OPEN HOMEWORK SYSTEM

PROJECT UPDATE

November 13, 2019

I wanted to drop you all a note and give you an update on the work that has happened since our meeting on the Open Homework Systems Project and let you know of a few events on the horizon in the new year related to the project.

COMPARISON ANALYSIS OF STEM OPTIONS

As you know, we have broadly divided the project along the lines of STEM and non-STEM based disciplines, recognizing that each broad area may have different considerations for homework systems. Indeed, as I have continued my research, I am finding that even these areas are likely too broad and will need to be narrowed down even more in order to appeal to faculty teaching in specific sub-disciplines.

In the anecdotal research I have carried out in the past month, it appears that Math based disciplines are heavy users of homework systems. This is helping me focus on Math based systems in the STEM areas for potential broad impact.

As part of the work in STEM, we are currently conducting a comparison analysis of three different Math based open source homework platforms: Numbas (Newcastle University) IMathAS (Pierce College, Washington State), and WeBWorK (Math Association of America).

Since our last meeting, the following has been initiated.

1. We have secured a one course release for a Math instructor at TRU, Shirin Bouroshaki, to conduct the comparative analysis, looking closely at the faculty user experience around using each application as a homework system.
2. To assist Shirin, we have also contracted the services of a technical analysts, Alan Levine, to both assist Shirin and to conduct a more detailed technical analysis of each of the three platforms.
3. Josie Gray from BCcampus (and our Advisory Group member) will also be conducting an accessibility and usability audit of the three platforms, focusing on accessibility of each of the platforms.

Alan will be installing all three applications on an EDUCLOUD server while we conduct our initial testing and assessment. This work will be done starting in December, with the final reports due in May, 2020.

DEVELOP REGIONAL WEBWORK COMMUNITY

While the comparative research happens, I know there is already great interest in WeBWorK in the province. To help gauge whether this hunch was true or not, I emailed the head of the Math articulation group here in the province and asked him to disseminate a short questionnaire to Math department heads across the province. The questionnaire asked:

1. Do you currently use WeBWorK?
2. If so, how widely used it is at your institution?

3. If you are using WeBWorK, are you hosting your own instance, or are you using the MAA hosted version?
4. If you are not using WeBWorK, what (if any) platforms are you using for math homework?

To date I have received 9 responses. I will close the survey on Friday and analyze the information, but preliminary results support the notion that there is a great deal of interest in, and knowledge of, WeBWorK, at least among the Math departments whom have so far responded.

OPL WORKSHOP

Agnes and I met with the editors of the WeBWorK Open Problem Library to discuss the possibility of holding an Open Problem Library workshop. These workshops are designed to bring together SME's in a workshop environment to vet problems for the Open Problem Library. There was interest in the editors on attending and facilitating a workshop event in Vancouver, and I am in the early stages of planning this event for the spring.

H5P & PRESSBOOKS

On the non-STEM side, I have been working with both H5P and Pressbooks to see if either platform, or a combination of these two platforms, could be a potential candidate for an open homework system.

I have attended several demonstrations of the platform being used to generate formative self-assessment activities and have begun to dive into the analytics side of the platform, with encouraging results.

If you are not familiar, H5P is a platform that allows the creation of several different interactive quiz like elements in a number of different platforms. These elements can be openly licensed to allow sharing and can be downloaded and uploaded easily to other H5P instances making the quiz elements very interchangeable and shareable among users. The integration with Pressbooks makes it a compelling candidate for extending open textbooks into becoming open courseware. Recently, it was announced that H5P would become a core component of Moodle, an LMS in wide use in BC. H5P can also integrate with other LMS platforms and CMS's such as WordPress and Drupal.

DEVELOP REGIONAL H5P/PRESSBOOKS COMMUNITY

The early encouraging results of my analysis of H5P and, to a lesser extent Pressbooks, is spurring on work in this area connecting institutions who have an interest in H5P. To this end, I am in the early planning stages of a one-day H5P specific workshop in conjunction with the upcoming Festival of Learning. The tentative date for the workshop will be Thursday, May 14th, likely at SFU Harbour Centre. I will have more details on this in the coming weeks.

COMMERCIAL COURSEWARE RESEARCH

In order to focus development efforts, this market research project is intended to examine actual usage patterns of commercial systems within the BC post-secondary system. Specifically, I am looking for the following information with this study.

1. A list of the top 10 digital courseware products in use within the BC post-secondary system and their publishers.

2. The retail cost that a student could expect to pay to use the system.

3. The enrollment number of students within the BC system who are required to use the system as part of their course.

4. The subject area of the course where the courseware is used.

The answers to these four questions will help focus our content development efforts in future phases by giving us the types of disciplines and sub-disciplines that are large users of commercial systems across the province.

I have approached two different researchers about this project and have yet to secure a researcher who can take on the project with the budget I have allocated (up to $10,000). I am now re-scoping the project to focus on 8 representative institutions as opposed to a comprehensive look at all 25 institutions, which should help in finding a researcher to take on the project.

I see this project as crucial in order to focus our efforts in the coming months around content creation. If you are aware of any research who may be able to assist with this project, please let me know. I have attached the project description to this update.

OPEN TEXTBOOK ANALYSIS

Josie Gray has completed the data gathering component of this research examining the existing BCcampus Open Textbook collection for potential open textbooks that could be enhanced with the addition of homework questions. I will be analyzing this data in the coming weeks to create a list of candidate textbooks that we can potentially enhance with homework components built in H5P.

RANDOM NOTES AND UPDATES

- The BCcampus Festival of Learning is coming up in May. Calls are now open, and I will be submitting at least one proposal related to the Open Homework System project. If you are involved with any projects at your institution, please consider submitting a proposal or attending. It is a wonderful event.
- For questions you may get about the OHS project, there is now a webpage on the BCcampus site that you can direct people to.
- On November 1st, the BCcampus Communications team published a blog post introducing you as the Advisory Group. Apologies that they never ended up using your photos for the piece (and thank you to those of you who submitted photos).
- I have had a presentation proposal accepted for the annual H5P conference in Madison Wisconsin in May 2020 and will be co-presenting about H5P and Pressbooks as an open homework system at that event.
- I have been invited to talk about Open Homework Systems at the Open Apereo conference in Ann Arbour Michigan in June 2020.
- I am submitting a proposal to speak about Open Homework Systems at the OER20 conference in London in April 2020.
- I am not a huge mind mapper, but I did spend some time mapping out the OHS project over the past month. If you want to see the results of my messy mind at work, check out the Mind Map I put together for the project.

Thank you to all of you who have helped when I have emailed a question or have connected me with people & projects since our initial AG meeting. Every conversation and connection has been useful and informative in guiding this work. Thank you.