

CS3216 Final Project Progress Report #2

Group 1

Jerome Cheng (A0080860H)

Chen Minqi (A0099314Y)

Joel Low (A0097630B)

Fazli Sapuan (A0096836M)

Application Prototype

The Lesson Plan and Workbin components have been merged into Coursemology upstream, and is currently live on coursemology.org. The Forum component is undergoing development in parallel, and can be found on coursemology.fuzzie.sg.

Progress Update

As briefly mentioned above, the first iteration of the Lesson Plan and Workbin components has been completed and deployed to the live Coursemology site. We are currently continuing to make improvements to these (particularly in the UI/UX area, as well as adding features requested by Prof. Ben Leong) while work continues on the Forum.

Teaching Staff are now able to create, edit, and delete Milestones and Entries on the Lesson Plan; an Entry corresponds to a particular event, such as a Lecture or Tutorial session, while a Milestone groups Entries together into periods of time (say, weeks or months). We've also integrated with Coursemology's Mission and Trainings components, so the Lesson Plan also displays these as "Virtual Entries" automatically, without the need for staff to create entries for each. Students only have the ability to view entries on the Lesson Plan.

As demonstrated in our last meeting, the Workbin allows Teaching Staff to create folders and upload files. In addition, we've also integrated with Missions and Trainings, so any files uploaded and attached to either now automatically appear in the Workbin as well. Staff can also link items uploaded to the Workbin to particular Entries on the Lesson Plan.

As for the forum aspect, we have implemented most features expected of a typical forum. From a normal user's point of view, they can now: create topics and posts; edit their own posts; and reply to specific posts in a topic. The users can also see which topics contain unseen posts, or are locked and pinned. There can be multiple forum sections per course and the Teaching Staff can add or remove entire forum sections as they please. Staff can also edit and delete other posts, and can also access topic pinning, locking and hiding facilities. All pages in the forums are automatically paginated if they are too long.

Currently, we are working on a UI to award course experience points to forum users. The points will be calculated and proposed to a staff member, who can then manually adjust and award them to students. Though the only metric being used right now is post frequency over a given time period, we will be adding more metrics like user votes.

User Feedback

After deploying the Lesson Plan and Workbin, we received some requests and suggestions from both Prof. Ben Leong and Raymoond Tang (the current Coursemology dev). These include:

- Recording and displaying the name of the user who uploaded files to the Workbin
- Checking for and automatically renaming duplicate files when they are uploaded
- Collapsing all Milestones by default on the Lesson Plan (to reduce clutter)

Though the first two are features we will definitely be implementing, the third is something we may attempt to address in another manner - the key issue at hand is the potential for information overload on the Lesson Plan, which might be able to be dealt with in a better way.

The initial feedback received for the forums was largely negative, that the forum lacks functionality and usability. Currently the functionality of the forum has been improved but more efforts should be put into it to make the forum more usable.

Problems Faced

After our initial deployment to the live site, we encountered several issues which have since been resolved:

- Some minor visual issues arose from buttons that were only accessible to staff no longer being displayed to students; these were mostly related to alignment and layout
- The Workbin would become inaccessible when cancelling a file upload under certain circumstances
- The Lesson Plan was displaying Missions/Trainings which had not been published (and should hence not be visible to students)

During implementation of the forum features we encountered many problems which ultimately led to the omission of the forums in the deployment mentioned above:

- Both Coursemology and Forem uses CanCan “Abilities” for user permission management. Coursemology’s “Ability” is more complex than normal because it relies on both the current user and the current course the user is in. This prevents us from using the Ability#merge method and the in order to reconcile the two “Abilities”. In lieu of this, we have completely ignored Forem’s Ability and used Coursemology’s Ability to check for permissions. This issue was only discovered when testing using unprivileged user accounts which required permissions to create topics and posts.
- Forem assumes that there is only one central forum for one Rails application. However, Coursemology requires a different forum for every course. We have worked around this issue

by using Forem's category feature to represent a particular course. We have also created our own routes so as to include the course parameter in the forum routes.

Updated Milestones

Our goal for the immediate future is to ensure that the Workbin and Lesson Plan components are working as they should; notably, that students are not able to access information and modify information that they are not allowed to. This is especially important since the system has already gone live and is in use by two different courses in NUS (and one course outside of NUS).

In this stage of the forum implementation, we will be looking into adding more features that will allow Teaching Staff to give an accurate amount of experience points for forum participation easily. We will be implementing a user voting system for this goal.

In the road leading to the final showcase, our main objective will be to reduce all the pain points that come from using the components which have been developed, ensuring that the user experience is fluid and makes sense.