Correlation between Mobile Learning Accesses and Mobile Device Purchasing Schemes – a City University of Hong Kong Experience

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e-Learning @ CityU

- WebCT campus wide adoption since 1998
- Blackboard (Bb) implementation since 2001
- Deployment of Bb as unified LMS since 2005
- Integration with Banner
- Adoption rate up to 79% of all courses in 20010/11
- Over 30,000 users
- Mobile Learning Pilot since semester B 2010/11
### m-Learning Pilot Info

**Funding**
- Provost

**Leader**
- Chief Information officer

**Coordination & Support**
- Computing Services Centre
- eLearning Support Team

**Begin Date**
- 9 Feb 2011 (Bb Mobile Learn inception)

**Operation Mode:**
- Schools & Colleges nominated pilot teachers to participate
- Pilot teachers requested for resources (mobile devices)
- eLearning Team conducted evaluation on project
- Computing Services Centre provided usage data
Hardware & Software

Only iPod touch & iPad were requested

Intended to support iOS, Android and BlackBerry devices

Bb Mobile Learn building block

Bb Mobile Learn App

Qualtrics (online survey tool, SaaS)

iLearn (online assessment platform developed by College of Business, CityU)

Web browser on mobile devices
Sample Mobile Activities

- Real Time Q & A
- Microblogging with photo or video
m-Learning Pilot at CityU (summary)

- Pilot Launched in Winter semester 2011
- Purchased 402 iOS devices (iPad1 & iPod touch) according to request
- Devices were loaned to students in participating courses
- 287 for semester loan & 115 for class loan
- For in and our of classroom activities
Student Survey Results
Q1. How do you rate the effect of m-learning to your studies in class?

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Useful</td>
<td>52</td>
<td>31%</td>
</tr>
<tr>
<td>2</td>
<td>Useful</td>
<td>55</td>
<td>33%</td>
</tr>
<tr>
<td>3</td>
<td>Somewhat useful</td>
<td>43</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>Not Useful</td>
<td>17</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Not Applicable (I am not involved in the mobile learning project)</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>169</td>
<td>100%</td>
</tr>
</tbody>
</table>
Q2. How do you rate the effect of m-learning to your studies outside classroom?

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Useful</td>
<td>66</td>
<td>39%</td>
</tr>
<tr>
<td>2</td>
<td>Useful</td>
<td>48</td>
<td>28%</td>
</tr>
<tr>
<td>3</td>
<td>Somewhat Useful</td>
<td>23</td>
<td>14%</td>
</tr>
<tr>
<td>4</td>
<td>Not Useful</td>
<td>17</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Not Applicable (The mobile device is available to me during class time only)</td>
<td>15</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>169</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Q3. How is your experience in using Bb Mobile Learn App? (on iPod touch, iPad, iPhone, Android devices and/or BlackBerry Phones)

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Good</td>
<td>55</td>
<td>33%</td>
</tr>
<tr>
<td>2</td>
<td>Good</td>
<td>77</td>
<td>46%</td>
</tr>
<tr>
<td>3</td>
<td>Neither Good nor Bad</td>
<td>23</td>
<td>14%</td>
</tr>
<tr>
<td>4</td>
<td>Bad</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>5</td>
<td>Very Bad</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>6</td>
<td>I have no experience with Bb Mobile Learn App</td>
<td>8</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>169</td>
<td>100%</td>
</tr>
</tbody>
</table>
Q4. Have you encountered any technical issue with the hardware and software in the m-learning project?

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes, all the time</td>
<td>15</td>
<td>9%</td>
</tr>
<tr>
<td>2</td>
<td>Occasionally</td>
<td>100</td>
<td>60%</td>
</tr>
<tr>
<td>3</td>
<td>Never</td>
<td>53</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>168</td>
<td>100%</td>
</tr>
</tbody>
</table>
Q5. Would you consider purchasing a mobile device to support your studies at CityU?

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>119</td>
<td>70%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>50</td>
<td>30%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>169</td>
<td>100%</td>
</tr>
</tbody>
</table>
First iPad Ownership Scheme

- Launched by the School of Law
- For teaching, learning & administrative purposes
- Around 1,000 iPad2s were ordered
- Students paid a fraction of the original cost according to remaining period of studies
- Distribution of devices to staff & students began on 10 Oct 2011
Bb Mobile Learn App Analytics

Mobile Analytics

Timeframe: Year

TOTAL LOGINS

*TOTAL LOGINS graph (interactive) is in Pacific Time which has a 16 (or 15) hrs delay
Sample Screen Shot

Logins by Day of the Week:
- Monday: 6000
- Tuesday: 6000
- Wednesday: 4000
- Thursday: 2000
- Friday: 1000
- Saturday: 1000
- Sunday: 1000

Logins by Hours of the Day:
- Hour 1: 200
- Hour 2: 600
- Hour 3: 1000
- Hour 4: 1400
- Hour 5: 1700
- Hour 6: 2000
- Hour 7: 2300
- Hour 8: 2600
- Hour 9: 2900
- Hour 10: 3200
- Hour 11: 3500
- Hour 12: 3800
- Hour 13: 4100
- Hour 14: 4400
- Hour 15: 4700
- Hour 16: 5000
- Hour 17: 5300
- Hour 18: 5600
- Hour 19: 5900
- Hour 20: 6200
- Hour 21: 6500
- Hour 22: 6800
- Hour 23: 7100

Logins by Platform:
- iOS: 16688
- BlackBerry: 3021
- Android: 5

Unique Users by Platform:
- iOS: 2333
- BlackBerry: 1191
- Android: 3
# Usage Comparison

<table>
<thead>
<tr>
<th>Daily Logins</th>
<th>Pilot</th>
<th>After Ownership Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max # via app</td>
<td>Below 120</td>
<td>~1,500 → ~3,000</td>
</tr>
<tr>
<td>Total average</td>
<td>~25,000</td>
<td>~25,000</td>
</tr>
<tr>
<td>App logins via iOS (max)</td>
<td>~100</td>
<td>950 → ~2,500</td>
</tr>
<tr>
<td>App logins via Android (max)</td>
<td>tens</td>
<td>566 → 628</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly</th>
<th>Semester A → Sem B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique visitors</td>
<td>~2,800 → ~5,800</td>
</tr>
<tr>
<td>Unique iOS visitors</td>
<td>~1,200 → ~3,700</td>
</tr>
<tr>
<td>Unique Android visitors</td>
<td>~1,600 → ~2,100</td>
</tr>
</tbody>
</table>

*Android purchasing scheme was never introduced at CityU.
What makes the difference?

- Colleagues in Law School?
- Law students?
- iPad2 / iOS?
- Ownership of the device?
- Other CityU iOS users not related to any internal purchasing scheme?
- Promotion of Bb Mobile Learn app in CityU ePortal?
Our Conclusions

More students relying on mobile app to access Blackboard Learn

Ownership schemes boost m-learning usage

Students adopt mobile devices with or without ownership scheme
Burning Question:

Do students learn better?
Areas of Concerns

- Quality of m-learning
- Proliferation of apps: pressure to support
- App development: course level vs institutional
- App licensing
- How to maintain a unified e-learning system?