Classes*v2 Usability Study

How quantitative and qualitative research guide design and development

Summer 2009
What is Classes*v2?

- Yale's central LMS (learning management system)
- Powered by Sakai, an open-source application set
- Over 1500 active course sites each semester
  - 1400+ instructors
  - 8800+ students
  - 1000+ teaching fellows
- Supported by Yale ITS, with partnerships across campus
What is a learning management system (LMS)?

- Learning management systems are usually web-based environments to facilitate delivery, management and tracking of learning activities.

- An LMS is usually an integrated suite of tools capable of interaction with one another, rather than a portal which provides a unified view to multiple systems that may have no true connection or interaction.

- Sakai defines itself as a CLE: Collaboration and Learning Environment (i.e., not restricted to teaching and learning).
What is the My Workspace page?

• Landing page that all users of Classes*v2 see every time they log on

• Key destination to communicate to the users of Classes*v2
2008-2009 My Workspace
The challenge

Redesign of Classes*v2 My Workspace page to make better use of this area for client outreach, documentation/training, advertisement of new functionality, and pedagogy-focused features
Redesign considerations

My Workspace redesign plan
Redesign considerations

• **Usability**
  Qualitative and quantitative research

• **Do-ability**
  What’s achievable in allotted time-frame with allotted resources

• **Common Sense**
  What the team already knows based on years of experience supporting Classes*v2
Methods

• **Phase 1: Quantitative research**
  Tool usage statistics
  Web-logging statistics
  RT customer service requests (RT is the technical support tracking system used by the Classes*v2 team)

• **Phase 2: Qualitative research**
  Feedback from the departmental tech support liaisons
  Usability tests with students and instructors

• **Phase 3: Synthesis and recommendations**

• **Phase 4: Production**
Phase 1: Quantitative research

- Tool usage statistics
- Web-logging statistics
- RT Customer service requests
Tool usage spring 2009

Red outline indicates that the tools are part of the default tools displayed on the left nav

<table>
<thead>
<tr>
<th>Tool</th>
<th># of instructors using tool (out of approximately 1400)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syllabus</td>
<td>1233</td>
</tr>
<tr>
<td>Resources</td>
<td>1166</td>
</tr>
<tr>
<td>Announcements</td>
<td>664</td>
</tr>
<tr>
<td>Email Archive</td>
<td>640</td>
</tr>
<tr>
<td>Drop Box</td>
<td>343</td>
</tr>
<tr>
<td>Schedule</td>
<td>143</td>
</tr>
<tr>
<td>Gradebook</td>
<td>114</td>
</tr>
<tr>
<td>Assignments</td>
<td>76</td>
</tr>
<tr>
<td>Sign-up</td>
<td>52</td>
</tr>
</tbody>
</table>
Tool usage: Observations

Syllabus and Resources are the most highly used tools. Users are relying on the default tools, and are not manually adding tools.
Web-logging statistics
Sep 2008 and Jan 2009 (the busiest months)

Most visited Classes*v2 documentation pages

<table>
<thead>
<tr>
<th>Page (Sep 08)</th>
<th>Hits</th>
<th>Page (Jan 09)</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Workspace</td>
<td>315,521</td>
<td>My Workspace</td>
<td>220,751</td>
</tr>
<tr>
<td>Help</td>
<td>4353</td>
<td>Help</td>
<td>2532</td>
</tr>
<tr>
<td>Gateway About (pre-login)</td>
<td>1596</td>
<td>FAQ- Student FAQ</td>
<td>932</td>
</tr>
<tr>
<td>Supported Browsers (pre-login)</td>
<td>1118</td>
<td>Gateway About (pre-login)</td>
<td>774</td>
</tr>
<tr>
<td>Basics- Tools</td>
<td>598</td>
<td>Supported Browsers (pre-login)</td>
<td>484</td>
</tr>
<tr>
<td>My Workspace Info</td>
<td>590</td>
<td>Spotlight- Sign-up</td>
<td>396</td>
</tr>
<tr>
<td>Basics- View Roster</td>
<td>577</td>
<td>My Workspace Info</td>
<td>262</td>
</tr>
<tr>
<td>Basics- Copy Materials</td>
<td>410</td>
<td>Basics-Tools</td>
<td>251</td>
</tr>
<tr>
<td>Basics- Add TFs</td>
<td>393</td>
<td>Basics- View Roster</td>
<td>248</td>
</tr>
<tr>
<td>FAQ- Student FAQ</td>
<td>383</td>
<td>Basics- Add TFs</td>
<td>232</td>
</tr>
</tbody>
</table>
Web-logging statistics: Observations

- Help, Student FAQ, and Basics for Instructors generate a relatively large number of hits considering the overall low traffic patterns of post-login pages

- Viewership of documentation goes significantly down after the first month of each semester
RT customer service requests
History 2008-2009 academic year

Top 8 categories of request

<table>
<thead>
<tr>
<th>Feature</th>
<th>Number of requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Permissions (requesting access to a site)</td>
<td>459</td>
</tr>
<tr>
<td>Membership (questions about joining and registration)</td>
<td>173</td>
</tr>
<tr>
<td>Project Site (requests for collaborative non-course sites)</td>
<td>160</td>
</tr>
<tr>
<td>Resources (issues with course materials)</td>
<td>109</td>
</tr>
<tr>
<td>Add Participants (requests to add members to a site)</td>
<td>75</td>
</tr>
<tr>
<td>Discussion Group (questions about forums)</td>
<td>65</td>
</tr>
<tr>
<td>Not Sakai (issues unrelated to Sakai)</td>
<td>61</td>
</tr>
<tr>
<td>Syllabus (questions about posting or viewing a syllabus)</td>
<td>56</td>
</tr>
</tbody>
</table>
# RT customer service requests

**History 2008-2009 academic year**

Requests submitted each month during the academic school year

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>249</td>
</tr>
<tr>
<td>September</td>
<td>498</td>
</tr>
<tr>
<td>October</td>
<td>201</td>
</tr>
<tr>
<td>November</td>
<td>87</td>
</tr>
<tr>
<td>December</td>
<td>97</td>
</tr>
<tr>
<td>January</td>
<td>310</td>
</tr>
<tr>
<td>February</td>
<td>169</td>
</tr>
<tr>
<td>March</td>
<td>51</td>
</tr>
<tr>
<td>April</td>
<td>42</td>
</tr>
<tr>
<td>May</td>
<td>36</td>
</tr>
</tbody>
</table>
RT customer service requests
History 2008-2009 academic year

Top 10 requestors

<table>
<thead>
<tr>
<th>Requestor</th>
<th>Number of requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor</td>
<td>648</td>
</tr>
<tr>
<td>Student</td>
<td>315</td>
</tr>
<tr>
<td>Dept Admin</td>
<td>168</td>
</tr>
<tr>
<td>Tech Support</td>
<td>165</td>
</tr>
<tr>
<td>TF</td>
<td>128</td>
</tr>
<tr>
<td>School of Management</td>
<td>77</td>
</tr>
<tr>
<td>Nursing School</td>
<td>61</td>
</tr>
<tr>
<td>Divinity School</td>
<td>33</td>
</tr>
<tr>
<td>School of Public Health</td>
<td>30</td>
</tr>
<tr>
<td>Guest</td>
<td>20</td>
</tr>
</tbody>
</table>
RT customer service requests: Observations

- Access Permissions, Membership, Project Sites and Resources generate the most RT requests
- Instructors and students submit the most RT requests
Phase 2: Qualitative research

- Feedback from the departmental tech support liaisons
  Divinity School
  School of Public Health
  Physics Department
  Nursing School
  School of Management

- Usability tests with students and instructors
Departmental tech support liaisons: The focus

• What about Classes*v2 do the faculty and students like?
• What questions do you get most often from your faculty?
• How do the questions change over the course of the semester and the academic year?
• What sort of content would be beneficial for your school on My Workspace?
• Where would you like to see improvements?
• Would you be interested in using a piece of real estate on My Workspace for customized content?
Departmental tech support liaisons: Observations

- Like the Sign-up tool, but instructors don’t know it exists
- Want video tutorials
- Students like using Classes\*v2
- Don’t want school-specific custom content
- My Workspace
  Change content more frequently
  More faces, more case studies
- Increasing interest in Forums
- Inundated with questions about the course registration process
Usability test: The process

- Recruited 10 people: 6 instructors and 4 students
- Wrote instructor and student versions of the usability script
- Created a Classes*v2 test site
- Tested using screen capture Silverback software on MacBook Pro laptop
- Created recommendation document
- Edited results into short Quicktime videos to support recommendations
Usability test: The participants

**Instructors**
- Professor of Mechanical Engineering
- Professor of Political Science
- Language Lecturer
- English Lecturer
- Forestry Lecturer
- Professor of Internet Marketing at the School of Management

**Students**
- English student (recent grad)
- Mechanical Engineering graduate student
- Mechanical Engineering graduate student
- School of Management student
Usability test: The focus

Based on the results of the quantitative research phase, and feedback from the professional school liaisons, the usability test focused on the following components of Classes*v2:

- My Workspace page
- Tools/ editing tools
- Overall impressions of Classes*v2.
My Workspace: Observations

- People don’t pay attention to it because it’s too busy, too wordy
- Students disregard My Workspace because it’s written and designed for instructors
- My Workspace colors are too similar to the banner and navigation bar
- Instructors want more tutorials and images
- Content doesn’t change enough
Tools: Observations

• Instructors don’t know what a tool is. They don’t associate tools with the options displayed on the left nav.

• Instructors don’t think the set of options on the left nav is alterable. They don’t know you can add and delete tools.

• When asked to dig a little deeper, they felt that there was too much emphasis on hiding tools.

• Instructors like the Sign-up tool, which they didn’t know existed.
Overall impressions of Classes*v2

- Overall most instructors like using Classes*v2 as a teaching tool
- Some instructors feel guilty that they haven’t spent the time to learn it
- Some instructors think Classes*v2 is hard to use
- The students love having everything online
- Many students and instructors want to do more with Classes*v2: upload videos, audio-books, podcasts, link to blogs, etc.
Phase 3: Recommendations

Emphasize the following features because users responded positively to them:

- Student FAQ
- Basics for Instructors
- The Sign-up tool
- Resources (Users want to learn more about organizing their resources)
Phase 3: Recommendations

Eliminate the following features because users responded negatively to them:

- Spotlight navigation scheme on the My Workspace page (despite prominence on the page, the second-tier pages received few hits)
- Static content
Phase 3: Recommendations

Add the following features to Classes*v2 to improve the effectiveness of the site:

• Student and instructor views of My Workspace
• Video tutorials that help users understand the basic applications of the site and reduce the number of RT requests
• Rotating content to keep the site fresh and generate traffic after the first month of the semester
• Visual registration timeline to better explain membership and access permissions
Phase 3: Research Matrix

X indicates that the specific recommendation was based on findings from the research method identified on the top row

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Tool usage</th>
<th>Web stats</th>
<th>RT</th>
<th>Tech support liaison</th>
<th>Usability test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student FAQ</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Basics for instructors</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sign-up tool</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Create a tutorial guide on organizing resources</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Student and instructor views of My Workspace</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video tutorials</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rotating content</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Create visual timeline of shopping period</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
2009-2010 My Workspace: Instructor view
2009-2010 My Workspace: Student view
Next steps

Continue to assess and evaluate the effectiveness of My Workspace as a key venue for communication with Classes*v2 users, and then design and implement improvements.

- Compare 2009-2010 tool usage statistics, web-logging statistics, and RT customer service requests to 2008-2009 numbers
- Reconnect with the departmental tech support liaisons with follow-up interviews
- Perform a follow-up usability test with instructors and students
- Send a targeted survey to the Yale student community requesting feedback