No More Pencils, No More Books…..No More Overheads and Markers:
Communication Disorders 211 Revised

Category: Personal Teaching Improvement

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Funds Requested: $7000

Abstract: This project will result in the substantial revision of Communication Disorders 211 – Anatomy and Physiology of the Speech and Hearing Mechanisms. There exists technology and media that undoubtedly have the capability to enhance student learning of anatomy beyond that currently provided by my use of 2-dimensional overheads. Further, such technology also has the potential to stimulate effective class participation even when enrollments exceed 100 students, a goal I have struggled to achieve for many years.

Department Chair's Signature _____

Dean's Signature _____

Provost's Signature _____

January 25, 2008

Academic Technology Grant Proposals
University of Massachusetts
225 Franklin Street, 12th Floor
Boston, MA 02110

Dear Selection Committee,

Please find enclosed my proposal entitled "No More Pencils, No More Books…..No More Overheads and Markers: Communication Disorders 211 Revised." I respectfully request this proposal be considered for funding under the category of personal teaching improvement.

Comm-Dis 211 is the first required course for our majors and recent enrollments have averaged approximately 100 students/session. I am hopeful that the work proposed in this application will result in significant improvement in my teaching effectiveness, my students' learning, and also the level of participation I can effect with such a large number of students.

I thank you, in advance, for your consideration of my application.

Sincerely,

Sarah F. Poissant
Associate Professor

Project Narrative

Problems with Teaching and Learning Associated with Communication Disorders (Comm-Dis) 211. Comm-Dis 211, Anatomy and Physiology of the Speech and Hearing Mechanisms, is the first required course for our majors and lays the foundation for many of our subsequent classes. Over the past few years this course has had an average enrollment of approximately 100 students. Our department was fortunate enough to gain an Amherst 250 Plan faculty position this year. One of the Provost's stated goals relating to this position is that the department will increase its number of majors, therefore I anticipate enrollments to continue to rise. I have experienced three major challenges while delivering this class: (1) effectively stimulating class participation given the large number of students enrolled, (2) convincing first semester sophomores that they need to know the detailed anatomy of the systems we use to communicate in order to ultimately be able to diagnose and treat communication disorders (and similarly, instilling excitement about the field in non-majors enrolled in the class), and (3) teaching about the body (a 3-dimension object) when the blackboard and overheads I used in class provide only 2-dimensional images. The effective integration of contemporary technology should significantly reduce these challenges and improve student learning; these are the explicit goal of my work.

During the Fall 2007 semester, while I was investigating existing technologies and thinking about this project, I took the opportunity to elicit student feedback about their experience with classroom technologies (specifically the personal response system (PRS)) and their opinions of the types of technology they think would best enhance learning in Comm-Dis 211. My proposed use of a PRS, in-class videos, digital images of anatomical structures, and SPARK are all supported by the results of this informal survey. Ninety-nine out of 105 students voluntarily completed the 6-item questionnaire. A full two-thirds of the students had used a PRS in at least

one class. Seventy-seven percent of students who had used a PRS and 80% of students who had not used a PRS indicated they felt the use of such a system would be beneficial to both classroom engagement and learning. Further, students repeatedly suggested the use of Power Point, videos, better/3D figures, SPARK, and more on-line activities as additional adjuncts to support learning.

Instructional Technology Tools. I propose to utilize a variety of technologies that will allow for the transition of my course presentation from that of overheads and markers to one of full computer delivery. I have previously been reluctant to make such a transition as I need to be able to draw on my anatomical figures while I'm describing them (e.g., to outline the course of a muscle). However, as indicated below, grants funds would be used to purchase a tablet computer that will allow me to continue to scribble away – just electronically, instead of with the markers that make a big mess all over my hands. All course content will be delivered via Power-Point slides. Embedded within the slides will be high-quality digital images, hot-links to appropriate websites, and video clips. Over the past summer, our on-campus Center for Language, Speech, and Hearing was outfitted with a state-of-the-art digital recording system. Video cameras were installed in each of our clinic rooms which allow, for the first time, both remote viewing of sessions and DVD recording. Following informed written consent of our clients, I will record appropriate sessions and play short pieces of them in class. Students have been very interested in any clinical anecdote I have verbally shared with them. I expect they will be extremely excited by the opportunity to observe actual footage in class – and also hopefully much more convinced of the need to learn class content when they see for themselves how they might apply it in the future. Finally, students will become more fully engaged in class through our joint use of a PRS. All of this technology will be seamlessly integrated into the tablet computer making what on the surface appears to be a lot of new technology, extremely simple to use during any given lecture.

Aside from the managing the PRS, all I will need to do is work my way through a Power Point presentation, the real effort to incorporate the technology will have been made prior to class. This is important to me as class time is extremely valuable and I'm looking for ways for technology to enhance my teaching and subsequently my students' learning, not to make the classroom a complicated place to be. Outside of class, students will find support for the course - and I will find assistance with managing more than 100 students - through the use of SPARK (e.g., lecture outlines, grades, useful link to free on-line interactive websites that will support learning, practice questions, ability to form study groups and/or have chats with other students).

Plan for Teaching and Instructional Technology Support. While I truly believe that the increased use of technology will go a long way in helping me overcome my teaching challenges, I also realize that the effective use of technology is not a "plug-and-play" endeavor. Reading student comments such as "you really seem to have the teaching of this course down to a science" and "maybe (additional technology will improve the class), but I think the way the course is set-up now is very effective" makes me take pause. I have worked hard at delivering my course content as effectively as possible with a stack of black and white overheads and a package of colorful, overhead markers. I am humble enough to admit that I will need (and want) support as I make such substantial changes to my class. My plan for securing such support is two-pronged. The first prong relates to the more technical aspects of increasing the use of technology in my class and includes activities such as seeking appropriate assistance from PRS support services in setting up the hard- and software necessary to incorporate the technology into my class (84% of the students I surveyed reported experiencing frustrating technical difficulties with the PRS systems, particularly when instructors seemed ill-prepared), attending OIT workshop(s) in June 2008 (e.g., SPARK, Moviemaker), requesting one-on-one consultation in

the instructional media lab as needed, and accessing available on-line content as appropriate (e.g., PRS website, PDFs of workshops such as "Digital Image Basics," and various SPARK tutorials.) The second type of support I will seek relates to the pedagogy of instructional technology and includes activities such as observation of an established, successful PRS class (by invitation of Dan Lass, Spring 2008), subscribing to the PRS mailing list, requesting assistance from the Center for Teaching (CFT) though its highly-targeted short-term consultation program designed to help instructors address specific teaching goals, which in my case will be increasing student engagement, participation, and learning through the use of technology, and finally through the CFT's Mid-Term Assessment Project (MAP). By requesting that a MAP evaluation be conducted part way through my revised course (as I did early on in my teaching of this class), I will be able to make any necessary course adjustments while the course is in progress so that I deliver the best class possible, despite the significant pedagogical shift.

Assessment Plan. Given that this course is foundational for our majors, is an opportunity for me to excite enrolled non-majors about our field, and impacts the educational experience of more than 100 students per session, it is extremely important that I get this class right. This means that I will need to appropriately gauge how well I have been able to integrate the use of new technology into my course and subsequently how the use of such technology has improved student learning. While I will work hard to prepare myself for this transition, there are bound to be things that I don't get right the first time around. However, I will have set myself on a course of exploration with the explicit goal of improving the effectiveness of both my teaching and of my students' learning. I will use a number of tools when evaluating my success. As mentioned above, I will request from the CFT a MAP evaluation while the revised class is ongoing. Further, I will critically analyze the results of my SRTI evaluations with a particular focus on questions

nine (class participation) and 11 (overall teaching effectiveness). All SRTI scores for the revised class will be compared to SRTI evaluations conducted in previous years. I will be most interested in reading students' written comments on the SRTI forms and my informal technology survey that I will re-administered when the revised class is delivered. While I have chosen to begin with a certain set of technologies, it is likely that I as become comfortable with their use, or if I find some don't work as well as I predict, I will embark upon the use of others; therefore, I expect these assessments will be ongoing.

Project Deliverables. The following deliverables will be generated during the period of this project: (1) a video library of clinical sessions that tie directly to course content, (3) a bank of PRS questions that, among other things, will stimulate class discussion, gauge teaching effectiveness within a class period, and give students a metric to use in determining if they are mastering course content between exams, (3) a completely self-contained, digital course pack with slides and figures that can still be drawn and colored on during class, and (4) new on-line course content available through SPARK.

Project Budget

Dell Latitude XT Tablet Laptop Computer	$3300 (quoted 1/25/08)
Thieme Atlas of Anatomy Image Collections	$600
DVDs for Recording in Clinic	$50
Additional Compensation – Summer Course Prep (15% Effort)	$3020
Total Funds Requested	**$7000**

Project Timeline

Spring 2008	Observe PRS class delivered by Dan Lass.
Summer 2008	Attend OIT workshops, order hard/software (e.g., tablet laptop computer, digital images), record clinical sessions, modify course content/delivery to support use of PRS, transfer all course content to tablet computer.
Fall 2008	Deliver revised course, request MAP from CFT, revise as appropriate.
Sping 2009	Reflect on modified course, critically analyze SRTI feedback - compare to results from prior years, revise class/technology use plan while class is still fresh in mind, prepare final report, and share my progress at the annual Information Technology Conference.