

EXECUTIVE SUMMARY

Encouraging Self-Regulated Learning through Electronic Portfolios

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Electronic portfolios (EPs) are linked to a student's ability to self-regulate their learning and to enhance their meaningful learning of important educational skills and abilities, especially literacy skills (Abrami, P.C. et al, 2006; Abrami, P.C. & Barrett, H, 2005). Self-regulated learners are individuals who are metacognitively, motivationally, and behaviourally active participants in their own learning (Zimmerman, 2000). A main feature of self-regulated learning is metacognition. Metacognition refers to the awareness, knowledge, and control of cognition. The three processes that make up metacognitive self-regulation are planning, monitoring, and regulating. Other aspects of self-regulated learning include time-management, regulating one's own physical and social environment, and the ability to control one's effort and attention. When students use portfolios, they assume more responsibility for their learning, better understand their strengths and limitations, and learn to set goals (Hillyer & Lye, 1996). In short, educators believe that portfolios allow students to think critically, and become active, independent and self-regulated learners (Perry, 1998; Mills-Courts & Amiran, 1991).

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Zimmerman and Tsikalas' (2005) review of computer-based learning environments (CBLEs) designed to support self-regulated learning (SRL) provides a framework for development of a tool to support the three cyclical phases of SRL: forethought, performance, and self-reflection. The three cyclical phases of self-regulation include both metacognitive and motivational components, providing the foundation for better sustainability of learning and skill development.

Using this framework as a guide, the CSLP in collaboration with our partners at LEARN-Quebec, developed web-based, student-centred electronic portfolio software, entitled ePEARL. Developed in PHP using a MySQL database, three levels of ePEARL have been designed for use in early elementary (Level 1), late elementary (Level 2), and secondary schools (Level 3). Features available include: customizing the portfolio; setting outcome and process goals; creating new work; linking to existing work; reflecting on work; sharing work; obtaining feedback from teachers, peers, and parents; editing work; saving work under multiple versions; and sending work to a presentation portfolio. We wish to disseminate the tool without charge to policy-makers, educators, students, and parents; encourage its active and sustained use on a wide scale; and learn about effectiveness, sustainability, and scalability as we do.

Our research is designed to study the impact of EPs on teaching and learning processes, especially those related to self-regulation. The design of Phase I of our project was a one-group pretest-posttest design. Teacher questionnaire data were collected in the Fall, 2006 prior to training and prior to the use of ePEARL in classrooms. Teacher questionnaire data were collected again in the Spring, 2007 after ePEARL was used for (some part of) the school year. Student questionnaires plus teacher and student focus group data were collected in Spring, 2007 only. A sample of student portfolios (N = 66) were also analysed. Analysis of the focus groups revealed the need for teachers to introduce processes involved in self-regulated learning and challenges inherent in teaching students learning goals, learning strategies, and collaboration and feedback. For example, not all teachers reported that students were aware of their learning strategies. In addition, teachers felt that learning goals were especially difficult to teach to very young students. Some teachers reported that students wanted to and shared feedback mostly with their friends instead of other classmates. Otherwise, teachers generally valued the self-regulating processes explicit in ePEARL, while students were very positive toward certain aspects of the tool, especially the customization features. Finally, teachers discussed their need for extensive support from school staff and administrators. Analysis of student

portfolios (N = 66) did not reveal widespread or extensive use of the tool; however, for those teachers who implemented e-portfolios extensively, ePEARL was used in creative and practical ways. As a result, student portfolios in the classroom of these teachers were often richer and demonstrated that students can learn self-regulation skills in order to improve their work and become better learners.

We will conduct a two-year longitudinal investigation (Phase II) using a non-equivalent pretest-posttest design focusing on changes in student self-regulation and literacy skills improvement. Ultimately, our objective is to learn more about the impact of EPs on student learning.

While teachers and their students see great promise in the use of EPs for learning, there is much that remains to be done to insure this promise is realized. To teach the skills of self-regulation within an EP environment requires commitment, purpose, and strategies on the part of teachers and students. It requires both “will” and “skill”. The effective use of EPs isn’t just about the destination but also about the journey—for teachers, students, and researchers. Stay tuned.

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