From Homebuilt LMS to Canvas: Lessons from the Developer Trenches

AND

Carrots and Sticks: Transitioning Faculty to a new LMS
From Homebuilt to Canvas: Lessons from the Developer Trenches
Who are we?

Brian Payne
Application Developer

Su Wang
Enterprise Software Engineer

Ray, our designer, who helped make this presentation not ugly
Who are you?
Today we’ll cover

Lessons in SIS Integration

Lessons in Branding and Customization
Lessons in SIS Integration
Lessons in SIS Integration

● Background
  ○ Non-vendor, very old campus SIS that is not able to directly integrate with Canvas
  ○ Homebuilt LMS had access to this information in prioritary format

● Problem
  ○ Had to build our own integration to send information into Canvas

● Constraints
  ○ In beginning, only had data from homebuilt LMS to start with
  ○ Data format in homebuilt LMS very different

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>user_id</td>
<td>text</td>
<td>A unique identifier used to reference users in the enrollments table is called the SIS ID.</td>
</tr>
<tr>
<td>integration_id</td>
<td>text</td>
<td>A secondary unique identifier useful for more complex SIS integrations. This identifier is used by the SIS to identify the specific integration or data set.</td>
</tr>
<tr>
<td>login_id</td>
<td>text</td>
<td>The name that a user will use to login to Instructure. If you have an LMS, use the user ID.</td>
</tr>
<tr>
<td>password</td>
<td>text</td>
<td>If the account is configured to use LDAP or an SSO protocol then this should not be set above. If the user already has a password (from a previous SIS import or otherwise) it will not be overwritten. Setting the password will in most cases log the user out of Canvas. If the user has the password, his or her login will not match the SIS login.</td>
</tr>
<tr>
<td>ssha_password</td>
<td>text</td>
<td>Instead of a plain-text password, you can pass a pre-hashed password using the SSHA field. You should still encourage users to change their password after logging in for the first time.</td>
</tr>
<tr>
<td>authentication_provider_id</td>
<td>text or integer</td>
<td>The authentication provider this login is associated with. Logins associated with a specific provider will be searched for logins associated with them, or unassociated logins. New providers will be listed. Use the type of the provider (in which case, it will find the first matching provider).</td>
</tr>
<tr>
<td>first_name</td>
<td>text</td>
<td>Given name of the user.</td>
</tr>
<tr>
<td>last_name</td>
<td>text</td>
<td>Last name of the user.</td>
</tr>
<tr>
<td>full_name</td>
<td>text</td>
<td>Full name of the user. Omit first_name and last_name if this is provided.</td>
</tr>
<tr>
<td>sortable_name</td>
<td>text</td>
<td>Sortable name of the user. This is normally inferred from the user's name, but you can override it.</td>
</tr>
<tr>
<td>short_name</td>
<td>text</td>
<td>Display name of the user. This is normally inferred from the user's name, but you can override it.</td>
</tr>
<tr>
<td>email</td>
<td>text</td>
<td>The email address of the user. This might be the same as login_id, but should still be unique.</td>
</tr>
<tr>
<td>status</td>
<td>enum</td>
<td>Required field: active, disabled</td>
</tr>
</tbody>
</table>
Lesson 1
Start with what you have

https://www.flickr.com/photos/sflaw/222795669
Starting with what we had

- Middle man for sending data to Canvas and communicates with homebuilt LMS
- Canvas doesn’t need to know Homebuilt LMS exists
- If the homebuilt LMS goes away, we can plug GrandCentral to another data source
Lesson 2
Make small improvements along the way

https://commons.wikimedia.org/wiki/File:Square_Peg_in_a_Round_Hole_-_geograph.org.uk_-_1244305.jpg
Making small improvements

Grand Central gets an upgrade!

- Most SIS data now coming directly from SIS
- Some data still dependent on homebuilt LMS database
  - Such as Teaching Assistants to Course bindings
LESSON #3
Prepare for change
Things change... be prepared

- All SIS data now coming straight to GrandCentral
- Data is now fed into the homebuilt LMS as needed
- Reduces dependencies
Lessons Learned

Start with what you have

Make small improvements along the way

Prepare for change
Branding and Customization
Customization

- We needed to add buttons
  - Transfer to WebGrades
- Customize content
  - Help dialog pop-up
  - Custom footer
Follow a development process
Structured

3 Files:

<feature>.css  <feature>.js  <feature>.html
customizations/courses/gradebook/
add_transfer_to_webgrades_buttons.js
Guidelines

2. Generate the css

```plaintext
scss uci-canvas.scss > canvas.css
```

3. Copy the files over to a webserver that can host static content


**Contribution Guidelines**

- All customizations should be placed in the `customizations/` directory.
- The path to the customization should reflect the path on Canvas. For example:
  A customization that removes a button to the URL [https://canvas.uci.edu/courses/100/settings](https://canvas.uci.edu/courses/100/settings) should be placed in `customizations/courses/settings/removes_a_button.js`
- The name of the files should be descriptive in what they do. For example:
  `customizations/users/removes_delete_button.js`
- Customizations should be distinct and small. For example: NOT `customizations/users/removes_delete_button_and_adds_help_box.js` instead `customizations/users/removes_delete_button.js` and `customizations/users/adds_help_box.js`
- Replace elements rather than tweak them. See: [Help dialog for an example](https://guides.instructure.com/im/4214/41896-how-do-i-add-custom-javascript-and-css-files-to-an-account)
● Development process

● Structure your code
  ○ 3 files
  ○ Directories match URL

● Guidelines
  ○ Single responsibility per fileset
  ○ Replace not tweak
Now for UC Merced!

Slides: https://speakerdeck.com/suw (to be published after this presentation)

Contact us if you have more questions!
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