Replacing Locally Hosted LMS with Cloud-based SaaS Solution: An Institutional Study

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Background

- Supporting WebCT from 1998
- Adoption of Blackboard in Faculty of Business in 2001
- CIO decided to have a unified LMS
- LMS evaluation in 2003 led to selection of Bb
- Not satisfied with Bb managed hosting service at pilot
- Hosting Bb on campus since 2005
- Long term contract with Bb ending in 2014
- 2nd LMS evaluation in 2013
Project Timeline

1. Initiate study
2. Informing department representatives
3. Preparation for pilots
4. Pilots, promotional activities & feedback collection
5. Reporting to upper management
6. Decision making
7. Implementation
8. User adoption
Evaluation 2013: Result Summary

**Blackboard (Bb)**
- Dated interface
- Hard to keep up with new versions
- Still acceptable as an LMS

**Canvas by Instructure**
- Modern & intuitive UI
- Instant upgrade & bug fixes (SaaS)
- Preferred by pilot users
- Possible replacement to Bb

**MoodleRooms**
- Unusual workflow
- https issue during pilot
- Not preferred by pilot users
- Not recommended

**Desire2Learn**
- Updated interface
- Lack of SaaS model
- Not piloted
## Recommendations to Upper Management

<table>
<thead>
<tr>
<th>Progressive Option</th>
<th>Conservative Option</th>
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<tbody>
<tr>
<td>Adopt Canvas</td>
<td>Retain Blackboard</td>
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<tr>
<td>Soft launch in 2014/15</td>
<td>Renew contract for 5 yrs</td>
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<tr>
<td>Completely replace Bb in Summer 2015</td>
<td>Consider new hosting option</td>
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### Responses from Upper Management

- No decision upfront
- Authorize further study of Canvas → Extended Pilot
- Demand proof of system capacity
Challenge #1: Verification of System Capacity

- Time test showed acceptable result for typical use
- Run Load test up to 3,000 concurrent users
Extended Canvas Pilot

- Canvas Implementation Group formed
- Extended pilot in Sem A (Fall Term) 2014/15
- Enlarge user population
- Generate authentic opinion
- Bb operating as usual
Challenge #2: Recruiting Users

- Most faculty members preferred to wait and see
- Upper management wanted involvement from all academic units
- Soliciting individuals to join
- One academic unit elected to fully adopt Canvas in all courses
- Finally, 237 courses published for 11,629 students (within 24,000 students)
- Demanding to support 2 LMSs running in parallel with large numbers of users
Challenge #3: Latency & Maintenance Time Frame

- Connecting to data centre in Virginia, USA
- Not ideal for large size file transfer
- Urgent maintenance took place during our training workshop
- Vendor had plan to open new data centre in Australia
- We suggested Singapore when Hong Kong had no AWS data centre
Canvas Analytics – Semester A 2014/15

City University of Hong Kong

237 Courses
269 Teachers
11,639 Students
981 Assignments
2,379 Discussion Topics
7,958 Files Uploaded
185 Media Recordings

Activity by Dale
Each bar represents the number of page views on that day. An orange bar indicates that some user took an action within a course on that day.

Activity by Category
Each bar represents the number of page views related to that category.

Grade Distribution
Distribution of current grades in courses across all students enrolled in department courses.
Feedback from Pilot Users

Are you satisfied with Canvas as an e-learning system? (regardless of e-portal features)

**Staff: 51 responses**
- Yes: 88.2%
- No: 11.8%

**Students: 456 responses**
- Yes: 67.5%
- No: 32.5%
Why some users not satisfied with Canvas?

- Issues with interface: 33.3% (Staff), 24.3% (Students)
- Latency: 17.6% (Students)
- Blackboard preferred: 11.5% (Students), 16.7% (Staff)
- Issues with features: 8.1% (Students)
- Issues with local computer: 6.8% (Students)
- Not user-friendly: 5.4% (Students)
- Stability: 2.0% (Students)
- Issues not related to Canvas: 6.1% (Students)
- No comment: 31.8% (Students)
Full Adoption of Canvas

- Full launch in Sem B (Winter Term) 2014/15
- 19 workshops conducted
- 17 academic units visited
- Over 370 attended workshops
- Over 150 courses migrated
- Moved to Singapore AWS on 14th Jan 2015
Challenge #4: Course Migration

- Cannot migrate course contents from local server to cloud without faculty’s consent
- Canvas provided migration service but the results were far from ideal
- Manual work to fine tune the courses after mechanical migration
- Allow colleagues to opt-in but advise to rebuild
- Only 10% of courses within this semester were migrated finally
Challenge #5: Limited Transition Period

- Blackboard will decommission on 30 Jun 2015 due to limited budget
- Unable to retrieve assessment records afterward
- No new course site on Bb since 1 Jan 2015
- Two LMSs only running parallel for Fall semester
- Some faculties were anxious about the change
- Final year students on new LMS for 1 semester only
- Users were cooperative in action according to analytics
Canvas Analytics – semester B 2014/15

City University of Hong Kong

- 1,817 Courses
- 1,418 Teachers
- 23,914 Students
- 4,779 Assignments
- 13,479 Discussion Topics
- 55,372 Files Uploaded
- 3,479 Media Recordings

Activity by Date

80% of all courses
## From Local Bb to Canvas on Cloud

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td>Students access to all e-learning records before graduation</td>
<td>No tool to download some records (e.g. discussion)</td>
</tr>
<tr>
<td>Maintaining e-learning records for accreditation/audit purposes</td>
<td>Lack of control on sending notification to students</td>
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<td>Easy to connect to other cloud services (i.e., Dropbox, O365, LinkedIn, etc.)</td>
<td>Hard to judge what to download as backup</td>
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<td>Instant updates and quick bug fixes</td>
<td>More factors to investigate when problem occurs</td>
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<td>Similar UI (operation) as social network platforms</td>
<td>Loss of certain features and control in course level &amp; system level</td>
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<tr>
<td>Lower total cost of operation</td>
<td>Redeployment of human resources due to diminishing demand for servers on campus</td>
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<td>No more server side management</td>
<td>Need more attention on legal issues</td>
</tr>
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<td>Rejuvenation of e-learning (from new pedagogy to MOOC)</td>
<td>Rising work load deal to new pedagogy development</td>
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Is it worth to make the switch?

- Initial success - adoption rate target met
- Some colleagues told me they loved Canvas
- Some said they could not reproduce certain learning activities
- Lower the barrier for application of technology for new pedagogy
- Increase workload to the support team

*Check out the SaaS LMSs!*
Questions?