Dr. Patricia O’Sullivan joined the staff of OED this past August as a part-time Associate Professor. Pat has 20 years of experience in health professions education and has worked in schools of nursing, pharmacy, and medicine both at the undergraduate and graduate level. She received her bachelor’s in chemistry from Rosemont College, her master’s in chemistry at the University of Pennsylvania, and her doctorate in education from the University of Houston. She previously worked for the University of Texas Health Science Center at Houston, the University of Alabama at Birmingham, Rhode Island Hospital, a Brown University affiliate, and Baystate Medical Center, a Tufts University affiliate. These experiences have contributed to diverse experiences particularly in evaluation and student learning activities. Her primary interest is in working collaboratively with faculty to develop educational research studies. Dr. O’Sullivan has taught research methodology and statistics.

Test Item Writing Workshop

Should you be writing A-type, K-type or R-type items on your tests? The Respiratory Therapy faculty members at the College of Health Related Professions will promptly tell you “yes,” “no,” and “maybe.” These faculty members participated in an Item Writing Workshop offered by OED. Patricia O’Sullivan from the office conducted the workshop.

The objectives of the workshop were to learn how to avoid technical flaws in item writing, to write items at a higher level than simple recall, and how to use item data to make improvements in test items. Small programs often think that item analysis data is not useful to them, but we reviewed what we can learn about how an item is working even with a small sample of students.

Emphasis was placed on writing good stems, lead-ins, and distractors. The resource for the workshop was the Constructing Written Test Questions for the Basic and Clinical Sciences written by Susan M. Case and David B. Swanson from the National Board of Medical Examiners. This resource introduced the faculty members to the idea of item templates. Templates can help you reduce the flaws in the items that you write. The respiratory therapy faculty members found the templates provided were very versatile and applicable to their testing.

Within the workshop, the faculty members worked on revising items that had been on their own respiratory therapy tests. Those items needed revisions because there were flaws in the items. We reviewed other test items and realized that we could now readily recognize our own good items.

We did emphasize the relationship between teaching and testing. To test at a higher level may require changes in the teaching strategies that faculty are using with their students.

By the way, A-type items are one-best-answer multiple choice items. K-type items are what we typically called multiple, multiple. That is, the directions included that response A was for 1, 2, 3 only, response B was for 1, 3 only and so forth. This type is no longer in use by the NBME. R-type items are the latest type of item that the NBME is suggesting. It is called extended matching. In extended matching the item writer selects a theme, develops a list of options, and then provides short vignettes. The student selects from the options what fits the vignette. There are more options then vignettes. An extension of this item type, called Pick N format, allows the student to answer with more than one option. Ready to learn more? Call OED at 686-5720.

OED will offer Seminar in Improvement of Curriculum and Instruction in Health Professions Education via Web-CT Fall of 1999

Graduate credit granted through UALR
WebCT: Using the Web for Learning

The World Wide Web has several capacities that can be used for instructional purposes: synchronous and asynchronous communication, interactivity, data collection, and the delivery of text, graphics, audio, and to a limited extent (for now), video. For UAMS faculty, making use of these capacities has just become easier and more convenient with the availability of WebCT. WebCT (Web Course Tools), is a Web-based program that integrates several functions (“tools”) that make it simpler for you to set up an entire course or supplement a course with some or all the features just mentioned. In addition to the convenience of integrated functions, the purpose of WebCT is to make it easier for “non-techies” to make use of the Web’s capabilities for their courses.

You can begin creating your own course site by requesting an account from the Office of Educational Development (OED). The account creates a module that contains the WebCT tools. These tools are accessed through your customizable Home Page. Most of the tools are ready to use at this point; these tools include the Bulletin Board/Forum, Chat Room, Private Email, and Calendar. Other tools allow you to add pages of text and images, create a linked glossary, and develop quizzes, tests, and surveys. Administrative tools let you register students and track their progress throughout the course. WebCT also provides grade maintenance and reporting tools. Deciding what tools you want to use and when you want to use them is up to you.

WebCT allows you to develop, revise, and maintain your Web materials from your desktop (or wherever you have an Internet connection). Licensing costs are paid by Academic Computing, so getting started using any or all of the features of WebCT can be as simple as setting up an account (takes about 5 minutes).

WebCT was adopted by the Self-Directed Learning Program (SDLP) late last Spring, and it is already being used in 8 courses taught by 6 UAMS instructors with enrollments totalling more than 200 students. Instructors have learned how to use WebCT by:

- completing the excellent WebCT tutorial
- getting assistance from OED and Academic Computing staff
- getting assistance from other instructors in their departments that are familiar with the program
- attending usergroup meetings
- posting questions to the official WebCT mailing list, and
- using WebCT’s built-in online help.

To begin exploring WebCT further, go to these Web sites:

- [http://academic.uams.edu](http://academic.uams.edu)
  This is the gateway to WebCT for UAMS users. Explore the Online Courses section to see a listing of courses being developed. You will also see that several faculty have set up accounts that allow them to practice using WebCT.

- [http://www.webct.com](http://www.webct.com)
  This is the official WebCT company site.

To set up an account and/or more information about learning WebCT and designing instructional materials and activities for the Web, please call 686-7054 (Sharon Roushdy, Office of Educational Development).

Innovation …..A Computer Program for Mapping Concepts

Far too many students think that the way to make good grades is to try to memorize every bit of information from lectures, textbooks, and labs. They meticulously outline all of this information and use their outlines as study guides. The outcome is very predictable: If asked to list all the subpoints under some of the main topics of their outline (e.g., major disorders pertaining to a system), most could do it with ease. However this type of study does not prepare students to identify the relevant distinctions they should know, such as characteristics that distinguish one disorder from another. As a result, when students who organize and study material in a linear form such as an outline, are faced with a question such as “Which of the following is characteristic of nephritic but not of nephrotic syndrome?” many are not prepared to answer it.

If you’ve ever wished there was a way to help students to ‘break out of the mold’ of memorizing isolated bits of information, you may want to find out more about a software program called Inspiration, which is available from Inspiration Software. This powerful but relatively inexpensive software program (nicely priced at about $70 for a single copy) has two very useful features for presenting information in a non-linear form. First it will automatically convert an outline done in typical main point-sub-point style (see Fig. 1) into a diagram which retains the original relationships in the traditional form (see Fig. 2). Second lines can easily be added to show links between information. Some other nice features of the software: It is not a ‘disk-hog,’ and files can be saved and exported in forms that are usable by other programs.

For more information about this, check out the Inspiration Website at [http://www.inspiration.com](http://www.inspiration.com)

Continued on page 6
Getting Ready for Distance Learning…..Part 2

**Design Issues**

The first part of this article (OED Newsletter, May 1998) discussed some of the important issues you will need to address in the early planning phase of your course. One of these issues addressed the question “What is the best way to teach the topic?” This question’s purpose was to help you begin identifying the strategies you will use to teach your course. Strategies include the learning experiences that you will provide for your students and the media and technologies through which the course will be delivered. We talked about the process of determining what kinds of media (text, images and video, for example), interactivity, and communications capabilities your course requires. As you begin to identify these requirements, you will need to be aware of the technologies that are available to you. You will also need to know the full capabilities of these technologies to support the media formats you’ll use. At UAMS, two major technologies are being used to conduct distance learning (DL) courses: live two-way compressed video and, more recently, the Internet.

Compressed video courses have been conducted from the UAMS campus for several years now. Converting to a DL compressed video format from a traditional course requires a level of adaptation, but also allows you to conduct a class in much the same way as you would in the traditional classroom. This is because some of the major elements of the classroom environment still exist; with live visual and audio communications; participants meet in a regular place at a scheduled time. In other words, the course delivery and participation is synchronous (all communication happens in real-time, at the same time).

The Internet, on the other hand, provides some synchronous communication, but most communication is conducted asynchronously. This means that students can access materials and communicate from anywhere (with access to the Internet) and anytime that is convenient. Obviously, this kind of environment is very different from the traditional classroom situation, as well as the DL compressed video situation. Therefore, adapting a course to an asynchronous format will present both challenges and opportunities: challenges for the adaptation of earlier teaching methods and opportunities to provide effective new methods for meeting the needs of your distance learners.

To meet these challenges and opportunities, you should begin exploring possible ways that you can exploit the Internet for DL. To do this, you will need to become familiar with its capabilities for supporting a resource-rich interactive, multimedia environment.

Here are three primary capabilities for distance learning:

- It can display course materials.
- It can access a database for storage and retrieval of data.
- It has both synchronous and asynchronous communications capabilities.

**Display Course Materials**

The Internet can present course materials for viewing, interacting with, or printing. The World Wide Web (WWW) is the most popular way of displaying materials over the Internet. Courses that use the WWW as the primary vehicle are now being referred to as Web-based instruction (WBI).

WBI course materials may include:

- text-based materials
- interactive and multimedia materials
- links (also called hyperlinks) to other materials

Text-based materials could include the syllabus, class assignments, lecture notes, study guides, course instructions, and so forth.

Some materials may be presented in an interactive and/or multimedia format. Interactive materials are those that ask for input from the student, such as a response to a question. Based on the student’s input, the program will respond in some manner. In an instructional module, for example, the computer could provide feedback designed specifically for a particular answer given by the learner.

The current use of the term multimedia usually refers to materials that include a combination of media formats. Examples would include subject matter that is presented through animation, video and/or sound, as well as through lecture or static text and images. These materials might then be delivered on a CD-ROM disc and/or over the Internet. Another characteristic that is usually included in the design of multimedia programs, is interactivity. The following examples are ways that you can incorporate interactive and/or multimedia materials into a Web-based course:

- **Quizzes:**
  You could include practice quizzes with instructional feedback for practice and self-assessment.

- **Tutorials, Simulations/Games:**
  Interactive instructional programs provide learners with opportunities to practice or learn new concepts, to learn at their own pace, and receive instant instructional feedback.

- **Forms:**
  You can also put evaluations, questionnaires, or other forms on the Web. When students complete them, the entries are saved to a database file located on the Web server. Another feature of the Web that allows you to display/access materials is the ability to create hyperlinks. Hyperlinks are words or images on a Web page that, when clicked on with your mouse, bring other materials to your computer screen. These linked materials can include those you created yourself, or materials from any site you select that resides on the WWW. Within your own site, you might include links to definitions of terms or to any other material that is related to the hyperlinked text or graphic. Outside your site on the WWW, you can locate valuable information that can help supplement your course material or serve as
Access a Database

Any interactive Web page can send student entries to a database program; examples include saving responses to questions or to requests for comments or opinions or other information. Also, almost any materials that you can retrieve through a database can be made available to students, such as text, images, or video (A good example is our own Learning Resource Center’s Media Database site at http://www.libraryirc.uams.edu/wwwroot/MediaDatabase/index.html). You can also link to commercial and non-commercial Web sites that provide access to their own databases. Examples include the OVID system, which is available to UAMS users and public databases such as the National Library of Medicine’s PubMed and Grateful Med. For more information on available databases, go to the UAMS Library Web site and see the “Links to Other Internet Sources” and “Collections and Databases at the UAMS Library” sections.

Provide Communication

Communications capabilities are probably one of the most important capabilities of Internet courses. It lets students interact regularly with the instructor and other students, which reduces feelings of isolation. Communication capabilities also provide opportunities for collaborative learning activities and discussion.

Electronic communication is experienced in either synchronous or asynchronous modes. Synchronous communication is carried out among users simultaneously (“live”), and is most commonly referred to as Chat mode. Asynchronous communication occurs as users read messages that have been posted (sent and displayed) by other users. These messages and their responses can be made at anytime that is convenient for the user, or during a designated time period that the instructor could set. Examples include email (including individual mail and mailing lists) and Web-based threaded discussion forums.

“Threaded” discussion simply means that messages are linked with their responses.

In most course activities, the asynchronous mode is the most useful. Because, in addition to threaded messages, the extra time that allows flexibility in deciding when to interact with the discussion, also provides the students with the opportunity to compose thoughtful responses.

In Synchronous Chat conversations, however, no threads exist so conversations are difficult to follow when three or more users are sending messages all at the same time. Also, because of its “live” nature, users try to respond quickly to another user’s postings (messages); this tends to result in a conversation of short single sentences rather than paragraphs. For these reasons, the synchronous environment is usually recommended for more casual situations, such as social interaction or a loose discussion of the assignment of the week.

A disadvantage of the asynchronous communication mode is that a conversation will take longer to complete than if it was happening concurrently. If the communication cycle needs to be completed more quickly, it is possible to conduct a synchronous conversation using an asynchronous medium. Dr. Craig Stotts of the College of Nursing used this method in his Epidemiology course. Once a week students and Dr. Stotts attended a one hour session to discuss topics related to the course. This served the purpose of maintaining discussion threads while allowing quicker turn around of responses to messages.

Using Internet Communication Capabilities

Here are some examples of how you can use Internet communication capabilities in a DL course:

**Group Projects:**
In group projects, students work together to accomplish a task. It is important that each person have a clearly defined task that is essential to the success of the project, and that each person is accountable for his or her contribution.

**Group Discussions:**
Group discussions are informal discussions about an assignment or topic. These might also be brainstorming sessions and informal problem-solving exercises.

**Reports by Students**
In this case, students could place their report online and other students could ask questions and comment.

**Public Assignments**
Students post assignments, read each other’s, and then provide feedback. This way students can learn from each other, both from the assignment and through feedback.

**Debates**
With a debate conference a controversial issue is identified and the students are divided into two groups to argue either a pro or con position, with research to back up their arguments. Some students can take turns taking a neutral position. After the arguments are concluded, all the students could vote on what position they decided to take; followed by a discussion of the decisions.

**Social Interaction**
This online area can be created to give students the opportunity to get acquainted on a casual and social level. The purpose is to provide a situation that might substitute for the kind of interaction students may choose to have if they were attending a non-DL course.
Endnote….Search, Record, and List References

Picture yourself sitting down at your computer, conducting a search on Medline, and just dragging the references you want right into your own reference library on your own computer.

Dreaming?

Well, yes and no. Niles Software, Inc., released its newest version of EndNote a few months ago. It does have all these capabilities and more. The question is, “How well does it do these things?” EndNote 3.0 has three basic functions. It is an online search tool, a reference database, and a tool to develop bibliographies. The latter two functions have been part of EndNote for a number of years. As a reference database, it can store, search, and manipulate references in a reference library. From these libraries it can automatically build a citation list in any format that you need. And for Word and WordPerfect there are add-ins that allow you to insert citations from EndNote while you type. With just these two functions—reference database and bibliography maker—EndNote has become researchers’ preferred bibliographic software. One reviewer said, “…it’s the most powerful citation manager you can find, short of a personal librarian”—PC Magazine, 1995.

New Features in EndNote 3.0

The most publicized of EndNote’s new features is, of course, its ability to search online reference databases from within EndNote. This means you use only one simple method to search all the online databases. You can also do these searches from your desktop, eliminating the extra step of saving your search results in a special format and importing them into EndNote. The drawback is that you cannot use some of the databases’ specialized search tools.

Librarian Rena Sheffer thinks that this simple-method search is a major drawback and cautions that this aspect of EndNote 3.0 should not be widely used for most database searching. The search mechanism is neither strong enough nor complex enough to perform an in-depth or comprehensive search of sophisticated databases such as Medline, CINAHL or PsychInfo. EndNote 3.0 does not have the tools to perform as targeted a search as Ovid. It does work well on Current Contents databases where subject headings, subheadings and detailed limits are not part of the database structure. In response to the question “Does EndNote3 replace search clients that the library already provides?” Niles Software, Inc., the EndNote Company itself, says “NO! ... [EndNote 3] does not approach the sophistication of the existing search systems (e.g., Ovid, SilverPlatter, MELVYL).” (Check the UAMS Library’s web site at the Ovid Access page under the Help button for more information on this topic.)

EndNote can now drag-and-drop. That means you can simply click and drag entries from one library to another. This also works with search results. Just click and drag the entries from your search results into the EndNote library of your choice.

Another new feature is the URL field. Click on the URL, and your Internet browser opens to that location. This is useful for online, full text articles. And more and more journals seem to be headed that way.

EndNote is also reasonably priced. You can get it directly from Niles for $299, but the UAMS Bookstore can order a copy for UAMS departments for $169.95 and for UAMS students for $99.95.

• For more information about EndNote, see Niles, Inc.’s Web site at http://www.niles.com

• For a demo download see Cherwell Scientific Publishing’s EndNote page at http://www.cherwell.com/ProdHome/Endnotehome.html

1 Niles SOFTWARE INC. The EndNote Company. EndNote 3 in the Library - Frequently Asked Questions (Distributed with EndNote 3 software); Berkeley, California, 1998.

Focus Groups Used in Evaluation of Palliative Care Experiences

Since July, Dr. Mildred Savidge of the Office of Educational Development has been assisting Dr. Reed Thompson, Assistant professor in the Donald Reynolds Department of Geriatrics, in evaluating the Hospice/ Home Care segment of the new Geriatric Clerkship. Dr. Thompson uses several methods of evaluation, including a pre and posttest; a standard written evaluation using a combination of Likert scale items, yes/no response items, and open-ended questions; and small group interviews or focus groups. The focus groups provide valuable information to Dr. Thompson concerning the personal thoughts and feelings of students about their experiences.

A focus group is a structured group interview that is conducted with a small group of program participants. Using a clearly defined set of questions that go from broad questions to more focused ones, participants respond to various aspects of the program in question. Strict adherence to focus group methodology would dictate that the participants be strangers. While this is not possible, the questioning technique, and the cascade effect of group interviews, allow the interviews to be successful. Dr. Savidge conducts the interviews, and from tape recordings and notes taken during the interviews, creates transcripts of the small group meetings. Students are identified only by number in order to guarantee anonymity. Dr. Savidge then reviews the students’ responses, looking for patterns that will provide insight into the students’ reactions.

The group interviews are particularly valuable in helping Dr. Thompson
This Fall, approximately 140 senior medical students took the Clinical Practice Examination (CPX) that incorporated two computer programs that improved the efficiency of the examination process. During the CPX, students completed a series of simulated patient examinations; after each simulated patient encounter students answered a series of computer-based questions about the patients they had just seen.

During the simulated patient examinations, the standardized patients evaluated the students using a checklist that had been prepared using the Remark test-scoring computer software. This software increases the flexibility of instructors in designing checklists. Checklist items can be placed almost anywhere on the page and the responses can be placed in specified areas identified earlier as “hot spots” by the computer program. Checklists can also accommodate a barcode “hot spot” which can be read by the software program. This feature negates the need for presorting the forms and thus saves considerable preparation time. After scanning the completed checklists, the results can be transferred to any of several programs, such as Excel or SPSS for statistical analysis.

Focus Groups Continued from page 5

...determine the students’ reactions to their Hospice/Home Care experience. In this part of the clerkship, students conduct three visits to an assigned patient whose care is being provided in the home. Most of these patients are terminally ill, and some are very near death. The focus of medicine at this point is on keeping the patient as comfortable as possible, rather than on curing the patient’s illness. For many doctors, it is a part of the practice of medicine that is less comfortable, and more frustrating, than their normal practice. Dr. Thompson is interested in discovering how students feel about this aspect of the practice of medicine.

During the interview, Dr. Savidge asks the students for their opinions about the treatment of terminal illness, and about whether their experiences over the past four weeks have changed those opinions. She asks them to comment on how their previous experiences with death and their thoughts about their own death might affect the way they treat their future patients. Students may choose to discuss specific incidents that have had an emotional impact on them and the mechanisms they use to cope with their emotional responses to these experiences in medical practice. At the end of each focus group session, the students provide feedback regarding the Geriatric Clerkship in general.

The group interviews have shown that students value the experiences they are receiving in the Geriatric Clerkship. Most of them indicate that they were unaware of the options presented by Hospice Care prior to this experience, and they believe that learning about these options is an important part of their training. Many of them say that they would now be more likely to recommend Hospice to a terminally ill patient. Students also indicate that the experience made them more aware of their own mortality, and that of their older relatives and parents, causing many of them to reflect upon what they want for themselves and their loved ones if and when they are faced with a terminal illness. They believe that their feelings about these issues will probably be reflected in their practice as they try to “put themselves in the patient’s shoes.”

Inspiration …..A Computer Program for Mapping Concepts

Continued from page 2

- Cardiac Physiology
- Histology concepts
- Electrophysiology
- Electrocardiography
- Cardiac Cycle
- Cardiac Output
- Peripheral Vascular System

Fig. 1: Concepts listed in traditional outline form

Fig. 2. Diagram of concepts from Fig. 1, produced automatically by the software package ‘Inspiration.’