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Faculty Profile: Shannon Donovan's Online Course

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Imagine that you are a 35 year old, single parent of two children (your sex does not matter for the purposes of this story), and you have run into a bit of a wall at work. You started college right after high school, but dropped out when you were given an opportunity at your part-time job to work full-time for a very good salary. Also, the job included good benefits, which was especially valuable because your first child was due later that year. Your plan for your education soon became “I’ll just finish my college degree part-time.” However, marriage and the kids, plus steady advancement at work, put college on the back, way back, burner. But now you see young college graduates being hired and promoted to positions above yours, and you know that your career is dead-ended without a college degree. The cost of the education is not a problem, since your company has a program to pay for you to finish a management degree. The sticking point is that you can’t possibly take the time to go off to college as if you were 18 years old.

Not long ago this would have been an insurmountable problem. You could certainly try “correspondence courses” or one of those often embarrassing diploma mills, but they would not be much good if you hoped for serious education and training, or if real credentials were required. But now you can take high quality college courses for degree credit without having to go to campus. They can be as rigorous as on-campus courses, and can include significant interaction with faculty and other students, factors that educators have always considered critical to quality education. The key to making this possible is the Internet, and the ability of faculty to adapt traditional courses for on-line formats.

Every semester Bridgewater State College offers a range of online courses for college credit through its Division of Continuing and Distance Education. In the fall semester of 2007 there were 67 online courses listed. Here at Bridgewater, some of the best examples of such online courses are being designed and offered.

The image at left is a "screen shot" taken from Dr. Donovan’s web-based course in Real Estate Investment/Finance. It is taken from a lesson on “calculating the future value of a lump sum.” On the right you can see the problem being solved as if on regular lined paper. The student sees the steps as Dr. Donovan arrives at the correct solution of 116.64, seen at the lower right. The calculator at left is currently inactive, but will be used in the next example of solving the problem.
taught by Dr. Shannon Donovan, a faculty member in the Department of Accounting and Finance. Her course, “Managerial Finance”, received a “Course of Distinction” award at the fourth annual E-Learning Conference held by the organization Massachusetts Colleges Online (MCO) in 2007. It has taken Dr. Donovan several years to build the experience and knowledge to design online courses that rival the quality of the courses she teaches in the traditional format on campus.

Dr. Donovan’s interest in online courses began in 2004 when she started using a tablet computer. Her courses focus on finance problems, such as calculating the value of an investment or property given a set of specific conditions (like interest rates). The tablet computer allowed her to create problems in the class, entering data and formulas using either the keyboard, or writing on the screen with a pen-like stylus. The problems could then be projected immediately for the class to follow, posted on the college’s Blackboard teaching site for later use by students or saved in file form on her tablet PC. Over time she became increasingly skilled at using the various programs that allowed her to accomplish her course management and teaching objectives. Using a grant from MCO she took a class on how to design and teach an online course. But she faced some special challenges in teaching her extremely quantitative courses like Managerial and Real Estate/Finance in online formats. How could students be shown how to do quantitative work on real problems rather than just read about how to do it? The course would have to be highly interactive, with extensive capacity for questions to the professor from each student. In addition, an ideal course like this would show the teacher actually doing the sample problems in the several ways they are done in real life. Calculations like the value of an investment are variously done by hand on paper, using hand calculators or with computer programs such as Excel. For Dr. Donovan, the key to teaching all this online turned out to be a computer software package called Captivate.

Captivate allows one to make videos that show how to do any kind of work, then display it on a computer for students to learn from and to practice themselves. Dr. Donovan’s courses teach how to accomplish quantitative tasks using each of the three techniques mentioned above. Using an online connection from home, each student first sees the problem on what looks like a conventional page of lined notebook paper as the teacher works through it by hand, step-by-step. (See the accompanying visual “captures” taken from Dr. Donovan’s course web site during the fall 2007 semester.) While the problem is solved this way, the student hears the teacher’s voice explaining each step. (Remember that the tablet computer has the capacity to record and store data entered from its keyboard, or from a stylus used on the surface of the tablet screen. Particularly important or challenging aspects of calculations can be highlighted in red, underlined, and even accompanied by simulated scratches of a pencil if the teacher wishes.) As an added benefit, the student at home can replay the “by the hand of the teacher” lesson as many times as she or he likes, an aid to learning that the traditional classroom teacher cannot afford to indulge without limits.

After the problem is worked through in this virtual by-hand method, the student is next led through the process of doing the problem on the computer screen using a virtual calculator. Again, the teacher’s voice is heard explaining the steps. Lastly, the presentation solves the problem using the Microsoft program Excel, again adding the teacher’s voice explaining the steps taken to get the correct answer. Listen and watch as often as you like. Dr. Donovan won’t mind.

As with any good course, the presentation of the material, even in several forms and unlimited repeatability, is only part of good teaching and learning. It is also vital that students have the opportunity to ask questions of the teacher, discuss material with the teacher and other students, be tested thoroughly and have the ability to keep track of the “nuts and bolts” elements of the course such as new assignments and grades. All these are accommodated in Dr. Donovan’s online courses. There are two additional keys to accomplishing these goals. They
are the use of the college’s software for course management, called Blackboard, and a great deal of planning and management of the course by Dr. Donovan.

As the Bridgewater State College website for Blackboard describes the software, “The Blackboard Course Management System provides Faculty and Students with secure web site space for document distribution, course communication, and other related course activities. Students can view handouts (syllabi, PowerPoint slideshows, etc.) and multimedia content, hold discussions via the Discussion Board and Virtual Chat tools, view grades via the Online Gradebook, collaborate with fellow students on group projects, submit assignments to instructors via the Digital Dropbox, and more.” In the case of Dr. Donovan’s Real Estate/Finance course, the student logs on to Blackboard via the college web site and has instant access to all these functions. She posts her course syllabus which specifies all the requirements, assignments and schedules of assignments and tests. There is information about her as a faculty member, including office hours and any special contact information. Under the tab for “Course Documents” students find readings, weekly assignments and discussion projects, as well as study guides for specific topics. Larger project materials, such as a personal real estate project, are posted in a Projects area. The videos she produces for the course, using the Captivate software, are the meat of the teaching in the course. They are listed under “Professor Videos.” Students can post questions and comments to the teacher and to one another in a “Discussion Board” area. There is a “Communication” area for announcements, group pages, a roster, an email port and more. And, lastly, there is a “Tools” area which includes a glossary, grades listing for each student, calendar, dictionary and thesaurus.

As you can imagine from reading this description of Dr. Donovan’s course, there is a great deal of work required to design, implement and operate such an online offering. Just writing and recording the demonstration “videos” using Captivate requires many hours before the course begins. And keep in mind that all the students have e-mail access to the instructor for their questions, and that it takes additional time to evaluate student assignments and grade exams. Dr. Donovan has found that these online courses require a good deal more time and work of her than do her conventional courses on campus. But she also finds the process of creating and teaching them extremely satisfying. Students learn the same material and take the same exams as in her conventional courses, and they can even experience much of what on campus courses provide in the way of interaction with the instructor and with one another. Dr. Donovan has even found that sometimes an online “class leader” can emerge during the semester. As with other new technologies, techniques for the presentation of high quality online courses will take time to emerge. Dr. Donovan is clearly one of the innovators who are pushing the process forward at Bridgewater.

—William C. Levin.