

# **Fiscal Responsibility and Institutional Inertia**

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# Maryland Course Redesign

- Maryland Course Redesign Initiative
  - Develop at least one redesigned pilot course at each USM degree granting institution based upon the NCAT model
  - Develop internal capability to redesign courses in the future
- Focus on large enrollment courses
  - Large lecture sections
    - improve learning environment
  - Multiple sections
    - improve efficiency

# Course Redesign Projects

- One pilot project planned at each of USM eleven degree granting institutions. Currently
  - Two Biology
  - One Chemistry
  - One English
  - Three Mathematics
  - One Nursing
  - Three Psychology

# Some Themes

- Most projects use the “replacement model,” i.e., move some activities from classroom to some technology assisted instruction
- More individualized, active learning through the use of technology and undergraduate learning assistants
- Eliminate “course drift” in multi-section courses
- In courses, where the problem is students with differing backgrounds/objectives create strategies for addressing differing needs, using technology and other strategies

# Course Redesign

## Complementary System Activities

- Create discipline specific connections between comparable projects
  - System Office can facilitate collaboration where it makes sense
- Organize workshops on common issues:
  - learning theory, assessment, etc.
    - This is not a “one-size-fits-all” approach
    - But it is also not a “go-it-alone” approach
- Make connection between USM project teams and those at other institutions who have successfully undertaken similar redesigns
  - Generate momentum for continuous success

# Three Examples

- Jennifer Hearne, Assistant Professor of Biochemistry at University of Maryland, Eastern Shore
- Megan Bradley, Associate Professor of Psychology, Frostburg State University
- Raouf Boules, Chairperson and Professor of Mathematics at Towson University

# Principles of Chemistry I

University of Maryland Eastern Shore



Jennifer L. Hearne, Ph.D.

January 22, 2010

For more information about the redesign of Principles of Chemistry I, please contact  
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Or visit

<http://www.thencat.org/States/USMaryland.htm>



# Redesigning General Psychology

*AAC&U The Wit, The Will...And the  
Wallet Conference, 2010*

Dr. Megan E. Bradley

For more information about the redesign of General Psychology, please contact Dr.

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# Redesigned Courses:

DVMT 101- Developmental Mathematics (4 contact hours)

DVMT 110 - Intermediate Algebra (3 contact hours)

Raouf Boules, Ph.D., Professor and Chairperson, Department of Mathematics, Towson University      boules@towson.edu

# Student Population

- Students with SAT mathematics scores less than 500 and weak placement test scores
- Academic year 2008-2009 enrollment data
  - DVMT 101: 25 course sections enrolling 649 students
  - DVMT 110: 17 course sections enrolling 349 students
  - Total: **42 sections** with close to **1000 students**
  - Relative size: 10% of the Department academic year operation

# Traditional vs. Redesigned (1)

- Traditional
  - Lecture format
    - DVMT 101: 4 hours
    - DVMT 110: 3 hours
  - Taught mainly by part-time faculty
  - Use common exams with pass/fail grades
  - Challenges
    - Students enter with varying background, experience and skill levels
    - Students may move with varying pace
      - May even enroll in DVMT 101 and finish both
    - Some need more practice than others

# Traditional vs. Redesigned (2)

- Redesigned
  - Uses a *replacement model* where one hour in each of the 2 classes is replaced by 2 hours in an open computer lab
  - Lab uses interactive learning software with thousands of practice problems and tutorials
  - Self-paced learning environment with immediate feedback and tutorials
  - Lab is mainly staffed by Undergraduate Learning Assistants (ULA's) and graduate Teaching Assistants (TA's) who provide individualized guidance as needed

# Advantages to the Student

- Individualized attention with an opportunity for self-based learning
- The ability to practice in class and participate as an active learner
- Getting immediate feedback (software)

# Roadblocks

- Resistance to change
- Large number of part-time instructors involved with long experience in traditional modes of teaching
- Isolated bad Technology experiences
- Initial lack of space for an open computer lab

# New Computer Lab

- 40 computers
- Open 28 hrs/wk



# Implementation

- Created Course Redesign Task Force
- Created an on-line component for each course
- Hosted two major workshops (led by two national experts) and numerous technology-related training sessions
- Utilized resources provided by the University System (workshops, networking opportunities, etc)
- Some members of Task Force attended the NCAT and other conferences
- Created resource manual for instructors and a website for students
- Recruited and trained ULA's and LA's

# Success Indicators

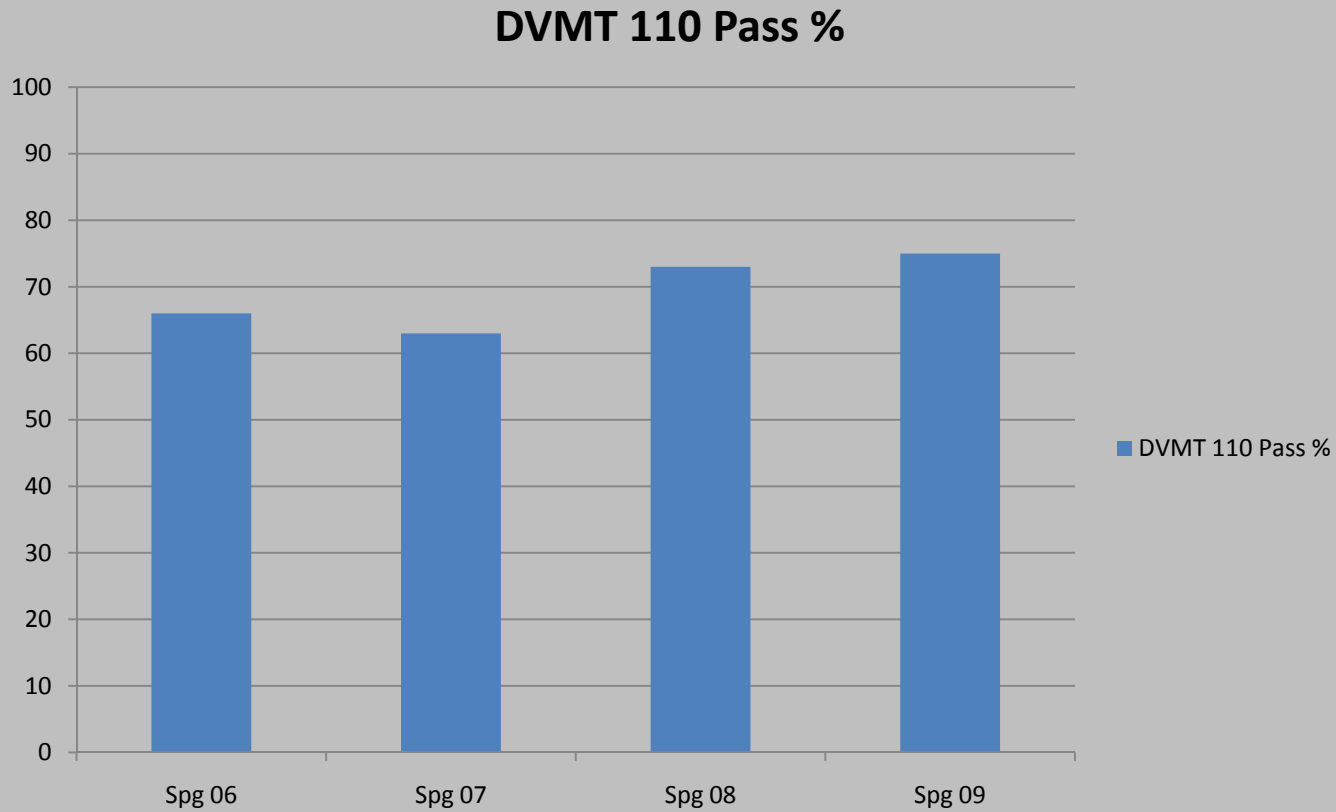
- Time to completion
- Pass rates: 77% □ 85% (fall semester data)
- Positive student experience (from course evaluations)
- Increased faculty enthusiasm
- Some realizable cost saving

# DVMT 101 Pass Data

## DVMT 101



# DVMT 110 Pass Data



# Cost Assessment

- Traditional
  - Instructors' salary = \$135,900 in Academic year 08-09
- Redesigned:
  - Instructors salary = \$98,100
  - Lab staffing cost = \$15,000
  - Total = 113,100
  - Saving of 17% (\$22,800)

# Conclusion

- Given the positive results, the Department is committed to continuing the practice and to using the experience gained to improve the redesigned courses
- Some faculty are looking into using a similar model for other lower-division and introductory courses (College Algebra)

# Credits

- Task Force members
  - John Grant (professor)
  - Felice Shore and Alexei Kolesnikov (assistant professors)
  - Judith Macks and Erika Miller (lecturers)
  - Alicia Medina (Academic Achievement Center)
- TU administration
  - Dean FCSM, Provost and President
- USM
  - Chancellor and his staff
- USM Board of Regents