

A hybrid interactive learning paradigm for an undergraduate Business Decision Making Course

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Approach Studied

- ▶ Hybrid approach: face-to-face plus e-learning
- ▶ Two technological innovations
 - the use of non-intrusive recorded lectures
 - the use of electronic homework to re-enforce the material learned in class

Starting Point

- ▶ 100% online delivery less effective than 100% face-to-face delivery
- ▶ Quantitative material benefits from regular face-to-face instructor interaction
- ▶ Hybrid approach may provide advantages of e-learning yet avoid drawbacks of online delivery:
 - Face-to-face presentation of material plus
 - Two e-learning techniques: recorded lectures and electronic homework

e-learning Technique #1

Recorded Lectures

- ▶ Record entire lecture plus supplementary examples (Camtasia software)
 - Key strokes
 - Screens
 - Sound
- ▶ Post to course management system (Blackboard) for student download and viewing on a self-paced basis

e-learning Technique #1

Student Reactions (55 students)

Spring 2008	
Q1: How often did you access the Recorded Lectures	
a) Never	31%
b) Occasionally	60%
c) Whenever they appear	9%
Q2: Did you find the recorded solutions	
a) Improved understanding	21%
b) Clarified gaps from class	33%
c) Helped catch up when you missed one	36%
d) Did not add to the experience	10%
Q3: Did you find the recorded lectures was	
a) Sufficient	94%
b) Too much	4%
c) Too little	2%

e-learning Technique #1

Student Comments

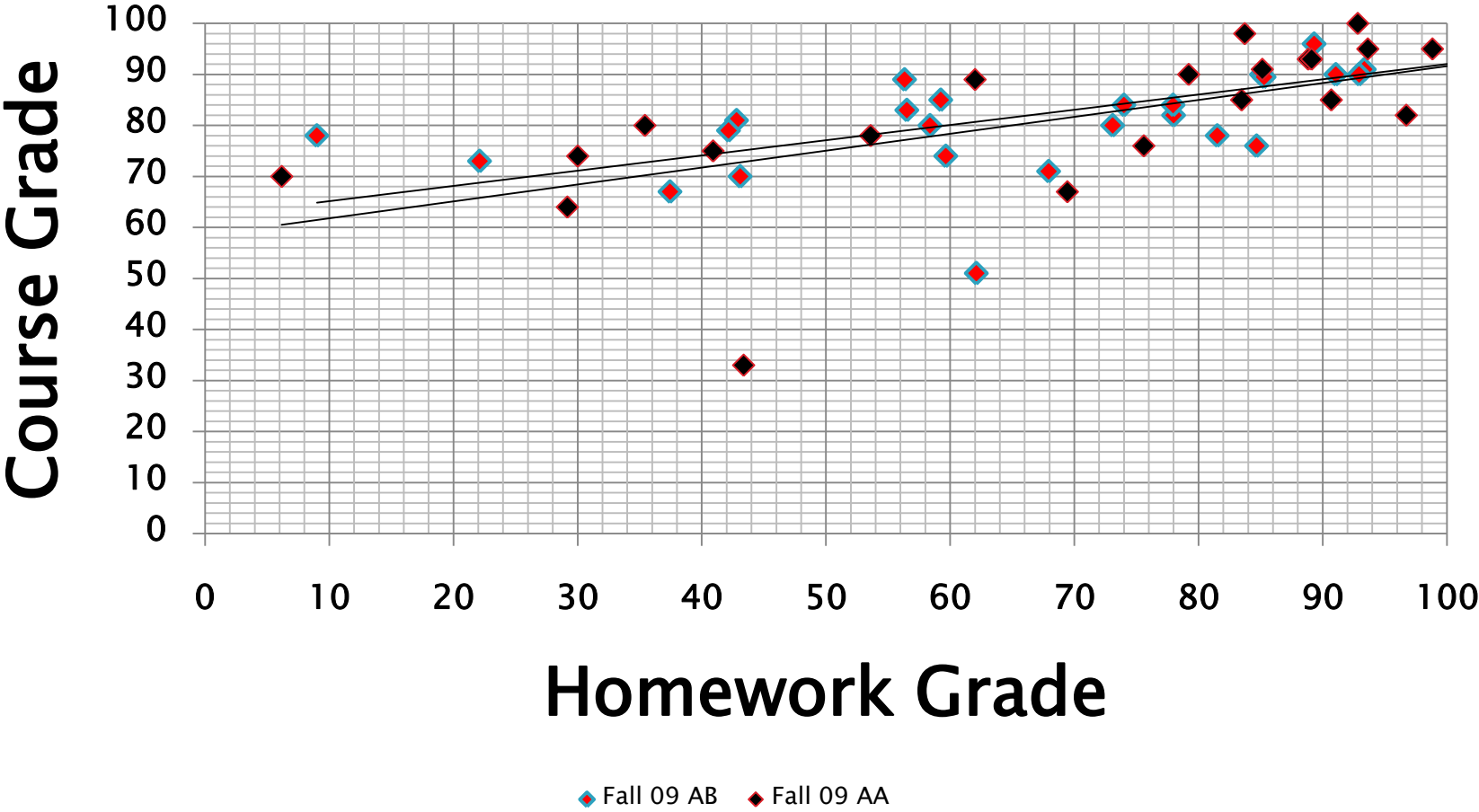
		Sample Comments
Self-paced	12	Watching the recorded lectures was really easy, it was nice being able to fast forward through the lectures to find a part I really needed. Excellent learning method. It has helped me keep on top of things.
Interactive	9	They are fun
Helped gain confidence in material	10	It helped me reinforce what I learned in class, and I used the recorded lectures to study as well.
On Demand	6	Nothing is the same as the actual classroom but it was helpful if I had to miss class.

e-learning Technique #2

e-homework

- ▶ Assign required homework problems using Blackboard's electronic test facility
 - Replaced optional homework used previously
 - Included in course grade
 - Graded automatically providing instant feedback

Figure 1a: Comparison of electronic homework average grade with final course grade



e-learning Technique #2 – e-homework

Instructor Observations

- ▶ Homework grades correlate with course grades
- ▶ Participation rate using required electronic homework understandably higher than rate using optional paper version
- ▶ No observed improvement in course grades compared to prior courses using optional/non-electronic homework method

e-learning Technique #2 – e-homework Needs Further Study

- ▶ Does e-homework improve student participation (completion rate) relative to non-electronic homework?
- ▶ Does e-homework improve student performance relative to non-electronic homework?
- ▶ What are the most effective uses of e-learning in a face-to-face course?