Embedded Librarian at Singapore Polytechnic: A Case Study

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Abstract
The School of Chemical and Life Sciences (CLS) at Singapore Polytechnic welcomed an embedded librarian in October 2016. The librarian worked with several lecturers on a key initiative of the school to use existing resources and content to develop e-learning packages for continuing education and training (CET) courses. The librarian was involved in learning the course creation software and creating parts of an e-learning course, and was also able to recommend more relevant EduTech tools and e-resources to augment the courses. This paper is an account of the embedded librarian's experience in this project and highlights some key lessons learnt.

***Keywords**:*
embedded librarianship, information literacy, education technology

Introduction

In 2016, Singapore Polytechnic's academic staff were tasked to increase the number of continuing education and training (CET) hours by 20% by end 2017. To tackle this considerable increase amidst time constraint, lecturers from the School of Chemical and Life Sciences (CLS) decided to come up with e-learning packages. It was decided that a librarian would be "embedded" in the school for a year, to be present physically and work thrice weekly with selected CLS lecturers to meet this target. The e-learning packages would eventually be uploaded on PolyMall, an e-learning platform in Singapore created and supported by all five polytechnics in Singapore.

After experimenting with a few e-learning authoring tools, the lecturers settled on Articulate (for producing the entire e-learning package) and GoAnimate (for creating videos). Accordingly, the librarian attended workshops on using these tools. The lecturers supplied the librarian with the academic content for the e-learning packages whilst the librarian curated interactive e-resources to be integrated into the packages.

Being Embedded

Prior to this initiative, the librarian was already the school's liaison librarian, in part due to the fact she has a basic degree in chemistry. As the school librarian, she supported CLS lecturers with curation of content, integration of resources into modules and imparting of information literacy skills to students. Over time, she had built up good rapport with the lecturers, who are some of the friendliest and most enthusiastic educators on campus. Due to this, the school was often involved in trial programmes before these were implemented campus wide. In addition, the school's students (mostly 17-20 years old) were mostly respectful and studious.

The liaison librarian and embedded librarian's job scopes are similar in nature, but an embedded librarian is physically closer to the school of CLS and consequently the users. The school is self-contained in a separate building with classrooms, labs, faculty offices, and student study spaces of its own. It is a 10-minute walk from the library, where the liaison librarian was based, before she became the embedded librarian, thus making it more convenient for users to interact with her. Admittedly, while most of the library collection is online, users are still heavily reliant on physical reminders, training sessions and on the spot troubleshooting.

While lecturers sometimes need help with the use of e-resources, many are uncomfortable with sharing their screens via Skype with the librarian. It could be argued that screenshots could be used in this case but often, procedural issues are not captured in their entirety and troubleshooting becomes difficult, necessitating countless emails between the lecturer and the librarian. Ultimately, if the issue is still unsolvable, the user has to make a trip to the library.

Some of the operational duties of the librarian were also taken over by her colleagues, freeing up time for the embedded librarian to concentrate on CLS resource recommendations for integration into the CLS curriculum.

The librarian was located at CLS staff offices among the lecturers. She attended various laboratory sessions, lectures and tutorials to observe students' reactions to the curriculum and questions that they struggled with. She gained insights on the average students' mindsets and pain points. Many of the lecturers also started asking more library related questions, and sought resource recommendations on an ad hoc basis as the librarian's physical presence

catalysed these, perhaps due to the librarian's presence at the common office spaces like the meeting rooms, printing area, pantry and toilets.

The librarian attended several staff learning sessions and industry events with the CLS academic staff to understand how the e-learning package would be utilized, as well as learnt more about the issues and plans for CLS. Additionally, she went along to a chemical plant in Jurong Island on an exploratory visit with various lecturers and staff from the Department of Educational Development (EDU). Subsequently, the EDU staff came up with interactive videos tailored to the chemical engineering students' curriculum.

After about a year, the librarian and the lecturers came up with the e-learning package. CLS had to provide a short taster video for ULeap (a microlearning site) on the e2i (Employment and Employability Institute) website for a launch event. One of the videos "CLS e-learning package: An atom, its shells, subshells and orbitals" developed for the CLS chemistry module by the librarian (https://www.youtube.com/watch?v=28rYb7UC7ys) was selected.

Lessons Learnt

Curation of local news

From participating in the activities and events mentioned above, the librarian discovered that the CLS academic staff were very interested in local industry initiatives and policies, as well as those from ASEAN countries. Hence, she began curating news articles on a daily basis in a LibGuide, along with newsletters from the Economic Development Board. She emailed the LibGuide link to all the lecturers on a monthly basis, along with an invitation for them to inform her of any research needs they might have. From these monthly blasts, the librarian received research and other library related requests. In addition, she got some leads of upcoming courses that would be conducted and information on the staff who were involved or in charge of certain initiatives. The CLS staff were welcoming when the librarian requested to sit in on these various courses.

Recommendations of software, e-resources and webinars/events

As the librarian was using the same version of Articulate as the lecturers, she was able to test out various scenarios before recommending the steps for them to embed library resources (e.g. videos) into their e-learning packages.

As a result of being embedded, the librarian was also able to learn more of the staff's pain points and career development interests, which enabled her to make more relevant recommendations for new resources or send webinar/event invitations or alerts on new resources to relevant parties. Previously, the library used to send generic emails to all staff in the school and the open rate of these emails were very low. Now with this focussed approach, more staff were responding with brief thank you emails or feedback, especially if they could not access the resources with their passwords. Some of the e-resources have limited concurrent access, so with staff emailing the librarian around the same time that they could not access the resources, it was a testament that more than a few persons were clicking on the links sent, hence closing off access when the number had exceeded the limit.

What motivates the staff?

Most of the academic staff are motivated by learning, collaboration and accomplishment. Hence, the library adjusted the resource promotions accordingly. Instead of offering shopping vouchers or material goods as prizes to entice users as was the case previously, now our

promotions are focussed on how staff can develop their careers or learn skills to help with their teaching or academic writing.

Supplementary services/resources

As an embedded librarian in CLS, the librarian was also able to talk with the course chairs informally about supplementary services and resources offered by the library. These services and resources were normally not promoted specifically to CLS as they are more generic in nature. However, the librarian discovered that there was still some need and interest for these for CLS. Some of these services and resources include the Makerspace (3D printing of protein models and modelling of packaging for cosmetics), One Button studio (for creating e-portfolios and video presentations) and video tutorials on presentation skills, video editing or biostatistics. There were also several requests for instruction classes on looking for business information for the chemical and biomedical industries.

Smart books

In a bid to reduce the load of preparing course materials for the lecturers and to promote self-directed learning, the library also worked closely with CLS to pioneer the use of smart books in the polytechnic. Smart books are adaptive e-textbooks that support personalisation and reinforcement of learning for students. The librarian helped to collate feedback and access issues. Other schools subsequently went on board to use smart books as their course material, saving time and energy on the lecturers' part.

Human test subject

Sometimes, the librarian offered to be the test subject for laboratory trials of products (mainly food) in cases where volunteers were scarce and she fit the criteria. By doing so, she was able to understand more of the trial processes and help with resource access and recommendations.

Debunking library myths

Many CLS student users had preconceived notions of the library and little knowledge of how a library functioned. For example, especially for the millennial users, they expected any resource recommendation to be purchased and for it to arrive immediately (or at most by next week). The librarian had to manage their expectations. The same situation also occurred with some staff. The librarian did more pre-emptive work such as contacting lecturers before the start of semester for textbook recommendations so that the course reserves would be available on time. When similar new resources were available at the library, the librarian could also notify users that she knew would be interested, if they were not already been notified at the point of recommendation to purchase.

Limited budgets - lecturers have no idea of the power they wield

Due to shrinking library fiscal budgets, our library adopted a just in time acquisition policy instead of a just in case. Initially, many lecturers were apologetic or apprehensive about recommending resources. The number of recommendations was also low. The librarian thus reassured lecturers that they actually have much clout when it comes to recommending resources.

Conclusion

The initial objective of embedding a librarian in the school of CLS to work hand-in-hand with the lecturers to develop e-learning packages was successfully achieved. In addition, with the strong support of her library colleagues and collaborative CLS staff and students, the

librarian was able to parlay her embedded librarianship into more targeted resource promotions and increased resource usage. She was also able to incorporate information literacy and research skills into the teaching materials, with some of the academic staff supporting her efforts by assigning grades or making such sessions compulsory. Being physically present in the school increased the opportunities for interaction between the user and the librarian, leading to more research assistance and collaborations with users. The embedded librarianship has turned out to be a valuable experience for the librarian and a win-win collaboration for the school and library in enhancing the learning experience for students. The initiative was extended for another year to enable the librarian to build upon her engagement and further her support of the school.