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Using Personal Learning Environments (PLEs) to encourage peer learning and learner autonomy
By Chris Harwood

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Personal Learning Environments (PLEs) are becoming more widely used by educators who are responsing to the e-Learning needs of their students (Harwood, 2011). The idea of a PLE recognises that learning is ongoing and seeks to provide tools to support that learning thereby enabling individualized learning. A PLE, therefore, is a combination of the formal and informal tools and processes used to curate, reflect and critically evaluate the information obtained.

PLEs enable "non-formal learning within a formal learning context", says Mr Harwood from the Centre for English Language Communication (CELC) at NUS. In this session, he shared his experience on how and why his centre introduced SymbalooEDU as a PLE platform to support students in their learning of English for academic purposes. Then he went on to provide insights from a pilot study on the PLE platform.

Platform for peer and independent learning

The current situation

The online version of Self-Access English Learning Facility (ITSELF) was set up to provide materials to help students improve on their grammar, vocabulary, listening, reading and writing skills and thereby encourage independent and lifelong learning. In recent years however, they found that students were not accessing the facility – students were not aware of it or just did not use it. The main reasons reported were the materials were not easy to access and not as engaging as they could be.

Needs Analysis

With the support of the CELC e-learning committee, Mr Harwood conducted a needs analysis survey of 600 CELC learners. It was clear from the findings that students prefer mobile internet devices. The laptop computer was by far the most common way students (97%) accessed the internet and 42.3% of them accessed it on their smart phones. The needs analysis showed that students also learn in many different spaces- 41.2% accessed and learned online in retail Wi-Fi hotspots while over 20% used it on public transport. With regard to the preference of using online materials for study purposes, 91.5% of respondents preferred a mix of materials that have been prescribed by the tutor and those that they perceive as important. However, 78.1% claimed that they need help finding good websites to support their learning. Most students (92.3%) also indicated that they prefer customizing the available online course resources in one space and organising the categories to their individual preference.

Thus, it was important for the team to construct an online space featuring specially selected websites, video tutorials and other resources required for the course that would allow their students to personalize the information provided.

PLE for peer learning and sharing

Wheeler (2010) summarized the PLE (as shown in Fig 1) and suggested it not only encompasses the personal web tools and personal learning networks (connecting people through social network) but it takes in the experiences as well as learning through other formal media contexts like the TV, music, paper based materials. According to Anderson (2006), "A PLE is a unique interface in the owners' digital environment. It integrates their personal and professional interests (including their formal and informal learning), connecting these via a series of syndicated and distributed feeds." Clearly, PLEs are systems that help learners take control

Figure 1: Anatomy of a PLE

of and manage their own learning. Hence, Harmelen (2007) suggests that teachers can use PLEs to "provide support for learners to set their own learning goals, manage their learning; managing both content and process, communicate with others in the process of learning and thereby achieve learning goals."
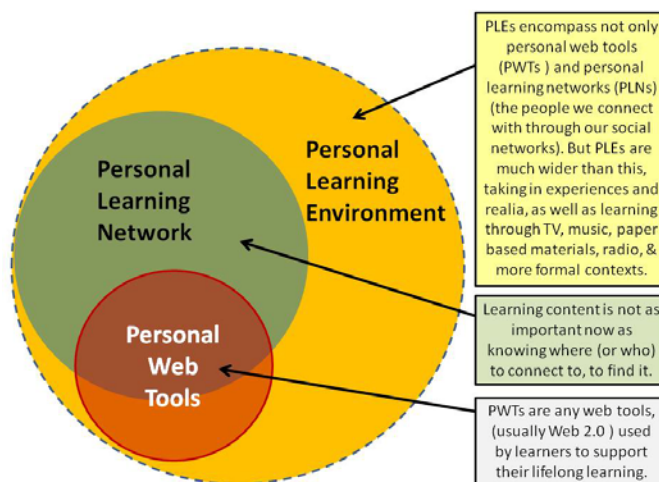
That was exactly what Mr Harwood with the CELC e-learning committee set out to do, he facilitated the construction of one such environment, curating content that simultaneously allowed students to **peer share** and **peer tutor** the newly learned knowledge in a social environment. He shared an example of how a peer sharing approach worked well in his classes. In a business communication module, one of his students shared a really useful resource on presentation skills. Using Facebook as a media, Mr Harwood 'liked' that resource which then prompted his students to use it as a learning resource. This further paved the way for further discussions in the class and allowed students to exchange ideas and share their experiences on how to improve presentation skills.

Selection of an appropriate tool – SymbalooEDU

SymbalooEDU is a software application that enables learners to organize, integrate and share online content in one setting or Personal Learning Environment. The visual interface and ease of aggregating content and sharing it makes SymbalooEDU a great resource for teachers and instructors, says Mr Harwood. The platform also allows educators to create mixes of tailored resources and share these mixes with students (Harwood, 2011).
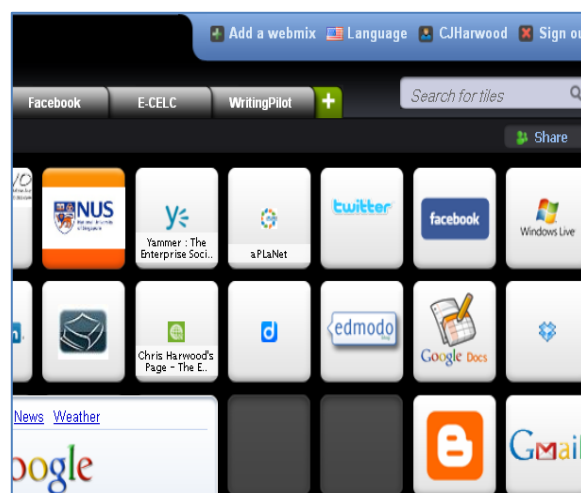
SymbalooEDU works by enabling users to simply construct customizable tiles which are linked to URLs of online resources. Once a grid of tiles (or webmix) is created, it can be shared with others via email. The application has a grid layout, with color icons (called tiles) within each space. The user can organize the tiles however they like and a search box at the top of the grid allows users to quickly search for specific resources or add them to their SymbalooEDU webmix. Thus, the platform allows educators to create mixes of tailored resources and share these mixes with students and allows students in turn to easily access, share and update content. One of the main advantages of this environment is that it allows for hosting almost every other platform within this space – learning management systems (IVLE, Blackboard), social networks, Facebook, Twitter, mySpace, Collaborative cloud tools, Google docs, Dropbox, Integrated curriculum activities such as blogging (Harwood, 2011).

Constructing the webmix

Their team discussed the content and materials of the Intensive English Programme (IEP) courses offered at CELC and identified the following five elements of the curriculum for inclusion in the webmix:

1. Academic writing: introduction, overview, approaches, style.
2. Essay writing: Thesis statements, paragraphs, cohesion, compare and contrast, referencing and so on.
3. Vocabulary: collocation, vocabulary, phrasal verbs.
4. Grammar: pronouns, verbs, tenses, noun phrases, determiners etc.
5. Resources: dictionaries, writing guides, academic wordlists.

In order to make the webmix easy to navigate and visually attractive, different coloured tiles were used for different topics.
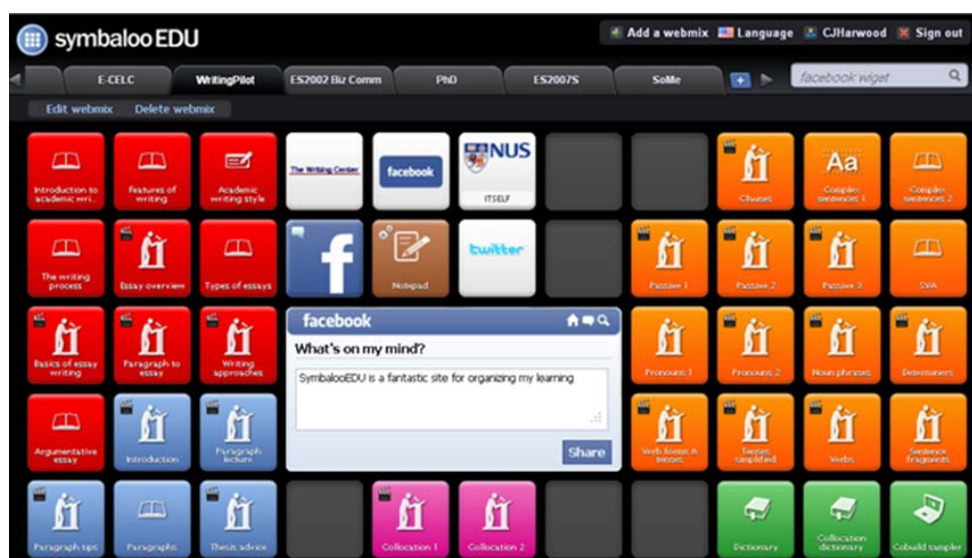
Mr Harwood explained how two icons were selected from the 'symbalooEDU' collection to signify the type of resource tile – 'book' was chosen to signify text-based content and 'a speaker at lectern' was chosen to signify video content. They also added social media tiles for Facebook and twitter along with the CELC language learning portal. This was then shared with the IEP students at the start of their IEP courses.

Pedagogical Advantages that PLEs Offer

1. **Easily organise and share information**

   SymbalooEDU is visually very attractive and simple for customizing, organizing and sharing information. It is also very easy to use, even for those with minimal IT knowledge, in order to create an effective compilation of resources, mixed in a way they believe is most useful. This allows instructors and learners to co-construct PLEs, which should provide support for learners to set their own learning goals, manage their learning, and communicate with others in the process of learning (Harwood, 2011).

2. **Single learning space across courses**

   Single learning space supports formal and informal learning across the various courses. Students are able to set up their own learning environment and space by reusing and remixing content based on their own needs and interests. Such an environment encourages students to see learning as inter-related, connecting both their personal and professional spaces to facilitate deeper learning.

3. **Gives learners' control of their learning**

   Rather than placing controls on what and how students learn, PLEs give them control over their learning. Though students receive support and guidance from tutors, they are also empowered to set their own learning objectives and manage both the content and the process of their learning.

4. **Promote peer learning by bringing the learning environment to students' social space**

   Instructors should embed social learning opportunities into courses to facilitate peer learning and allow the PLE to evolve with the learners' needs and use. Learners should be encouraged to communicate and share information, ideas, knowledge and resources using social media. For example, the use of blogs and class Facebook pages will help students develop reflective practice or constructive feedback skills and provide them with opportunities for non-formal peer learning.

> **Take away points:**
> - 16-24 tiles within a webmix so as not to overwhelm learners with too many resources.
> - Keep the tiles simple and resources direct – specific resources rather than simply linking to website home pages, where students can easily get overwhelmed and lose interest.
> - Share and update the webmix through email or using social media like Facebook and Twitter.

Recommendations

SymbalooEDU is a very useful tool to support learning. However, Mr Harwood recommends educators to:

- Embed Social media into the curriculum
- Provide sufficient training to the course instructors
- Refer to webmix content in class to promote awareness and use of the platform.

Thus, it is important to collect quality learning resources, curate, categorise them effectively and make them easily accessible to students anywhere, anytime (easily achieved through SymbalooEDU).

Summary from the Discussion

A lively discussion followed Mr Harwood's presentation that touched on issues related to using social media in classes. Many participants were positive about the benefits of using this tool to support learning. One of the participants said that he had registered for SymbalooEDU during the session itself and had already started planning his course for the next semester. Another suggested that he would use it to showcase exemplary work of his students. There were others who pointed out that switching to this format will solve a lot of problems that they have been facing with Delicious, a social bookmarking tool, while others felt that this will act as a good motivation for their students.

Q & A Session

Q: **How do your students actually use it? Do they bring the webmixes into their own account?**

CH: Once the webmixes are shared, students can integrate them into their own SymbalooEDU PLE, where they are free to use, add and share content with their peers. They can also customize it with resources related to their personal interest.

Q: **Can students forward these webmixes to others?**

CH: Yes, very easily. Students can use one webmix as a starting point, customize it to suit their class/course needs, and share it with the entire class.

Q: **Are there other specific PLE platforms designed to be used as PLEs?**

CH: There are other platforms but they are not as user friendly as SymbalooEDU. This platform is unique because it is really user friendly with widgets and share functions as well as being visually attractive and easy to customize.

Q: **How about privacy when you use Facebook as a tool within your webmix to generate discussion?**

CH: Privacy has not been an issue. I use class Facebook pages setup exclusively for the classes – the students cannot see your private Facebook page and it is not necessary for you to friend them at all. The advantage of using social media such as Facebook is that, used effectively, it can encourage peer learning.

Q: **How easy is it to update the webmix?**

CH: It can be done simply and quickly using the **UPDATE** button.

Q: Have you done an evaluation to understand how learning has happened when students started using these webmixes?

CH: As the PLE environment enables more informal learning, it becomes incredibly difficult to measure.   How do you measure the impact of informal learning on a business presentation? It is very difficult but you observe the results when eavesdropping on student group discussions and so on. Similarly, based on our observation, the usage of webmixes by students has increased students' level of engagement and interest. It has also received good student feedback through the qualitative comments in the year-end survey.

Q: How has your role changed?

CH: I now focus even more on creating learning environments that enable students to construct knowledge and negotiate meaning autonomously through self and peer learning. I have also become a "learner along with my learners". Students introduce new ideas and resources that they can easily relate to, which I would otherwise may not have found. This makes them more engaged, and I have become more engaged thinking about how to facilitate and bring back these resources into the classroom. It is also important to understand that students use it the way you model it, making it increasingly important for me to reflect on my own practice.

Q: Do you think you can do away with lectures?

CH: Those of you who have heard of or used the Khan academy will understand the idea of 'flipped classrooms'. One of the greatest benefits of 'flipping' is that overall interaction increases: teacher to student and student to student. Since the role of the teacher has changed from "presenter of content" to a "facilitator of content learning", more time can be spent understanding and facilitating the process. This will allow us to use classroom time more effectively answering questions, working with small groups, and guiding the learning of each student individually.

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(Research and references provided by Chris Harwood)