtual laboratory deals with several practical matters: the operation and care of a microscope, staining methods and the appearance of the actual tissues and organs used by the students in the course. The section on staining methods is instructive because it illustrates how different dyes are used to demonstrate different cell structures. Visitors interested in the self-testing aspect of the site can check to see if they are able to identify structures and answer fact-based lecture/textbook-based questions. (Reviewed by John R. Cotter, Ph.D., University at Buffalo.)

ThJuland's MSer's Glen.

<http://members.tripod.com/~ThJuland/>

This website is maintained by a multiple sclerosis (MS) patient. The site allows you to explore the central nervous system (CNS) with respect to the clinical side of MS and other CNS issues such as traumatic brain injury. It addresses the anatomy and functions of various CNS structures and areas of interest to the MS patient. It contains links to over 20 textbooks and a glossary of relevant terms. In addition, there is a lengthy list of publications and abstracts dealing with multiple sclerosis and the CNS. The website is a great place for information about MS and the nervous system. It contains no interactive slides or study questions, but due to the abundance, extensiveness and accessibility of the information, educators will have no problem finding questions for tests or clarifying concepts regarding the CNS. The site contains the patient's history and test results as well as links to other Internet sources for many different types of CNS related problems. There is also a forum for patients. This website makes it easier for students and educators alike to find sufficient information, efficiently. (Reviewed by Janelle Reed, B.S., University of Kentucky.)