The Economics Experience ...

Proposal

A Tablet Laptop Trial for the Department of Economics

Simon Angus, Jan 2009

Background

In recent years, there has been an almost complete shift from traditional ‘chalk and talk’ classroom teaching methods to projection based methods (e.g. PowerPoint). This is especially so in larger first-year and second-year units. Whilst this has meant that stacks of slides can be re-used, their preparation prior to class, and then subsequent delivery on a one-by-one basis has led to much debate about their effectiveness in overall teaching.

What has been lost in this movement to digital presentation? In a word – dynamic delivery. Whereas an instructor could adapt the presentation easily due to student questions and feedback with the advent of prepared slides, this is almost impossible, especially in some instruction theatres where no alternative mode of display is available (the ‘blackboardless classroom’).

Recently there has been a reduction in price for Tablet-style PCs (see pic below) which allow the user to write with ‘digital ink’ directly onto the image in front of them. Moreover, specific software has been developed alongside Tablet machines to allow a presenter to annotate on the fly, or completely new slides (known as ‘whiteboard mode’) to be generated by free-hand digitally with easy to use styles commensurate.

Furthermore, the software allows the complete presentation – both prepared slides to be used exactly as they appeared to the student during the lecture, plus any new material added (e.g. student questions and feedback, or in annotation of the static material) to be part of the lecture can be prepared prior to class, and then subsequently delivered on a one-by-one basis. This request was granted with the subsequent purchase of an HP EliteBook Tablet PC! for the sum of $2,200 (see quote attached) (see Fig. 1).

To my knowledge there has only been one other trial of this system at Monash, and that was in October last year, I attended an impressive demonstration of this system through the e-Learning Service at Monash, and that was in 2008.

1 Introduction & Scope

After attending an e-Learning seminar late in 2008, I approached the Head of Department (BOD) of Economics to request a trial of a Tablet PC for lecturing in the coming session. This request was granted with the subsequent purchase of an HP EliteBook Tablet PC! for the sum of $2,200 (see quote attached) (see Fig. 1).

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Phase 1: S1 2009 (Simon Angus only)

--> 2nd Yr PPS (ECC2800)

--> 5th Yr Micro (ECC5650)

Phase 2: S2 2009 (~ 9 lecturers)

--> 14 units

--> Across campuses

Phase 3: S1 2010

--> roll-out 2 + 3

--> ‘full’ uptake

Web Survey

Report

REPORT ON THE TABLET PC TRIAL

Use in ECC2800 Prospacy, Poverty & Sustainability

S. Angus

July 8, 2009

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How I use it: 2nd Year - Prosperity, Poverty & Sustainability (ECC800)

In Pictures: the Classical case

Source: adapted from (p.124) [Sachs2004]
How I use it: 5th Year - Microeconomic Theory (ECC5650)

Quasi-concavity: \( f(x^t) \geq \min \{f(x^0), f(x^1)\} \)
First survey (PPS ECC2800, S1 2009)

**I PREFERRED CLASSES WITH TABLET**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

**LIKE OTHER ECON UNITS TO USE TABLETS**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**MAIN ADVANTAGE**

<table>
<thead>
<tr>
<th></th>
<th>Quick update/elaborate</th>
<th>Interesting annotations</th>
<th>Leave things off</th>
<th>Viewing later</th>
<th>Other</th>
<th>Not applicable</th>
<th>Fun/Dynamism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**MAIN DISADVANTAGE**

<table>
<thead>
<tr>
<th></th>
<th>Harder on MULO</th>
<th>No disadvantages</th>
<th>Made slides unclear</th>
<th>Less of my own notes</th>
<th>Other</th>
<th>Technical problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>
Figure 4: A portion of the online survey administered to students during the last weeks of session.

Figure 5: Overall questions relating to the use of the Tablet PC, full survey statements in text.

### Economics S2 2009 Tablet Trial Survey

<table>
<thead>
<tr>
<th>Unit</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECW1102</td>
<td>29</td>
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<tr>
<td>ECW3143</td>
<td>20</td>
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<tr>
<td>ECW2731</td>
<td>14</td>
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<tr>
<td>ECW3121</td>
<td>7</td>
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<tr>
<td>ECC2400</td>
<td>4</td>
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<tr>
<td>ECC2000</td>
<td>1</td>
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<td>ECX2123</td>
<td>1</td>
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<tr>
<td>ECC2600</td>
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<tr>
<td>ECC5840</td>
<td>0</td>
</tr>
<tr>
<td>ECW1101</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Responses: 76

**Google forms survey administered online**

**ECC2800: Tablets, Content and Web survey**

Hi guys, thanks for clicking through to this survey -- this will really help me with my planning for future versions of ECC2800. Again, all the answers are COMPLETELY ANONYMOUS -- I don't even know which country you are entering the survey from, let alone which computer or your name. That said, please only reply ONCE...Thanks!

* Required

All else being equal, I preferred the classes in ECC2800 that used the Tablet Laptop for teaching.*
(The Tablet was only in use from approx. week 4)

(Strongly Disagree) *

I would like other Economics Units to use Tablet Laptops for teaching *

(Strongly Disagree) *

In my opinion, the MAIN ADVANTAGE of Tablet Laptop teaching is *

Please select 'Other' if you can't find an answer that you think suits.

- It allowed the lecturer to quickly update, add to and elaborate the prepared slides
- It allowed added text to be recorded for later viewing online
- It provided an element of fun and dynamism to the classes
- It allowed the lecturer to make far more interesting and informative diagrams and annotations (e.g. with colour, and ability to 'undo' actions) than otherwise available (e.g. with chalkboards, overheads or whiteboards)
- It allowed the lecturer to leave things off the prepared slides, keeping him active and so enabling a better learning environment for me
- Not applicable -- there were no advantages
- Other: 

In my opinion, the MAIN DISADVANTAGE of Tablet Laptop teaching is *

Please select 'Other' if you can't find an answer that you think suits.

- The annotations made the slides unclear
- It made the lectures harder to follow on MULO
- Technical problems caused too many disruptions to the lecturer's flow of explanation
- It made me less likely to take my own notes, which negatively affected my learning
- Not applicable -- there were no disadvantages
- Other: 

Clayton  Berwick
**Quotes: positive**

Tablet is very good addition allows for diagrams to be drawn on the fly much better than using the old analogue projectors.

I think tablet laptop is really helpful for learning process. The main advantage of tablet pc is fast for making comment on the lecture slide. Rather than using pointer, tablet pc allow lecturer to actually make changes in the handout such as draw shift or movement in a diagram.

Sometimes, lecturer can make extra notes for the students. Note down those that are important. And make sure the lecture slides are all the materials that need to be studied in the examination.

The best every lecture should use it, main advantage: Able to see diagrams more clearer and able to undo steps to show curve shifting which way & better and clearer than lecturers handwriting (the diagrams). Keep the great improvements!!!!
As an offcampus student this makes a really big difference to understanding theories and examples explained by the lecturer when working from an audio file with printed lecture notes to follow, as it allows me to keep up with exactly what the lecturer has been explaining in the lecture.

Made the lecture notes much easier to understand/follow when listening to an online lecture. Provided a lot of extra information for OCL students – especially as we can't usually 'see' what the lecturer is drawing/referring to if it's not included in the lecture slides. Very useful and worthwhile.

Really awesome to see this technology used.

A great ides. As an offcampus student the added comments, graphs and examples compliments a somewhat deficient text book. The only draw back was deciphering the writing. I know this is done during lectures but clearer writing would be good. Thanks vey much –

Very good to help understand what is being taught

Good job!!
Overall I was pretty happy with this format, but there were a few minor technical difficulties at different times (however I am sure with further use these will no longer be a problem).

Sometimes it is not working, cannot connect to the powerpoint.

Since it was only a test/beta/pilot program I understand that there would always be some technical difficulties. But when the equipment (projectors mainly) were not working or not working properly, then the class really was at a loss. Fix the peripheral equipment, and you have a smooth flowing class.

If the teacher can write more neatly it would be better. Becoz sometimes the teacher's writing is so messy and could not be read.
Did you find teaching with a Tablet PC effective?

Yes, it was very effective, especially for illustrating a point by drawing a diagram 'on the fly'.
Yes.
Yes, I did, but not as much as I expected.
Yes.

Did you have any problems?

No problems. It took a couple of weeks to get used to it.
It appears to be wrong -- to truncate the configuration. 1G memory is not sufficient. The system is far too slow. Other problems are just the matter of getting proficiency in using the technology.
There are quite a lot of cases in which the data projector somehow lost connections with the tablet and I need to re-start everything, which caused some interruptions.
Not really.

Did you find the tablet more or less efficient to teach/prepare with?

It is much more efficient, as I left spaces for diagrams and other things in my lecture slides. Made lecture slides less crowded.
To teach -- yes.
The new technology has not affected my preparation. I still use PowerPoint for designing my presentation.
Yes, and I think a lot of learning is going on and things will work better in the future.
It is more efficient.
Support ...

Group tuition (by me) prior to S2 2009 (wave 1)

Web resources for recent adopters

EconBrain

knowledge from the faculty for the faculty

Search
Search

Titles
Text

Navigation
Research Branch
Education Branch
Admin Branch
InfoTech Nodes
How To Nodes
Help Contents
Teaching with Tablet Laptop

Recent
Large Data... at Monash
Home
Research Branch
Education Branch
Teaching with Tablet Laptop

This Page
Show Parent
edit
show changes
get info
show raw text
show print view
attach file
check spelling
show like pages
show local site map

More Actions
despair
subscribe user
render as docbook
package pages
my pages

Started by: Simon Angus
Current contact: Simon Angus
Description: Notes on how to install CP3 and use a Tablet Laptop for lecturing.
See also: Education Branch Teaching with Tablet Laptop

Welcome to the Tablet Teaching Resource!

Preparing your tablet for teaching

Before you begin you need to connect the tablet to the internet and download the Classroom Presenter 3 (CP3) software, and practice uploading your files into CP3

Step 1: Download CP3
1. First, connect the 'blue chord' (internet) in your office to the Tablet;
2. Open a browser and navigate to: http://classroompresenter.cs.washington.edu/
3. Download the latest version of CP3 (currently 3.1)
4. Install as instructed

Step 2: In CP3
1. Open the CP3 application
2. In the first window, check the 'Instructor' in the 'Stand-alone' mode and; 'Enable dual-monitor mode' and click 'Start a new presentation'. This screen is checking whether you want to run CP3 in its fully functional mode which is where every student in the theatre would have a laptop and they and you would be connected to the same network. The students are then able to submit elements (diagrams, drawings, responses) from their laptops to yours during the lecture. Obviously this sounds great, but it is impractical at the moment, since few of our students are bringing laptops to class (though many of them own them).
3. From the 'File' menu click 'Open Deck' (a 'deck' is what CP3 calls a set of presentation slides).
4. Navigate to your PPT slides and Open.

In the lecture theatre

You should practice this in your office before your first lecture. This can be achieved by connecting a standard monitor VGA cable from your office monitor to the tablet as if it were the projector/lectern cable. Note, many of the changes below need only be done once (the first time!) so arrive a little early. After this, the settings should be remembered by the Tablet.

Step 1: Connect your laptop