

Data Analysis in Workforce Education & Development

An Example in Design
of Blended Learning

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Workforce Education & Development



Context...

- 500-level graduate course
- Core requirement of WF ED program
- Offered in standard lecture and web-only modes for 14 years
- Starting Fall 2001, offered through blending of ANGEL, eTextbook, and workshop modes of instruction

Participants...

- Mix of masters (70%) and doctoral students (30%).
- Majority are required to analyze and report data, and anticipate doing so in future.
- Most (excluding doctoral students) will receive no other data analysis instruction.
- Few are likely to have access to professional data analysis packages (e.g., SAS, SPSS, MiniTab).

Aims...

- Create skills sufficient for at least completion of analysis and reporting of data for masters paper or thesis.
- Generate capability to read critically and understand data analyses reported in professional literature.

Constraints...

- Participant math phobia (although course requires very little).
- Distance (most WF ED graduate students are a long ride from UP campus).
- Adult student population which has time allocation constraints.

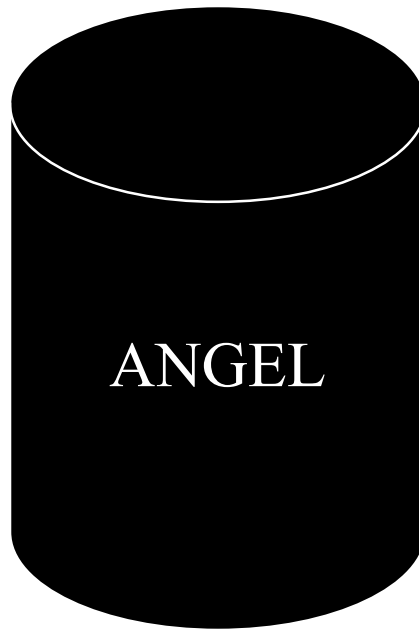
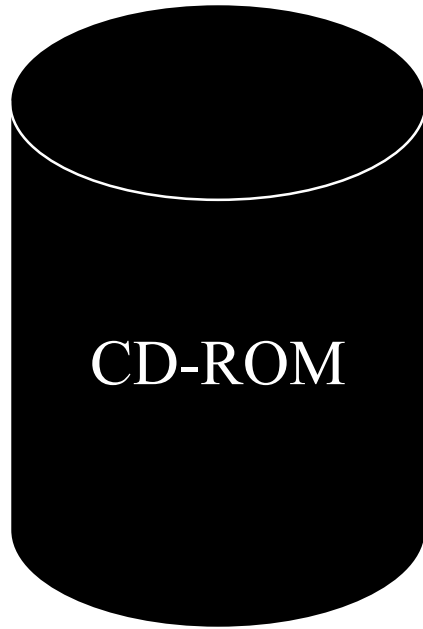
Design...

- Use MS Excel for data analysis, with data reporting through MS Word.
- Reduce opportunity costs of travel by CD-ROM content delivery, course management through ANGEL, and minimum of class meetings at University Park Campus.
- Reliance on multimedia objects for instructional content.

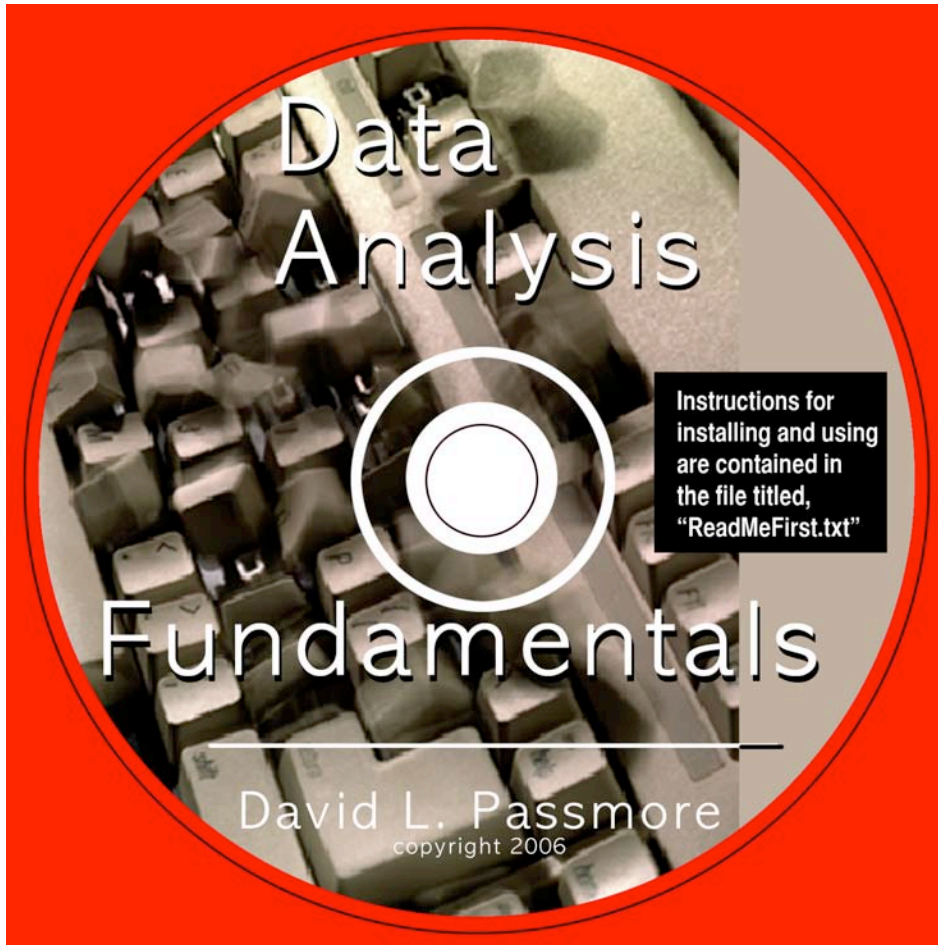
Design (cont.)...

- Opportunities for varied practice (45 assignments, six major workshop exercises, as many as six quizzes, and a final exam).
- Simple (quizzes) to challenging (assignments) to complex (workshop exercises) expectations.
- Promotion of communication and collaboration among students through ANGEL tools and through team work during workshop exercises.

Structure...



eTextbook...



- Contains all course content.
- Is published and distributed by commercial entity.
- Is Mac/Win cross-platform
- Holds extensive multimedia objects.
- Has digital rights management

Authored through -- <http://www.nightkitchen.com>

ANGEL...



- Examine course syllabus by searching for WF ED 540 during Spring Semester 2006 at <http://cms.psu.edu>.
- Demonstration of search for syllabus at <http://www.personal.psu.edu/dlp/angel/angel.html>

Workshop...



- Only six three-hour class meetings.
- No lecture format.
- After discussion or quiz, completion of complex and difficult tasks that approximate “real life” situations.
- Team work to capitalize on collaboration and peer teaching.
- Opportunities for guided practice and demonstration.

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