Reduce the Fear Factor with Online Materials
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Background:
I reviewed every written comment on the end of semester course evaluations that I received during 10 semesters of teaching an online introductory statistics class at UNC. Two things that really stood out in those comments were the students' high level of comfort and satisfaction with the materials and the students' references to a reduction in their fear of taking a statistics class.

Having recently moved to Maine, I find myself teaching introductory statistics to undergraduates in a small college. The fear factor here is intense. Most of the students need to work outside of class to learn the materials enough to pass the course. However, a lot of the students are not comfortable using a textbook as a learning tool, nor are they use to going to the professor for help. These same students are very comfortable surfing the web and reading materials over the internet. This thinking led me to the following hypothesis.

Research Hypothesis:
I propose that an introductory statistics course use online materials as secondary supporting materials. I hypothesize that the use of these materials will exceed the use of the textbook as a secondary source of learning and it will reduce the fear factor of taking a statistics class. In addition, it may lead to less dropouts and better grades.

Description of Online Materials:
The online course was broken down into 7 units and each unit was broken down into 3 to 6 lessons (one lesson is similar to one or two traditional lectures). Each lesson consisted of a list of objectives, readings, tutorial slides with audio and written notes, practice quizzes and a list of exercises. Any one component could be presented online or in hard copy for a traditional course. I suggest making the tutorials with audio, the written notes and the quizzes, available online for all traditionally taught students. Come by and see student's comments on these online materials as well as what percent of students prefer online learning.

Differences between online learning and traditional learning:
According to the students there are three major differences between taking a course face-to-face versus completely online: "the flexibility of the course", the ability to "replay the lectures over and over", and the "fear factor" is greatly reduced. Taking statistics online appears to lower the student's anxiety level. One student wrote, "And by the way, I just wanted to let you know how very frightened I was of taking statistics, but the way you organized the course made it interesting and enjoyable and I actually feel like I grasped most of the concepts and your teaching methods definitely reduced my anxiety and fear." Or as another student put it, "I cannot believe how much I have enjoyed a course I started off being terrified of!"

So why not take this positive feedback and apply it to a traditionally taught course?

Positive aspects of providing online materials in a traditional course:
1. Help students feel more relaxed, less rushed. Reduce fear of not catching all the materials. They now have a second chance to go over materials.
2. Online materials more informative, more course specific, more entertaining than textbook.
3. Easier to follow than many textbooks.
4. Students could study ahead and be better prepared for class. (yeah, right!)

Negative aspects and limitations:
1. Lots of extra work if do not already have online materials
2. Students skip class and just use online materials?
3. ?

I plan on providing online materials to a traditional class in the future and look at the use of the online materials, textbook, office hours, and other students, and how use relates to the fear factor.