Engaging the Active Learner: Strategies and Tools for Online Teaching

By Zina McGee

When I first began teaching my graduate statistics course online, I searched the literature for best practices and strategies for online teaching, particularly those based on mathematical applications and research design. Since then, I have been able to incorporate key features to facilitate learning, and have at some point used forums (asynchronous discussion), webconference, web content course materials, chat room, tests and quizzes. For advanced statistics and research courses, the literature suggests using a variety of online learning tools that allow students to (1) apply statistical principles and theorems by working with the content in contextual situations, (2) improve their written communication skills to optimize collaborative exchange of ideas, (3) develop awareness and appreciation of the real-life applications of statistics, (4) practice the higher order learning skills necessary for research problem solving, and (5) explore their individual strengths and weaknesses in addressing these research problems. Hence, my course is designed to promote the higher order skills used in solving research problems (applying, analyzing, synthesizing, and evaluating) which can then serve as a subset of critical thinking. As part of their assignments, students are expected to generate relevant hypotheses, propose strategies that will investigate hypothesized questions, correctly evaluate the data based upon issues of validity and reliability, and integrate conclusions from the data with known literature and research findings to better understand the context of the whole problem.

The literature strongly supports the use of case-based discussions for these types of courses, and depending upon the size of my online course, I have occasionally assigned groups of students to work on a case problem in asynchronous electronic discussions, communicating first only with their group members, then presenting the problem and their findings to the rest of the class. They are directed to report their discussions through the online forum. As the instructor, my role is to act as a “guide” to keep the online conversation on track and provide them with sources for data from the primary literature. I only insert comments when necessary and provide data if relevant to the problem. As with other online case-based discussions, students are exposed to text readings and presentations that can be downloaded which include content pertinent to each case. A portion of their
grade depends upon their involvement in these case discussions, and I am able to assign points based upon how well the student (1) defines the problem, (2) asks the appropriate questions related to their learning issues, and (3) sharpens the postings about the specific data more narrowly.

As with the traditional model of classroom instruction, I have also found that not all groups or students progress through a case at the same rate. Some may be successful at solving problems as part of the group (i.e., frequent postings) only to discover that they are not as successful in other exam questions such as those essays requiring data analysis or evaluation from calculations. In these instances, the best strategy has been to return to the earlier transcripts of their postings for further assessment of the strategies that they are using to solve the problems. This will then guide them as they attempt to improve their performance.

Regarding “active learning,” I have found that discussion forums work best when we need to engage students in discussion that involves analysis and synthesis. In such cases, there may be no right or wrong answers, just discussion that involves making a connection between theory and real-world practice. Discussion boards, however, aren’t the best tools to use if you are trying to make sure that the students have read an article or book chapter, particularly if you are looking for specific answers. This will basically result in everyone saying the same thing with little discussion and evaluation. Studies have shown that webconferences work best for presentations of material and are ideal for student group work that involves meeting, discussing and sharing materials. They are not the best, however, for lectures, particularly those that exceed 90 minutes. It would be best to post your lectures and give students the opportunity to refer to them and ask questions later. Webconferences also work well for online office-hours and tutorial sessions to clarify points. If you are planning to use a webconference, be sure to record and stream for those students who aren’t able to attend.

The primary section for dissemination of information is web content course materials. However, depending upon how much you plan to post, make sure the navigation is clear and be consistent with what is available. I have found that arranging lecture notes, practice problems, tutorials and syntax guides by chapter works best for students and makes it easier for them to navigate through the documents. I usually post announcements and send out information on the listserve if I am planning to add anything to help them better understand the material. Otherwise, they may miss any new postings after they become familiar with what you have placed in the system. Visual cues such as common colors, headers, and backgrounds also help if you have many documents, and these are also important if you expect them to link to certain HTML pages. However, if you are running out of time and need to create something with a large content that is dynamic and changing, it may be best to use another delivery form such as a forum. Although the literature suggests that webconferencing is being used more than chat rooms, some students still like to use them for brainstorming sessions or when webconferencing isn’t available. Chat rooms don’t work, however, for formal discussion or lectures. Finally, timed tests and quizzes can be used
for graded assessment. This is an excellent feature that may also be used for self assessment to stay on task, and they provide automatic feedback to the student. However, when you need to assess application or synthesis, the use of this tool may become complicated. While you can develop a solid objective test, you will need a great deal of time and experience to write certain questions. As with any means of assessment, it is always best to use a variety of measures to evaluate student performance. I have found that what works best is to develop some assignments or tests based on calculations that can be timed and completed within an hour along with other small research reports that involve literature searches, syntax development and analysis of data that can be submitted in parts over the course of the semester. Hence, creating and structuring opportunities for students to communicate and learn from each other in an online course can help formalize and disseminate knowledge to accelerate learning and increase student effectiveness.

A Checklist for Facilitating Online Courses

By Mary Bart

There are two common assumptions about teaching online that can sink even the most well-meaning neophyte. One is that “teaching is teaching” regardless of whether it’s face-to-face or online and there’s no reason to deviate from the proven principles that work so well in the traditional classroom. The second assumption is that teaching online is all about the technology, and if you design your course properly, it pretty much runs itself.

Of course both assumptions are false, but where does that leave online instructors looking for guidance on the right way to teach an online course? A new research-based tool developed at Humboldt State University can help. Assessing Online Facilitation (AOF) can serve as a valuable guide to best practices in online teaching. It lists the four main roles of an online facilitator – pedagogical, managerial, social, and technical – and the associated tasks of each role. These tasks also are broken down according to when they should be done – before the course begins, during the first week of class, throughout the course, and during the last week of class.

In the recent online seminar Beyond Course Design: Planning for Successful Facilitation, two of the AOF’s developers, Joan Van Duzer, an instructional technologist at Humboldt State University, and Carole Robinson, instructional media producer for Pasadena City College, discussed many of the tasks outlined in the AOF. Some of the items in the checklist include:

Before the Course Begins:

- Pedagogical – Review past course evaluations to determine if enhancements for instructional strategies are required.
- Managerial – Send informational message including how to login, what materials are needed and how to get them, and who to contact for technical assistance.
- Technical – Update hyperlinks to remove dead or broken links.
During the First Week of Class:

- Pedagogical – Create an ice breaker activity related to a course key objective or concept.
- Managerial – Contact missing students to encourage their participation.
- Technical – Assist students with login/access difficulties.
- Social – Provide a personal and welcoming introduction to develop a personal presence.

Throughout the Course:

- Pedagogical – Summarize discussions.
- Managerial – Update the online grade book promptly after assignment due dates.
- Technical – Model competency with course management system delivery tools.
- Social – Organize collaborative projects to achieve strong social interaction.

During the Final Week of Class:

- Pedagogical – Provide feedback on final project.
- Managerial – Provide general information concerning the nature and format of the final assessment(s).
- Social – Send an email with a closing personal message to students.

Resources

Instructional Strategies for Online Courses
Of the many instructional strategies available for use in the online learning environment, ... The discussion is often the heart of an online course. ... www.ion.uillinois.edu/resources/.../instructionalstrategies.asp - Cached - Similar

Synchronous and Asynchronous Learning Tools: 15 Strategies for ... A Plan for Effective Discussion Boards; Using Video Clips to Stimulate Discussion; Nine Strategies for Using IM in Your Online Course; Four Ways to Improve ... www.facultyfocus.com/.../synchronous-and-asynchronous-learning

Teach them to Fly: Strategies for Encouraging Active Online Learning by K HARDIN - Related articles
Several of the students commented about the amount of communication in the online course. I require communication in the discussion board. ... tojde.anadolu.edu.tr/tojde14/notes_for_editor/hardin.htm - Cached - Similar

Issues and Strategies for Facilitating Interactivity in Large ... File Format: Microsoft Powerpoint
15-20 recommended in the literature as ideal class size for online; Does it depend on Content? Explain how you will organize and use the Discussion Board. Other Strategies. Prepare all course materials and assignments in advance.

myweb.fsu.edu/.../online/interactivity%20in%20lg%20online%20classes.ppt - Similar

Strategies for Teaching Online Using Blackboard™

File Format: Microsoft Word - View as HTML

Once enrolled in online course(s) students are more likely to participate in things like discussions, surveys, and evaluations. Create a special discussion.

...itc.boisestate.edu/BbSupport/BbDocs/instructors/Teaching_Online.doc

Announcements

The National Institute on Drug Abuse (NIDA) is pleased to announce that the next NIDA Blending Conference will be held on April 22 and 23, 2010, in Albuquerque, New Mexico. Don’t miss this 2-day conference that presents innovative, science-based approaches that have proven effective in the prevention and treatment of drug abuse and addiction. The conference is designed to narrow the “translational gap” by disseminating science-based findings and placing them directly into the hands of practitioners. Participants will explore the use of evidence-based practices when working with diverse populations and settings. To register for the conference, or to find out more about speakers and topics, please visit www.NIDABlendingConference.info.

The AAC & U Engaging Departments Institute offers campus teams intensive, structured time to advance their plans to foster, assess, and improve student learning within departments and across the institution. The 2010 Institute will concentrate on:

- leadership for engaged, intentional, and integrative learning within and across departments;
- essential learning through the major, including civic engagement, personal and social responsibility, and global citizenship;
- assessments for achieving and improving essential learning outcomes, concentrating on authentic assessments based on the work faculty are already doing in the classroom;
- improving educational effectiveness and student achievement by identifying barriers and aligning new practices with departmental and institutional goals; and
- aligning and advancing departmental learning goals with general education outcomes.

For additional information contact Kathryn Angeles at angeles@aacu.org or 202-884-7413.
The AAC & U Greater Expectations Institute is a five-day, intensive program designed to help campuses improve the quality of undergraduate education to prepare students—particularly those who historically have been underserved by higher education—for success in a globally interdependent society. The Institute will help your team:

- Work campus-wide to raise expectations for student learning and close achievement gaps
- Improve quality and expand access to high-impact educational practices
- Create new institutional designs for academic excellence and effective assessment
- Build faculty leadership capacity for learning-centered educational change efforts

The Institute curriculum grows out of AAC&U’s long-standing work in diversity and educational quality, most recently brought together through two major initiatives, Making Excellence Inclusive and Liberal Education and America's Promise (LEAP). For additional information, contact Nakia Bell at 202-387-3760, ext. 407, or bell@aacu.org.

AAC&U Meeting in Philadelphia to Address Faculty Roles in High-Impact Practices

From teaching integrative capstone courses to running offices of community engagement to leading national networks devoted to undergraduate research—faculty are at the forefront of developing, improving, and expanding the reach of many high-impact educational practices. What can others learn from their efforts and what support and development do faculty need to expand and improve these practices? This is the question that will be considered at Faculty Roles in High-Impact Practices, March 25-27, 2010, in Philadelphia, Pennsylvania. Highlights will include a keynote speech by Nancy Cantor, chancellor and president of Syracuse University; lunchtime plenary on academic excellence, inclusion, and student achievement; and a closing plenary, "How Teachers Need To Deal with the Seen, the Unseen, the Improbable, and the Nearly Imponderable" by Marshall Gregory of Butler University. For more information and to register, visit www.aacu.org.

Proposals Due March 15 for Diversity, Learning, and Inclusive Excellence Meeting

Submit proposals by March 15 for conference sessions at AAC&U’s October 2010 Network for Academic Renewal meeting, Facing the Divides: Diversity, Learning, and Pathways to Inclusive Excellence. The meeting will be held October 21-23, 2010, in Houston, Texas, and will focus on the pragmatic ways in which college and university leaders are fostering inclusive learning environments. More information and the complete Call for Proposals is available online at www.aacu.org.