

Radiology course goes interactive

An interview with Garry Gold, MD, course director of RAD221: Introduction to Radiological Anatomy

By Brian Tobin

Setting

Four medical students work excitedly at a computer station in the Fleischmann Labs discussing items on their checklist, quickly drawing arrows and typing labels into radiology image software, and occasionally jumping out of their chairs to point to the large plasma screen. Soon they will present their findings on the large screen to the rest of the class, so they're racing to find and label the remaining items on their group's assignment sheet.

Garry Gold, MD, Department of Radiology, is the course director for this successful *Introduction to Radiological Anatomy* elective course. Dr. Gold wanted to make an effort to enhance his course this year. We asked to hear more about his changes and the results.

Dr. Garry Gold's CAP (Community Academic Profile) is listed at:
http://med.stanford.edu/profiles/garry_gold/

Q: Why did you decide to redesign your course?

The general motivation for changing this course was to move from the same old didactic teaching style – where students sit and faculty speak to them – and to see if we could generate more student excitement, interest, and improve learning by having a more interactive format. That epitomizes the difference between last year's course and this year's course.

Last year the course was strictly lecture format, with the exception of one lab day when students visited a hospital MRI scanner. Department of Radiology faculty were enthusiastic, but

disappointed when actual attendance at the end of the course was low. It made it seem as if you were speaking to a virtually empty auditorium. I felt like students enjoyed the material, but they were not excited with the format. This year it's a much more free-flowing, interactive, and student-directed course where students will stop the lecture and ask questions.

Q: What is the most important change you made?

I shortened the didactic portion of class [from two hours] to between 45-60 minutes. After each lecture, students broke into four groups – one for each of the four computers. We provided unique clinical cases for each of the groups. For example, when we were doing the upper extremity, one group would be looking at a shoulder MRI, another group would have an elbow CT scan, a third group would have a plain film of the wrist, and another group would look at a shoulder MRI with a different imaging plane.

Students worked in their groups for 45 minutes. Then each group came to the front of the classroom and presented to the rest of the students. The faculty member was simply there to provide commentary on what they were seeing or correcting mistakes that one of the student groups made.



Rad221 students work together to label and diagnose CT scans before presenting their findings to classmates

Q: What other changes did you make that affected this course?

I moved the course from the M106 lecture hall to the Fleischmann Labs because Fleischmann is more amenable to having students move around the classroom and perform different tasks. I also met with the Human Anatomy faculty and synchronized our course schedule with theirs. We felt like students would get more out of our class if they were reviewing things they'd recently spent time dissecting in the Gross Anatomy course.

Q: How did you get in touch with EdTech for support?

After I asked EdTech about scheduling a classroom space, EdTech's outreach staff contacted me and we discussed my course in more detail. We realized we could have students do small group interactive sessions right in the same classroom where students had the didactic session. EdTech staff was instrumental in finding, installing, and supporting the software that allows us to view the cases. This software

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Learning and Knowledge Center Initiatives

The Fleischmann Labs were renovated in the summer of 2003 to increase classroom flexibility and enhance technology capabilities. This upgrade was one of the Learning and Knowledge Center (LKC) interim projects, which aim to encourage faculty to explore new approaches to teaching and learning.

Interactive Radiology Course (continued)

enabled the student groups to come together after working and show the entire class what they'd found anatomically and pathologically.



Dr. Garry Gold, Director of the Introduction to Radiological Anatomy course, and his dog Humboldt.

"This has been the most fun teaching a course that I've ever had and other faculty love the changes, too."

Q: How difficult was it to make these changes to your course?

The investment on the part of faculty was simply a question of organizing the lecture and collecting cases for the interactive portion. Having the support of the EdTech group in terms of dealing with file formats and placing images on the computers in the labs was invaluable. The lab sessions would not have been possible without that support.

Q: Are you pleased with your results from redesigning your course?

I am very happy with the results. This quarter we have 17 registered students and consistent attendance of between 15 and 17. Students really love the interactive portion of the course. According to mid-term evaluations, students thought they were at a distinct advantage in Human Anatomy over those who did not take this course.

The small group sessions lead to a more collegial environment. Students feel free to ask questions and interrupt the lecture. We also have faculty who stop their lecture and ask questions of the students.

This has been the most fun teaching a course that I've ever had and other faculty love the changes, too. They feel like they're really getting to know the students and they're really getting to teach the students rather than talk at them.

Q: What will you be doing for this course next year?

I anticipate doing something in a very similar format, perhaps further shortening the didactic portion and making the lab portion play an even bigger role in the course.

We're hoping to move the course to the new radiology education center in the Lucas Center expansion. Our department chairman, Dr. Gary Glazer, has carved out space and provided funding for a state-of-the-art learning center with six individual computer workstations for small group sessions.

Q: What recommendations would you make to other faculty?

Rather than stick with the traditional didactic format, try something new. You may find that you create something that really captures the interest of students and improves their learning.

I would also recommend that you contact EdTech and work with them to see if they can give you any ideas or support for your course.

Learn more...

EdTech actively seeks out new pilot projects to help broaden the way the School of Medicine employs useful new technologies.

To discuss what EdTech can do for you, please contact us at 650-723-6952, or EdTech-info@lists.stanford.edu

About the Fleischmann Labs' collaboration software

Synchroneyes software was installed in the Fleischmann Labs in the fall of 2004 to enable breakout groups to quickly display their work on the large screen during class time. Synchroneyes offers a number of interesting features for small group sessions:

- Monitor all students' progress at once by glancing at thumbnails of all computer screens
- Call on students and send their laptop screen to the projector so they can show their work and lead discussion
- Lock student computers until it is time to use them for coursework
- Survey or quiz students using built-in polling tools

To use Synchroneyes, facilitators start Synchroneyes Teacher software on the front computer. Next, the student computers connect to the teacher by starting the Synchroneyes Student software and typing in the IP address of the teacher computer. When student computers connect, the teacher computer will see a thumbnail picture of each computer's screen. Finally, a facilitator may click on a computer's thumbnail and select an action like "Control", "Observe", "Lock", or "Vote".

For a demonstration of Synchroneyes software, please contact EdTech at 650-723-6952, or EdTech-info@lists.stanford.edu.



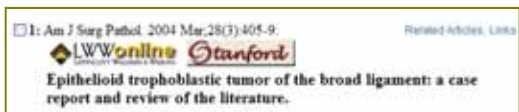
Students in the Practice of Medicine course work on laptops while their computer screens are visible as "thumbnails" on the large screen

Faculty member prefers PubMed@Stanford

Update your bookmark: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?otool=stanford>

Carol Clayberger, PhD, Professor of Pediatrics in Immunology and Cardiovascular Surgery is encouraging her colleagues to update their PubMed bookmarks. Following the publisher buttons in PubMed often leads to the dreaded “pay me” message, or worse, no indication of online or print availability at Stanford. Lane’s new PubMed@Stanford fixes this problem. “The new Stanford connect button really simplifies getting the article you want,” says Dr. Clayberger. She began using PubMed@Stanford in October to access direct links to 2700 current biomedical journal titles.

TIP: Clicking on “FindIt@Stanford” button allows users to quickly gain access to the full article and graphs *and* tables.



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 Source The American journal of surgical pathology [0147-5185] Kuo yr: 2004 vol: 28 iss: 3 pg: 405

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“Two clicks and you have the PDF if the article is available electronically,” says Dr. Clayberger, and “if Stanford doesn’t have it online, there is a link to print availability at Lane and other campus libraries. To make it even easier, if the article isn’t available at Stanford, one click and an interlibrary loan request is populated with the citation for you to request Lane to obtain it for you at no cost. The library staff has really made access simple.”

Preferred journals

Lane is tracking every attempt to find an article. This allows the library to see what is used and, more importantly, what is desired and not available online. This information is critical to make subscription decisions in a digital era. Everyone should search using PubMed@Stanford.

TIP: The Journal and Article Finder allows users to quickly find biomedical and even non-biomedical eJournals.

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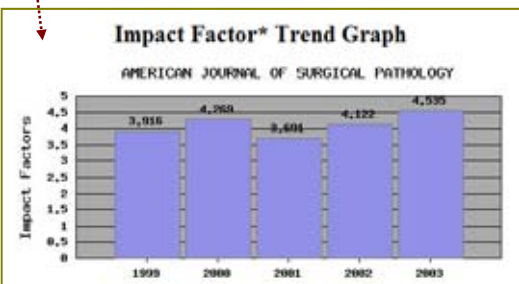
year

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volume issue 1st pg

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“With one click you can see a graph that charts the journal over five years. It couldn’t be easier.”



Dr. Clayberger notes the impact factor option is a great way to find an alternative journal for an article submission.

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EndNote and FindIt@Stanford

Configure EndNote to access FindIt@Stanford from any reference in your EndNote library whether it is from PubMed or any database.

See instructions in the Lane FAQ:
http://lane.stanford.edu/howto/index.html?id=_142

Extreme Makeover for Lane

By Heidi Hellemann

Tired of fumbling around for your ID card every time you need to come to the library? Unsure who to ask for help once you're in the library? Over the winter quarter, there will be some construction going on in our entryway to remedy this. This work continues an overall facelift project that began last Fall and will create a barrier-free, user-friendly entry. We have removed the turnstiles that once defined our entrance and exit so that people can enter and exit the library freely. The barcode reader is now gone. ID cards will only be needed to check out materials.



Before: Lane entryway before removal

As part of Lane's commitment to reclaiming our space for people and providing responsive and efficient information and access services, we are also consolidating the service desks and rearranging furniture in the entryway. Shelving will be moved to make room for additional seating near what is now the Information Center. The present Circulation Desk will be extended and become a single service desk. Library users will have just one stop for library service, whether they are checking out a book, requesting help with the catalog or getting a reserve item. Information Services librarians will be available at the new service desk and by appointment. All service desk staff are participating in training aimed at strengthening our information and access services.

The library's foyer is being spruced up and brightened up, with lighter colors, more informative bulletin boards, maps, and information displays featured on a new plasma screen – where you can easily locate information on Lane's classes and events, new materials, and other developments in our services.

Stop by the library in 2005 and see the changes for yourself!



After: New barrier-free, user-friendly entryway

Lane Medical Library & Knowledge Management Center

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L109
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<http://lane.stanford.edu>