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Do the teachers share the greater ‘burden’ of Blended Learning? : An evaluation of innovative approaches to economics teaching

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Motivation: *Blended learning and Cost-Benefit Analysis (CBA)*



- Why did we *opt for* looking at **CBA** of adoption?
- *Who are the stakeholders?*
 - *Teachers*
 - *Students*
 - *University Administration*
- *Why Economics courses at Lincoln University?*
 - *ECON 215: Managerial Economics*
 - *ECON 603: Development Economics*

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What are the *drivers of adoption*?



- Rogers (1962, 2003): Social Networks & Diffusion of Innovations
 - innovators
 - early adopters
 - early majority
 - ***late majority***
 - ***Laggards***

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Adoption of Technology in Teaching



- **Finely & Hartman (2004):** Western Michigan University
Pedagogical concerns, skills, departmental culture
- **Birch & Barret (2009):** University of Southern Queensland
 - Institutional Barriers : absence of program-wide strategic plan and specialised training
 - Individual barriers: workload, lack of reward & recognition
- **Orr et. al.(2009):** University of North Carolina
 - Availability of Compensation(stipend, course release time, summer development activities) is not an essential motivator

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Technology and 'Incentives' for Teachers(?)



- Complementarity vs. Substitutability
- Rationality: Is iT better for my students?
- Compatibility: Do I have enough skills/ knowledge to adopt iT?
- Complexity: Is iT user friendly?
- Measurability: Can we test and observe iT working?

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What is Blended Learning at LU?



- Blended learning is learning that is facilitated by the effective combination of different modes of delivery, models of teaching and styles of learning...
 - Heinze, A.; C. Procter (2004)
- It is not an attempt at distance learning by stealth or even a first step in that direction
- Technology is a tool... not a means-to-an-end

Case Study 1 : Managerial Economics

ECON 215



- Complementarity: f2f and online learning
- Rationality: creating personal learning space
- Tools
 - Pre-module concept and skill check
 - **Review Quizzes**
 - *Lectorials*
 - **Practice quizzes**
 - Interactive lessons

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A standard module for ECON 215



Course: ECON215 - Managerial Economics 2012 - Windows Internet Explorer provided by Lincoln University

http://learn.lincoln.ac.nz/learn/course/view.php?id=2598&sesskey=BwDT6zq2p8&switchrole=5

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ECON215 - Managerial Economics 2012

You are logged in as Nazmun Ratna: Student (Return to my normal role)

Lincoln University Website | Library, Teaching & Learning | myLincoln Intranet | Study Help | LUCAS | iHelp Website

Learn > ECON215

Return to my normal role

Menu

ECON215

- 1. Intro to Manag. Econ.
- 2. Marginal Analysis
- 3. Demand
- 4. Production
- 5. Cost Analysis
- 6. Decisions & Uncertainty
- Review Materials
- Test and Exam info
- MATH003 (Calculus)
- Questionnaire

Show all

Administration

- Profile

Course Information

- Course Outline
- Course Overview Page
- Past Tests/Exams

My courses

- 100 Generic
- 100 Generic A
- Academic Committees
- Academic Quality
- ACCT000 Accounting
- ANU - Econometrics
- ANU Preparatory Math for Economics
- Commerce

3. Demand

Learning Objectives

Completion of this topic should enable you to:

- Evaluate *quantitatively* the impact of different determinants for a multi-variable demand function
- Use Calculus to measure different demand elasticities and show how managers can maximize profit by using *optimal markup pricing*
- Understand profit maximization by using price discrimination under monopoly

Pre-Module Concept and Skill Check

Students can review the extensive notes on elasticity provided in the ECON110 handbook (Exercise 5). Lecture slides on stage one material and some stage one quiz questions are also provided below.

- Demand and Elasticity review notes
- Demand review quiz

Course Resources

Lecture slides:

- 03 - Demand Lecture Slides
- Demand Function Practice

Readings:

Textbook - Chapter 3.

Tutorial Questions:

- Wk 03 Questions (wk beg 12 Mar)
- Blackwing Pencils
- Wk3-Q1 video answers
- Wk 03 - Tute Ans

If you cannot view the video answers please download the decoder (codec) below, and install it. Please email Paul McKeown with your feedback or if you have problems...

Click here to download decoder for video

Module Review Materials and Activities:

- Demand Lesson

Latest News

- 23 Apr, 13:56 Nazmun Ratna My mistake...it is Quiz 2 more...
- 23 Apr, 12:17 Nazmun Ratna Week 7 more...
- 19 Apr, 10:46 Nazmun Ratna Week 7 more...
- 17 Apr, 15:12 Paul McKeown Test 1 returns more...
- 2 Apr, 14:33 Nazmun Ratna Office hour more... Older topics ...

Calendar

April 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Events Key

- Global
- Course
- Group
- User

Local intranet | Protected Mode: Off

10:24 a.m. 24/04/2012

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A standard module for MATH 003



Lesson

This lesson has two complementary branches that cover the same ideas about deriving logarithmic functions. The math path takes an 'algebraic' perspective to help you boil the idea down to a simple abstraction. The economic examples take a 'narrative' approach, placing the ideas in practical business and community situations. You'll find it useful to do both. At all points you can go back and review pages you've done or exit the branch to try the other branch.

When you've completed the lesson you should test your skills by doing the self-assessment quiz for the module.

[Logarithmic Function Derivative Lesson](#)

Self Assessment Quiz:

The quiz below is a way for you to check whether or not you understand the concepts you have studied. Questions are selected randomly from a bank of resources so you should attempt it more than once. Don't feel satisfied until you can get 100% every time. Doing that will give you the confidence you need to take on related math challenges in your main courses with confidence.

[Logarithmic Function Derivative Quiz](#)

Resources & Activities:

Logarithmic Function Derivative Video 1 : Khan Academy (9:52 Minutes)

Use the video to reinforce your grasp of concepts you are working with in other parts of the module. Just watching the video for 10 -15 minutes is going to be pretty boring at best or put you to sleep at worst! 😊 So here are some things to make your time investment more productive:

- Before you watch write a quick summary of what you know about the topic already and check to see if your understanding is confirmed in the video
- As you watch, note the key points of the video and email a summary to a fellow student
- At interesting points stop the video and predict what will come next - how often are you right?
- Watch the video with a friend (no pop corn please !!!) and discuss things you like or dislike about it
- Share the link to the video with a fellow student
- Note any questions you have and post them to a class online forum - nine times out of ten someone else will have a similar question they'll be glad you asked 😊

Click on the right hand bottom corner to expand to a full screen mode

Proof: $d/dx(\ln x) = 1/x$

Notes for the whole module on the home page for a summary of all the topics

- Complete the Quizzes for the module to assess your competence

You may change the order of these if you want. For example, if you already feel confident you have a skill you can do the quiz to confirm this.

Learning is a social process so

- Complete your profile in *Learn* so that other users know a little about you and your learning goals
- Share questions and ideas raised here with others in your main course
- Ask your course tutor(s) for other resources as you need them
- Check with colleagues in your other courses to find people who are also doing the modules

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Costs & Benefits

Group 1: Students



1. Performance
2. Engagement/participation
3. Comfort
4. ***Overlapping benefits*** for Group 1 & Group 2

Performance & Engagement

ECON 215 2012



	Demand		Production		Quiz	Final Exam
	Review	Practice	Review	Practice	Frequency in Top 10	Total (rank)
Student 1	-	67%	60%	78%	5	97%(1)
Student 2	-	50%	100%	-	4	82%(6)
Student 3	70%	50%	80%	78%	-	79%(9)
Student 4	70%	100%	-	77%	5	93%(2)
Student 5	80%	83%	-	-	5	72%(12)
Student 6			60%	-	1	90%(3)

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Benefits for Group 1



- **Student-centred approach & *Comfort*:** “ MATH 003 worked really well for me in preparing for ECON 215 as I had little experience with calculus previously and it explained the calculus concepts in simple terms.....MATH 003 quizzes were great as I could read the notes to get the understanding and then follow up by practising actually the concepts.”

Benefits for Group 2: Teachers



- Better learning outcome

(R)Evolution from **Distance** – **Flexible** - **Blended** learning

- Creating the sense of **ownership** for students
- Information on engagement of students outside the lectures

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Case Study 2:Development Economics

ECON 603



- Post-graduate course with students across the disciplines : Economics, Environmental Management & Policy, Agricultural management, Finance
- ***Development Economics*** speaks to an analytic process, ***Economic Development*** speaks to a broad objective, requiring multidisciplinary analysis that goes beyond economics.

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Performance/Engagement



2011	Frequency of participation	Marks	Project 1	Project 2	Final Marks
Student 1	9	4.8	91	87	80
Student 2	6	1.75	70	87	66
Student 3	6	3.75	76	96	81
Student 4	4	3.5	86	91	81
Student 5	9	4	72	87	70
2010		Marks	Project 1	Project 2	Final Marks
Student 1	2	3.75	85	85	84
Student 2	1	3.5	50	81	78
Student 3	4	4	75	74	73
Student 4	1	3.25	84	75	78
Student 5	1	3.5	73	85	70
Student 6	1	2.25	80	84	75
Student 7	0	0	0	0	39

Domestic =Red, **ES Int'l Students** =Blue , **NES Int'l Students**= Green

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Benefits for Group 1



- “ Ability to post questions or comments, not limited to what the lecturer posts”.
- “ I liked being asked a question online. This helped in 1) formatting answers and 2) studying the material more closely”
- “Discussion forum where discussions were started freely by the students”
- “ Introduce topics and discussion outside of course. Get other people involved”

Benefits for Group 2



- Collaborative process of knowledge-building process (Akhras 2012)
- Deeper reflections (Elvis and Calvo 2006)
- Immediate application of new information (Smith 2001 in Kaur 2011)
- Building confidence and expertise to engage in interdisciplinary discussions
- Time management

Work in progress

- Can we answer the question we asked?
 - Measuring costs for group 2
- VERY HIGH FIXED COST in year 1 and declining average cost with constant marginal cost
- Measuring costs for group 1

