

## **Personal Learning Environments: A Catalyst for Student Ownership of Learning**

Marc Crompton

We have a critical tension in formal education at the moment. We recognize that meta-cognition, learning how to learn or knowing how one knows, is a crucial skill for our students to master yet we don't let our students take control over their own learning in a way that helps them to truly master those skills. Personal Learning Environments (PLEs) are a way for learners to organize their own learning, but have been for too long used almost exclusively by adults who have left their formal education years. How are our students going to take control of their own learning so that they have the skills to become effective life-long learners if we don't give them the opportunities to do so in their formative years?

Aspects of PLEs are used sporadically throughout North America to engage students in their learning. We read about successful classroom blogging where students learn to articulate their ideas in a public forum. Traditional Learning Management Systems automate aspects of the online classroom environment allowing students to share their work and communicate with other learners, but often only in a controlled manner within a walled environment. Students will often use their browser's bookmarking functions to remember important sites that they will need to return to. Tools and concepts from PLEs are used in a haphazard way, but rarely do students in today's schools have the opportunity to build their own, thoughtfully constructed, digital space that gives them the control of their own learning. Teachers and teacher librarians must class time and discussion to the teaching of these skills.

### **Research**

In order to better understand my own students' learning needs and current meta-cognitive skills, I have worked with them on two different projects introducing the concept of PLEs, having them build their own and getting feedback regarding their experiences. The students that I work with are from a single-gendered (boys) high school in Vancouver. The boys are most typically from affluent families and are heading to a university education of some sort. They usually have access to the digital tools and the motivation to learn.

I undertook the first project in the spring of 2013 under the auspices of graduate work through the School of Library and Information Science at San Jose State University. 15 students from grades 8-12 were gathered to participate in the study. All students volunteered. Half were in Grade 8 and opted to participate in the study in place of an organizational skills course that they are required to take. The other half of the students volunteered their time at lunches and after schools to meet with me.

The students first identified some single topic that they were passionate about that their initial PLE would be built around. Many chose sports or specific teams,

but others chose to learn about photography, film or musical theatre. They then gathered a Personal Learning Network (PLN) around their chosen topic through researching blogs, web sites and twitter. Portal tools were developed to aggregate the feeds from the multiple information sources that they used and they shared their learning through blogs on their topic. These tools included RSS feed readers, browser and OS dashboards and web-based platforms such as Symbaloo and Netvibes. Once the students were comfortable with these tools and had had some experience working with them around their one passion, we attempted to move these concepts into the school environment.

While the single learning goal that existed outside of the classroom lent itself well to a PLE approach, it was when we started incorporating the idea into the classroom that we started to see struggles. An informal debriefing on the last day of the project brought some key issues to the fore. A simple problem was that the majority of the students' teachers were not using digital platforms for classroom interactions. With each student only having one or two teachers who used web-based tools, it was difficult for them to see a need to develop an online digital PLE for their schoolwork. In addition, students didn't feel empowered to take ownership of their own learning. When much of the learning is done through textbooks and lectures and is assessed using standardized test, they didn't feel a need to develop a strategy for personal learning. Finally, it became evident that not all students preferred to use digital tools in the first place. The concept of digital natives is perhaps not as widespread as we might think. This project was documented in a formal paper and on my personal blog (Crompton, 2013a; Crompton, 2013b; Crompton, 2013c).

The following school year brought the opportunity to teach 5 to 6 week courses to grade eights that dealt with personal organization for learning. This seemed to be an ideal opportunity to continue to explore the role of the PLE in the school environment. While the course is not limited to PLE concepts, the idea of a personal learning environment is the backbone of the curriculum. Through the course of this academic year, every grade eight in our school is being taught the basic concepts of the PLE and the end result of their course is to demonstrate their own personal learning environment and organizational strategies. While the first year of my teaching of this course is still in progress, there have been some good successes as students explore how to organize themselves for success in a learning environment that is ultimately directed by them.

The process for teaching personal learning environments to these grade eights is similar to what was used in the PLE project above. Instead of starting with personal passions, however, the boys start by identifying personal learning goals and then identifying those people, websites, and other resources that help them to work towards those goals. Once they know who they are communicating with, they can then build an environment that allows them to communicate with their PLN in an efficient and organized fashion. From there, they build their portfolio that allows them to archive and share the products of their learning. Two

different assessment approaches have been utilized through the teaching of the multiple iterations of this course. Initially, the students were required to present a PowerPoint, a video, an essay, or some other demonstration of their personal learning environment and the thinking that went into it. A companion website, [ple.quickmooc.com](http://ple.quickmooc.com), was used to supplement the discussions in class. The second assessment process used was to simply have the students work through the QuickMOOC site, and earn badges as they progressed. The second approach also has the advantage that it puts the control of the learning directly in the students' hands.

There is a significant problem with the literature surrounding PLEs in general and more specifically PLEs within formal education environments. The terminology is not standardized, meaning that often a PLE is called a PLN or when the term PLE is used, it takes on different meanings (Morrison, 2013). Much of the literature surrounding PLEs in formal education seems to come from the post secondary level. As universities explore options around learning management systems, many express deep concerns with the more limited top down style of LMS that seems to be pervasive in the market. An alternative that is explored is that of some sort of institutionally-based platform that allows students to create their own personal environments to organize their learning. There are often issues around risk management, intellectual property, and uniformity of service that educational organizations have trouble dealing with. And when PLE's are seen as a solution there is an education piece that becomes crucial as students learn to set up and work in these types of environments (Mott, 2010). Relevant literature to consider includes the work of Will Richardson in his discussion of connected learning and the relevance of schools and Van Harmelen's (2008) exploration into introducing PLEs into the learning environments of the University of Manchester. My introduction to the concept was through the work of Loertscher, Koechlin and Zwaan (2011).

### **The Issues**

The question becomes, are PLE's appropriate tools for students if there are so many challenges to their adoption? If there is no use for the tool, perhaps there is no point in spending time trying to teach students to use it. But, if the challenges to the adoption of PLEs in a school environment are challenges that are worth overcoming anyway, then maybe PLEs can be part of the solution. Let us look at the three biggest issues in a little more detail.

The problems with our industrial approach to education are well documented. At this point in time, there is little doubt that the sage on the stage approach to education to the exclusion of all other teaching methods is no longer an option. The teacher and the textbook are not the only sources of information for the students. The simple delivery of facts is no longer seen as a method for teaching the skills and habits of mind that our students need to develop to be successful in their lives. The British Columbia Ministry of Education is saying in their curriculum renewal presentations that the emphasis is to be on uncovering

curriculum rather than covering it (Dockendorf & Munro, 2014). True, there does need to be a scope and sequence that ensures that our students receive a good grounding of certain core knowledge and skills that they can then build upon for the rest of their lives, but perhaps the most important of all those core skills is that of learning how to learn.

Teachers need to become mentors, guides, and meddlers (McWilliams, 2009) in student learning. We need to develop challenges and set up environments for students to discover themselves and the world around them. The use of PLEs in an educational paradigm such as this provides an effective manner of organizing oneself to learn anywhere, anytime, from anyone. The skills needed to find and assess credible and quality resources are essential to developing an effective

PLE and they're recognized as important 21<sup>st</sup>-century skills. Implementation of PLEs into formal education has to occur at the same time as the shift from centralized to decentralized learning occurs. As expressed by my students, PLEs really do not have a place in an education system that is all about information scarcity and knowledge delivery. Constructivist inquiry-based education can become directionless when students do not have the tools to organize their own inquiry. PLEs and inquiry-based education are part of the same paradigm shift and must be advanced simultaneously.

If teachers do not use digital or web-based tools, as my students have pointed out, again there is no roll for PLEs in education. Digital and web-based tools in and of themselves do not improve education, but the use of these tools in the hands of great teachers can allow learning to go far beyond where it has in the past. Even if the only reason to use these tools is because society is changing and these tools are becoming the norm, teachers must adopt digital and web-based ways of teaching and learning in the classrooms. One of the biggest fears that teachers have in using these tools is that they themselves do not have the skills and organizational structures to work in new ways. Teachers as well need to learn how to build and effectively manage PLEs in an effort to learn and teach effectively.

An important thing to keep in mind is that not all students prefer a digital means of learning. Simply because a student is born into a world where everyone is connected via the Internet, this does not mean that that student prefers or is most effective working in a digital mode. Many students still prefer pencil and paper and more traditional methods of working with their knowledge. Many students still prefer physical texts to digital ones. Many students resent excessive screen time. These students still need to learn the digital tools to become effective learners and contributors to society. They also need to learn how to go back and forth between physical and digital modes.

Even when students are inclined to use technological tools, they don't necessarily have any knowledge of how to use them to learn and organize one's

self. Simple observation would indicate that my students use their technology primarily for communication through Facebook and texting/chat and gaming. Teacher librarians know that the bulk of our students have very rudimentary research skills and it is often the search tool's ability to cater to deficiencies in their knowledge that give them the success that they do find. When my students have found success in using technology to organize their learning it is often through the use of single apps that do make differences, but they tend to use the single tools at a very shallow level. A tool like MyHomework or a todo application will be used as a list of tasks rather than using categorization, scheduling or other functions to improve the impact of the tool.

### **Approach to success**

The first step in students' establishment of a personal learning environment is through the establishment of learning goals. Many of these goals will be determined for them by their teachers who are working from ministry of education documents, but the time spent reflecting on the details of mandated learning goals and establishing personal extracurricular learning goals will gain them significant clarity in understanding exactly what it is that they need to learn. It is not enough to set Social Studies 10 as a learning goal. The students must read the course syllabus and understand that, among other concepts, they will need to come to a deep understanding of how immigration to Canada prior to World War I affected the nation's culture and identity and how the relationships between these immigrant groups and those that came before them created the Canada that we have today. It is likely that they already have a better understanding of what they need to learn in the context of their extracurricular learning goals. In these areas, they may be better able to set specific goals. Rather than establishing learning to play hockey better as a learning goal, the student might recognize that specific stick handling skills or general overall fitness might be areas that need greater attention. The more specific the goals, the better able the student will be to move on to the next step.

Using the learning goals as a foundation, the students can then pull together a personal learning network to support those goals. This can be difficult for students especially when they are used to being the focus of a stream of knowledge that originates at the teacher and textbook. They should certainly include the teacher and textbook as part of their PLN, but they should also consider where they go for help when the primary resources are not available or sufficient. Do they have friends, parents or siblings that help them with their studies? Are there online resources such as Khan Academy, YouTube channels, or Discovery Education that can serve as alternate explanations for topics struggled with in class? Documentation of the PLN through a spreadsheet or mindmap can be very useful for thinking through who members of a PLN are and how those members relate and communicate with the individual student.

Once the PLN is established, it becomes easy to determine what methods of information aggregation are needed. Often, classroom teachers are primarily

communicated with face to face and through email. It is important that students think through how they access and organize their email, especially now that they tend not to use email to communicate with friends. Bookmarking of regularly visited sites is a simple method of aggregating information, especially now that many browsers allow the syncing of bookmarks across multiple devices. Tools such as Symbaloo, Netvibes and Feedly all offer different ways of pulling links and updates to multiple sites together on one page. The idea is that we try and pull as many different sources of information into one place as makes sense. The more places a student has to visit, the more likely it is that they will miss crucial information (ie. updates on a class web site) or forget that certain resources exist all together.

The younger a student is, it seems, the less relevance they seem to see in a portfolio tool that archives their work for future reference and sharing. My students seem to respond better to the idea that they need to keep their work in one place in order to be able to study for future tests. Some simply use their file management system on their computer or the online equivalent of Dropbox or Google Drive. This is a good start, particularly where ease of sharability is inherent in the system. As the students get older, they may find a need for broader sharing of their accomplishments via web sites, blogs or other more public platforms. They should also be aware that contributing comments to other's blogs, retweeting and contributions to wikis all are other forms of information sharing that contribute to their own and others' learning.

A resource that can be used to further one's understanding of PLEs is the online community at [ple.quickmooc.com](http://ple.quickmooc.com). While the primary intent of the site is that it is used by students, there is certainly plenty of material there that will appeal to learners of all ages. This site provides much more material relating to specific tools and methods used in setting up an individual's PLE. It is hoped that the community will continue to grow and members will contribute new ideas and findings as tools, concepts and skills develop. Readers of this document can use the username: TMC2014 and the password: Victoria. If you wish to involve a class in the site, please contact the author.

## **Conclusions**

Personal Learning Environments can be powerful tool sets in a school environment. They emphasize many of the skills and dispositions that a student needs for success and that education has recognized are important. PLEs are not, currently, a natural fit in many more traditional school environments, but they can be a catalyst for change and certainly should be adopted as one effective option for managing learning as schools move toward a more student-centred ethos.

## **References**

- Crompton, M. (2013a). PLE project blog posts - Adventures in Libraryland. Retrieved from <http://mcrompton.ca/wordpress/adventures/category/ple-project/>
- Crompton, M. (2013b). PLE project. Retrieved from <http://mcrompton.ca/wordpress/adventures/ple-project/>
- Crompton, M. (2013c). A role for personal learning environments in a K-12 formal education setting. Retrieved from [http://mcrompton.ca/portfolio\\_art4.php](http://mcrompton.ca/portfolio_art4.php)
- Dockendorf, M., & Munro, B. (2014, February 7). *Ministry workshop: New BC curriculum*. Address presented at Independent Schools Association of British Columbia Pro-D Day 2014 in St. George's School, Vancouver.
- Loertscher, D. V., Koechlin, C., & Zwaan, S. (2011). *New learning commons: Where learners win!* (2nd ed.). Salt Lake City, UT: Hi Willow Research & Pub.
- McWilliam, E. (2009). Teaching for creativity: From sage to guide to meddler. *Asia Pacific Journal of Education*, 29(3), 281-293. doi: 10.1080/02188790903092787
- Morrison, D. (2013, January 22). How to create a robust and meaningful personal learning network [PLN]. Retrieved from <http://onlinelearninginsights.wordpress.com/2013/01/22/how-to-create-a-robust-and-meaningful-personal-learning-network-pln/>
- Mott, J. (2010, March 3). Envisioning the post-LMS era: The open learning network. Retrieved from <http://www.educause.edu/ero/article/envisioning-post-lms-era-open-learning-network>
- Richardson, W., & Mancabelli, R. (2011). *Personal learning networks: Using the power of connections to transform education* [Kindle Edition]. Bloomington, IN: Solution Tree Press.
- Richardson, W. (2012). *Why school?: How education must change when learning and information are everywhere* [iBook Edition]. New York, NY: TED Conferences.
- Van Harmelen, M. (2008). Design trajectories: Four experiments in PLE implementation. *Interactive Learning Environments*, 16(1), 35-46. doi: 10.1080/10494820701772686