

Teaching Economics on the Web A Study of Student Success

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Online at <http://gozips.uakron.edu/~myers/online>

Research Questions

- (1) Does the mode of delivery (face-to-face or web-based) have an influence on learning outcomes?**
- (2) Are students in an online environment as likely to do as well as in face-to-face classes? Will they be able to equal the complex problem solving of the face-to-face students?**
- (3) Will web-based students develop more favorable attitudes towards economics than the attitudes developed by students in the face-to-face class?**
- (4) Do student myths about economics affect their learning outcomes and attitudes towards economics?**



Acknowledgments

- Grant from
 - Carnegie Teaching Academy
 - Scholarship of Teaching, Assessment and Learning Funds
 - Institute for Teaching and Learning
 - The University of Akron
- Data collected under signed informed consent from our students subject to the Institutional Research Board for the Protection of Human Subjects at The University of Akron.
 - Very few failed to give informed consent
- Data collection instruments validated by a number of independent reviewers and created by MA grad, Michael Lovette.



Course under study

- Introduction to Economic Analysis
 - One-semester principles of economics
 - 3 cr. General education course
 - Required for engineering majors
 - Both face-to-face and on line
 - The online course is similar to a graduate course offered since Fall 2001



Comparison

- Online
 - Offered by Steven Myers
 - No face-to-face meetings
 - Mastery & competency based learning
 - High professor-student interaction
 - No student to student interaction
 - Full use of the WebCT environment
- Face-to-face
 - Offered by Michael Nelson
 - Regular class times
 - Lecture and active learning collaborative techniques
 - Better than the norm of 83% “chalk and talk” (Becker and Watts)
 - Some minor web-enhancements such as online gradebook



The online course design has influenced student success

Grades Distribution

	A	B	C/D	F
Online Course	33%	39%	0%	10%
Face-to-face Course	8%	37%	40%	10%


MC Learning Assessment Breakdown / Online

Modules	Total	Recognition	Conceptual	Analytical	%C&A
2-8 Micro	331	29%	45%	26%	71%
9-15 Macro	563	32%	54%	15%	68%
2-15 Total	894	31%	51%	19%	69%



Student Comments

- “The fact that this course was completely internet based, had no bearing on the level of knowledge I gained from the course. I think I learned as much, or even more, than I would have in a traditional classroom. I contribute this most to the way the instructor organized the course.”



Student Comments

- “I believe that the benefits of web-based courses ... far outweigh any disadvantages such as lack of face-to-face interaction--at least in this particular course. Dr. Myers' course was, of the four I took this semester over the web, truthfully the best organized, most well-adapted to the web (by his efforts) of them all.”



Research design

Student's success

=f(student's initial endowments,
awareness of the economy,
attitudes about economics,
student characteristics,
course modality)



Student Characteristics

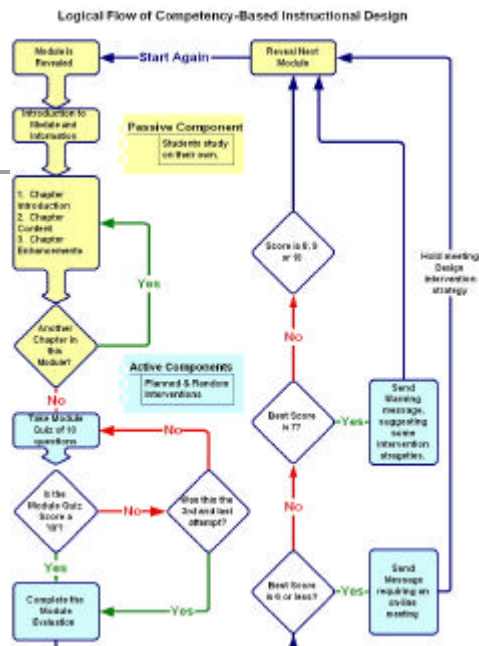
- Online Students
 - More likely to be
 - To be older
 - To be non-white
 - To be female
 - To have taken more credits
 - To be decided in their major
 - More favorably disposed to economics
- Face-to-face Students
 - More likely
 - To be male
 - To be a freshman
 - To be undecided in their major
 - To spend less time gathering business and economic news.

Design of the online course

- Built in modules
- Modules completed in order
- Competency based testing
- Use student feedback
 - For student learning enhancement
 - For modifying & improving the course

Course Design

- DL requires planning for contingencies
- 14 Content Modules
- Active Learning vs. Passive Learning



Source: Steven C. Myers. Foundations of Economic Analysis. The University of Akron.



Pre-class and Module 1: Preparing Students to Learn

- Email me! <http://gozips.uakron.edu/~myers/online/>
 - Is Distance Learning for Me?
 - VARK – testing learning styles
 - Orientation Module—' How to logon to WebCT'
 - Orientation Module—' How to Use WebCT'
- Syllabus
 - Graduate course
 - Undergraduate course



Pre-class and Module 1: Additional Orientation

- How to Communicate with Dr. Myers
- How to access your online text
 - <http://www.economicplace.com/econ5e/>
- Rules of the game
- Building a relationship –
 - Breakdown the anonymity
 - Survey "Tell me about yourself"



Content Modules 2-15

- Module Introduction & Objectives
- Chapter Introductions
- Content
- Supportive Materials
- Assessment of Learning - Quizzes on objectives with multiple trials
- Evaluation

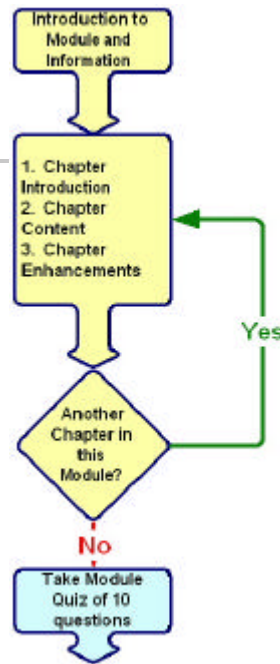


2 Research & Writing Assignments – some objectives

- Practice and experience in reflecting on a topic in the current economy.
- Practice in analysis of economic trends.
- Gaining of confidence about talking about the economy.
- Ability to know and use the resources of economic commentary, prior analysis and data.

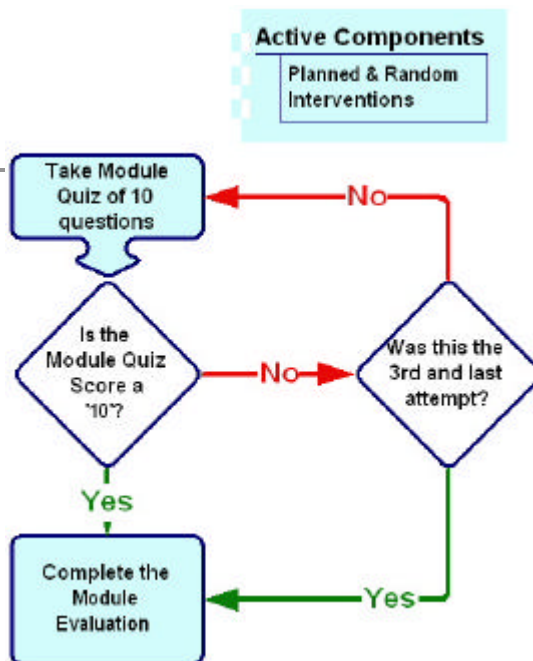
Introductions & Content

- Mostly Passive
- Learner Centered
- Students progress without intervention
- Micro – Modules 2-8
- Macro – Modules 9-15



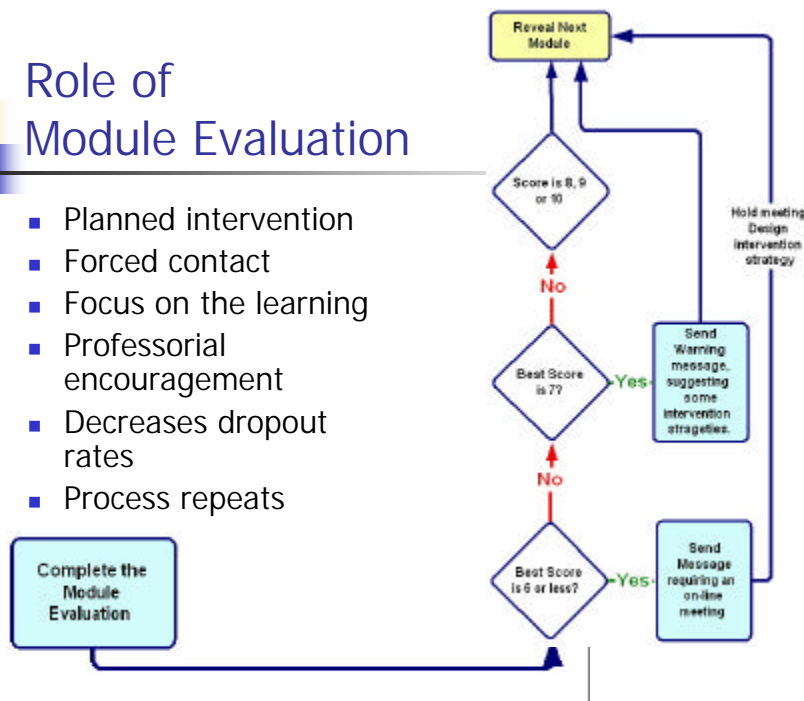
Graded Assessment

- Competency based
- Everyone strives to get a perfect 10 (Mastery)
- Three attempts, 15 min. time limit
- Questions a mix of (1) Recognition, (2) Conceptual, & (3) Analytic ~70% C&A
- Random intervention by Professor



Role of Module Evaluation

- Planned intervention
- Forced contact
- Focus on the learning
- Professorial encouragement
- Decreases dropout rates
- Process repeats



Module Evaluation

A Classroom Assessment Technique from Angelo and Cross (1993); tested by Chizmar and Ostrosky (1998)

- What comments do you have on this module and your experience in completing it?
- What main point have you learned that you did not fully understand before?
- What questions ... Include any points that still remain muddy or unclear. Do consider posing the muddy points to your fellow students in the discussions.
- What recommendations do you have for us as we continue to change and enhance the course?