SMART BOARD WORKSHOP FOR INNOVATIVE TEACHING AND LEARNING

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Smart Board @ UH
WELCOME - E KOMO MAI

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I am the recipient of the 2015 Chancellor’s Citation for Mentorious Teaching—a campus-wide teaching award.

I received my Ph.D. in Economics from the University of Maryland at College Park and B.A. and M.A. degrees from Bogazici University, Istanbul, Turkey.

I worked at Fordham University and in the Development Economics Research Group of the World Bank previously.

My main research interests are in International Trade, Political Economy of Trade Policy, and Development Economics.

My publications include articles in International Economic Review and Journal of International Economics.

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What is a Smart Board?

- Smart Board is an interactive whiteboard system.
- “It is an interactive whiteboard that uses touch detection for user input (for example scrolling and right mouse-click) in the same way as normal PC input devices.”
What is a Smart Podium?

- Smart Podium is an interactive pen display.
- “You can interact with digital content and write over it on SMART Podium, all whilst displaying that content on a large screen in the same room or from a remote location.”
Where can I find Smart Podiums?

- Various classrooms have them installed, e.g. BUSAD, Physical Science, Gartley, Webster, Sakamaki.
Smart Podiums in the Classroom
Advantages of a Smart Podium

- “Battery-free tethered pen: Because the pen is the point of contact on the interactive screen, you can rest your hand on the screen while writing notes”
“SMART Ink smooths out your handwriting to improve legibility. You can write notes over any application and save them into several common applications, including Microsoft Office programs or Adobe Acrobat Pro”
First Thing to Do: Orient/Align

- The first time you connect your SMART Board interactive whiteboard, you must calibrate and orient it.

- “The orientation process ensures that the calibration coordinates are accurately associated with the relative location of your projected image on the interactive surface. Orient your interactive whiteboard if your projector or interactive whiteboard has moved since you last used it, or whenever the mouse pointer isn’t properly aligned with your finger or a pen tray pen when you touch the interactive whiteboard’s surface.”
1. Press the Orientation button on the pen tray.
   - Note: If you have the configuration settings menu open you can orient your interactive whiteboard through the Tools tab, and then press Orient.
   - The orientation screen opens.
2. Pick up a pen from the pen tray.
3. Firmly touch the center of the target in the upper-left corner of the screen, and then lift the pen. When you remove the pen, the target moves to the next orientation point.
4. Repeat step 3 until the orientation process is complete.
Exercise 3: Very Basic Math Review

- Suppose $x$ measures the number of different cell phones owned in lifetime. 5 students have responded to a quick survey as follows:
- That is $x_3 = 5$ (respondent number 3 had 5 cell phones), $x_5 = 1$ (respondent 5 had only 1).
Exercise 3: Very Basic Math Review

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<table>
<thead>
<tr>
<th>$x$</th>
<th>$x_i$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>$x_3 = 5$</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>$x_5 = 1$</td>
</tr>
</tbody>
</table>

$n = 5$ sample size

$X = \# \text{ of cell phones}$
Isocost lines show combinations of capital and labor input that cost the same amount. Total cost of production is

\[ C = wL_F + rK_F \]

\[ \Rightarrow \]

\[ K_F = \frac{C}{r} - \frac{w}{r}L_F \]

A producer will choose the **lowest** possible cost given the technological trade-off outlined by the isoquant curve: where isocost curve is tangent to the isoquant
Isocost lines show combinations of capital and labor input that cost the same amount. Total cost of production is $C = wL_F + rK_F$.

$$K_F = \frac{C}{r} - \left(\frac{w}{r}\right)L_F$$

A producer will choose the **lowest** possible cost given the technological trade-off outlined by the isoquant curve: where isocost curve is tangent to the isoquant.
- Voters uniformly distributed
- Everybody has to vote
- Single policy election
- People will vote for the candidate who is closest to their position

(1/4, 3/4) is not a political equilibrium since whoever deviates from it becomes worse off
“...create, deliver and manage interactive lessons within a single application. With all your instructional materials at your fingertips, you can save any notes or content you write during lessons to share with your students later.”
The Floating Tools Toolbar

- **Cursor**
- **Pen Tool**
- **Highlighter**
- **Area Capture**
- **Undo/Redo**
- **Eraser**
- **Right-click**
- **More**
- **Collapse/Expand Toolbar**

<table>
<thead>
<tr>
<th>Button</th>
<th>Use this button to</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Capture button" /></td>
<td>Capture an area of the screen into Notebook™ software</td>
</tr>
<tr>
<td><img src="image" alt="Stop button" /></td>
<td>Stop using other tools and return the cursor to mouse mode</td>
</tr>
<tr>
<td><img src="image" alt="Draw button" /></td>
<td>Write or draw in digital ink</td>
</tr>
<tr>
<td><img src="image" alt="Highlight button" /></td>
<td>Highlight an area of the screen with translucent ink for emphasis</td>
</tr>
</tbody>
</table>
The Floating Tools Toolbar

Undo your previous action. This tool toggles between two states, Undo and Redo.

Redo an action you cleared in error. This is the second of the two states mentioned above.

Erase digital ink

Make your next press on the interactive whiteboard a right-click

Open the drop-down menu to personalize toolbar functions
Screen captures, images and files from other applications, such as Macromedia Flash, can be brought into Notebook software to help create engaging lesson activities and presentations. Save your completed file in Notebook file format to share with others in your workplace. You can also share your valuable content by exporting your Notebook file to HTML, PDF, PowerPoint (PPT) or as a series of images (e.g., JPEG, GIF, etc.) in case your colleagues don’t have Notebook software installed.
Using the Capture Toolbar

1. Open Notebook software
2. Select **View > Screen Capture Toolbar** on the Notebook software menu to open the Capture toolbar
3. Navigate to the screen you want to capture, such as a Web page. The Capture toolbar will remain open over any active application or Web browser.
4. The captured image will appear on a page in your Notebook file.

<table>
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</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Capture a rectangular area of the screen" /></td>
<td>Capture a rectangular area of the screen</td>
<td><img src="image2.png" alt="Capture the entire screen" /></td>
<td>Capture the entire screen</td>
</tr>
<tr>
<td><img src="image3.png" alt="Capture a particular window on the screen" /></td>
<td>Capture a particular window on the screen</td>
<td><img src="image4.png" alt="Capture a freehand area of the screen" /></td>
<td>Capture a freehand area of the screen</td>
</tr>
</tbody>
</table>
Very Brief Orientation

A Illuminated buttons

B

C

D

E

F Magnetic pen rest

Stores the tethered pen when you finish writing so you always know where to locate the pen next.

F G

H
## Very Brief Orientation

### Using the illuminated buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture</td>
<td>Press this button to launch the Screen Capture Toolbar.</td>
</tr>
<tr>
<td>Launch software</td>
<td>Press this button to launch SMART Notebook software or SMART Meeting Pro software.</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Press this button to launch the on-screen keyboard.</td>
</tr>
<tr>
<td>Eraser</td>
<td>Press this button to erase ink from your screen with the tethered pen.</td>
</tr>
<tr>
<td>Black ink</td>
<td>Press this button to write on your screen in black ink with the tethered pen.</td>
</tr>
<tr>
<td>Red ink</td>
<td>Press this button to write on your screen in red ink with the tethered pen.</td>
</tr>
<tr>
<td>Green ink</td>
<td>Press this button to write on your screen in green ink with the tethered pen.</td>
</tr>
<tr>
<td>Blue ink</td>
<td>Press this button to write on your screen in blue ink with the tethered pen.</td>
</tr>
<tr>
<td>Select</td>
<td>Press this button to use the tethered pen to select objects, control your computer and to left-click.</td>
</tr>
<tr>
<td>Right-click</td>
<td>Press this button to use the tethered pen to perform a right-click or control-click on the screen.</td>
</tr>
<tr>
<td>Help</td>
<td>Press this button to launch the online Help for SMART Notebook software or SMART Meeting Pro software.</td>
</tr>
<tr>
<td>Orient</td>
<td>Press this button to start the orientation procedure.</td>
</tr>
</tbody>
</table>
After I open the files I will work with, such as Powerpoint, Word, Adobe Acrobat Document, I go to Programs > Smart Technologies and click on “Smart Ink”. This ensures that the digital pen functionalities get activated.

In Microsoft Word, in order to change colors etc. and save the digital pen created notes you need to use the Microsoft pen tab and change the colors using the “Pens” tab. The buttons on the display only function to toggle between pen, eraser and pointer options but do not allow you to edit colors, etc.
You may write directly on any document including web pages, and then use “screen capture” which automatically gets pasted on Smart Notebook software. After you finish editing your notebook file, you can export it as a pdf file.

You can directly write on and save a pdf file by using “Smark Ink Document Viewer”: Right-click on a pdf file and choose open with “Smark Ink Document Viewer”.

You can check the box next to “Calligraphy pen” in the Smart Ink tab to write more sophisticatedly.
Useful Tips

- When using the Smart Board don’t lean your palm, arm or anything else against the interactive screen (although it’s totally fine with the Smart Podium). More than one point of contact with the interactive screen can confuse the product’s electronics.

- Write often on the screen to keep your class interested, attentive, and entertained. Let your students write on the screen too. Interacting with the lesson material helps your students learn through discovery, which leads to better retention of your lesson objectives.