CSLP
Learning Toolkit
Newsletter

Spring 2013

Learning ToolKit

News on the Learning Toolkit

Welcome to the latest issue of the LTK Newsletter which provides an update on the research and development activities related to the Learning Toolkit suite of tools.

Thank you to all of the senior administrators, pedagogical consultants, teachers and students from LEARN and our partner school boards — CQSB, EMSB, ESSB, LBPSB, RSB, SWLSB — who have contributed their time and effort to these various projects.

Emerging Literacy in Mathematics

Though still in its infancy, the initial prototype of our new, bilingual math literacy tool, ELM, that was showcased in 2011 has blossomed this past year. Based on our May 2012 field tests with kindergarten participants in two EMSB schools, and in discussions with math consultants, subject matter experts and grade 1 teachers, we have defined the scope of the project and re-formulated the principles that are now being used to guide the design and development of ELM, as well as the overall structure of its activities.

The software involves the users in a story in which they develop relationships with the story characters and collect new friends as they travel around the world. ELM provides an engaging, interactive, easy to learn environment to its users. The themes in the software are designed to cover essential mathematical concepts and processes, such as number-sense and counting. Each mathematical theme presents different ideas with multiple activities. These activities increase in complexity in order to cater to the full range of skill development, from from struggling to advanced students.

An extensive just-in-time support system consists of audio and visual instructions or prompts to guide the users in doing the activity. In addition, a more detailed video demonstration will available to users at any time before or during the activity.

An important feature that distinguishes ELM from other mathematical software will be its teachers' manager page, essential for pedagogical differentiation and inclusion among students. Teachers will be able to modify the default setting of certain variables such as the highest number presented in an activity, the number of repetitions of an activity and the access to more advanced activities, depending on the student's ability.

The first release of ELM is scheduled for December 2013 and has been made possible through funding from the the Ministère du Développement économique, de l'Innovation et de l'Exportation. It will consist of more than 20 different numeracy activities, such as counting, adding, subtracting, comparing numbers, decomposing numbers and place value. In addition to the student module, a teacher and a parent module will be available to help introduce or reinforce the mathematical concepts and processes discovered and learned through the software's activities.
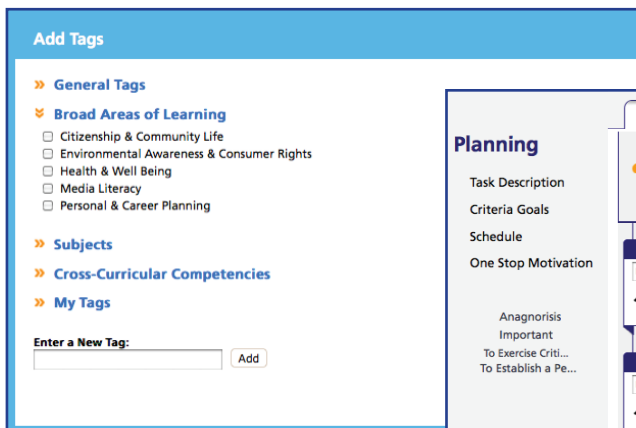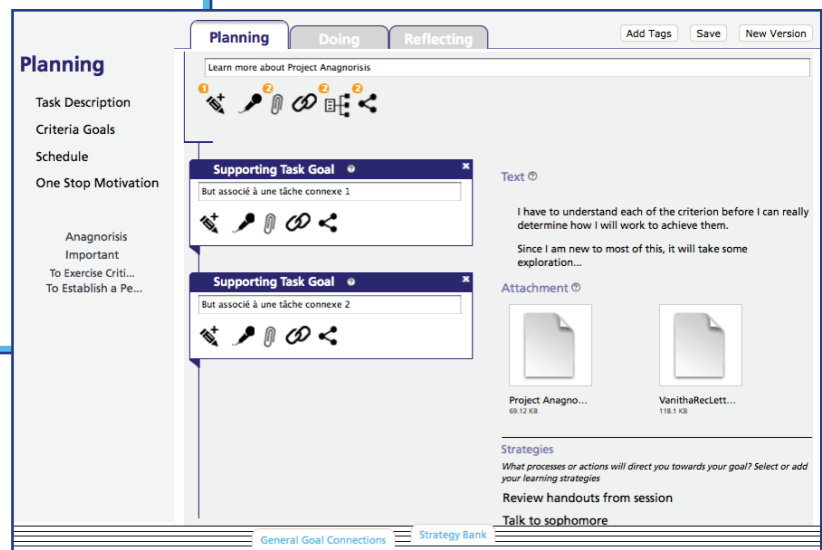
ePEARL **Level 3**

ePEARL's Level 3 has a completely redesigned interface to meet the needs of secondary school students (Grades 7-12). With its Toolbox, Schedule and Tagging features, it promotes a more flexible and mature environment for this population. It also encourages more in-depth self-regulated learning by allowing students to drill-down on goal-setting, motivation and reflection questions. The new Toolbar offers even more ways of adding content to this multimedia portfolio.

Tagging feature

In-depth SRL features

ePEARL Level 3 (continued)

The ability to set notifications, add posts and reply to peers, teachers and parent comments create the feel of a "wall" that students are accustomed to using on social media sites. Students can customize these notifications and their Home Page, which ultimately provides ownership over their learning portfolio.

Home page

Personalize

Design and Development of Level 2

With funding from the Max Bell Foundation, we have redesigned the student module for late elementary and early secondary students. Last year, we pilot tested our prototype with LBPSB and EMSB teachers and their cycle three (grades 5 and 6) students. The data we gathered helped us pinpoint improvements to the tool, including a Phase 3 — *Using Information*, for the Inquiry Process. As well, changes to ISIS have been designed in accordance with current research on information literacy, pedagogical strategies for online learning, and a constructivist framework. We have also ensured that ISIS-21 is designed to help meet Canadian curricula standards and outcomes. Preliminary development has started and we anticipate the tool to be ready for testing in January 2014.

Development of support material

Several short, 2-3 minute, student-centred videos that model the process are currently being produced as part of a joint project with our partners, the Information Literacy team at MELS and LEARN. We have also started to create some teacher resources, such as lesson plans and rubrics. These resources will be embedded into a teacher module that will be developed early next year.

To learn more about the tools in the Learning Toolkit
go to http://doe.concordia.ca/cslp/LTK

iScore

Self-Regulated Learning in Music Education

A new tool has recently joined the CSLP family. In January 2012, we and our collaborators at Queen's University and the Royal Conservatory of Music launched iSCORE, the first electronic learning portfolio intentionally designed to support music education.

iSCORE, which was adapted from ePEARL, supports music learning by helping students set goals and strategies, act on these while monitoring their progress, and then reflect on their performance. In the realm of music education, these skills are critical for the development of independent musicians.

From an educational standpoint, there is more than a decade of research and experience about web-based portfolios and SRL to be found in iSCORE. From a musical perspective, features like the ability to record, annotate, compare and communicate outside the weekly lesson give studio teachers an edge in inspiring students to become passionate, capable and self-directed musicians.

It also helps budding musicians explore their musical interests outside the walls of the music studio. Links to performances by master musicians, popular artists, and other artistic expressions by the student can help immerse both students and teachers in a rich, active and personal environment beyond the weekly studio lessons.

iSCORE (continued)

Through built-in communication features, students and teachers become part of a musical community that breaks the isolation many novice musicians feel. Through email, sharing of personal recordings, and requesting and providing feedback, iSCORE encourages alternative ways to communicate with the teacher and other students between classes.
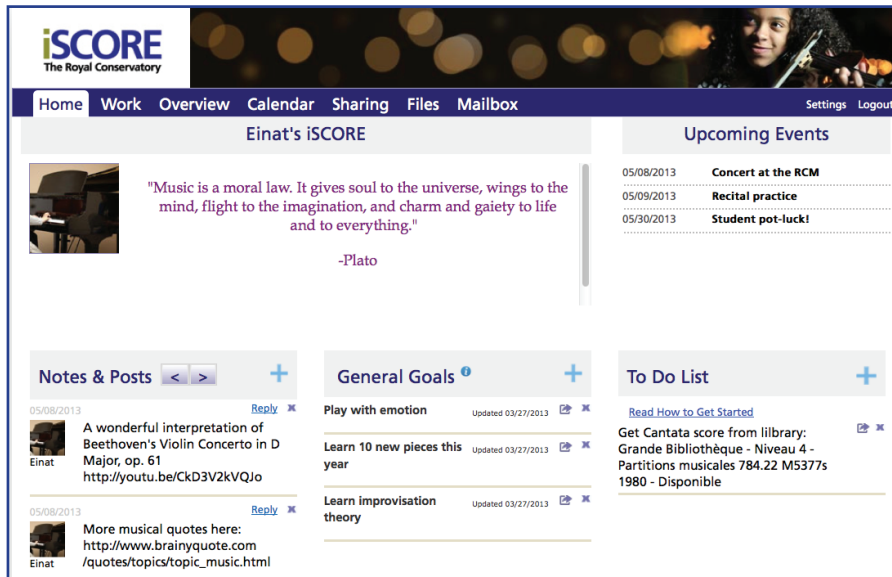
Home page

This year, we are starting a 3-year-study that will look at the extent to which students become more engaged in music when their lessons are enhanced with iSCORE. We will determine how the nature and outcomes of music study change when students use a tools that supports self-regulated learning. We will also be collecting information about how iSCORE is being implemented in order to make improvements for a new version of the program in 2014.

Mailbox

For more information on any of these tools please contact Anne Wade at wada@education.concordia.ca
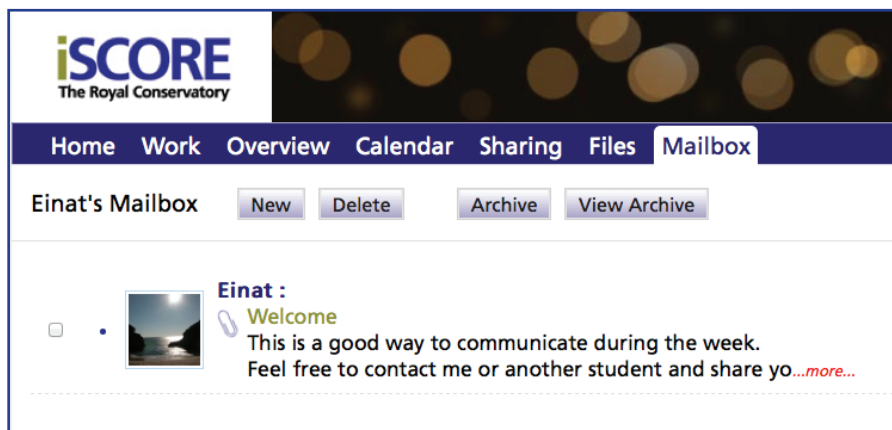
Projects　　ABRA-ePEARL Mentorships

This year the CSLP and LEARN have enjoyed supporting our veteran research teachers, Mary-Ellen Lynch (RSB), Tanya Bell Beccat (EMSB) and Irene Tsimiklis (SWLSB), in their new capacity as Learning Toolkit (LTK) mentors.

In the fall of 2012, these three teachers were awarded a Professional Development and Innovation Grant (PDIG) called *Yes We Can: Facilitating the Use of Evidence-based Tools to Increase Cycle-One Student Literacy*. The core purpose of the grant was the use of a mentorship model whereby the three mentors teamed up with 10 other cycle-one teachers in their school or board. The teams were able to share their experiences and expertise, gained through the use of the Learning Toolkit tools like ABRACADABRA and ePEARL, to support the development of self-regulation and literacy. Over the course of the school year, the teams, along with consultants from LEARN and the school boards involved, met regularly at the CSLP offices. Mentees also visited the classrooms of their mentors to learn how to integrate the tools wisely into their literacy practice (photo below shows mentee teachers visiting Mary Ellen Lynch's class). They also enjoyed classroom visits by their mentors themselves to share their emerging expertise with the tools and to receive contextualized feedback, support and advice.

Each mentee received a laptop to complement their existing classroom technology and used it to gain more expertise with the software, to follow their students' progress and to provide feedback on their work. A virtual space was established to store and share materials developed during the project.

The mentoring model produced some major positive outcomes. First, it instilled effective teaching practices that align with the philosophy of self-regulated learning that underlies the LTK software. Secondly, it encouraged ongoing interactions both within and between schools and school boards, which allowed for the creation of communal knowledge and the emergence of collegial relationships between team members. This year's experience inspired other teachers to try the LTK mentoring model. More teams are applying for the professional development funds to support instruction with LTK for the 2013-2014 school year!

Improving English Literacy in Kenya

In 2013 the CSLP and the Aga Khan Academies worked collaboratively on Phase I of a multi-year project to learn about the feasibility and effectiveness of using ABRACADABRA, our early literacy software, with emerging readers and their teachers in Mombasa, where the need to improve children's literacy is great. Over three months, six teachers and their grade 2 students visited the computer lab at the Aga Khan Academy in Mombasa weekly and used the software. Lab sessions were followed by additional enrichment activities in the classroom. Student achievement data were collected and compared to those collected from parallel classes in the same schools which did not use the software. Weekly planning meetings, coupled with regular observations and videotaping was used to document the implementation.

The reading achievement data show that after thirteen weeks of ABRA exposure, students in the experimental classes demonstrated significantly improved literacy skills than students in the control group. Gains were found in comprehention-related skills, including reading and listening comprehension. In addition, both groups gained in vocabulary-related skills such as decoding and sight-reading. The results also indicate that the recorded increases in all skills by the ABRA classes helped to move them towards the norms for North-American students.

The lessons learned will be used to inform the teachers in subsequent phases of the project as we discover more about how to effectively integrate the use of ABRA across Kenyan classrooms. Financial and in-kind support for the project was provided by the CSLP, Concordia University, Aga Khan Academics Unit and the Aga Khan Academy, Mombasa. The team recently learned that they were awarded $200,000 from SSHRC, under the Partnership Development program, for expansion of this project.

Improving English
Literacy in Hong Kong

In March 2013, Dr. Barley Mak visited the CSLP to receive training in the use of ABRACADABRA. Dr. Mak is a faculty member in the Department of Curriculum and Instruction and the Director for the Center for Enhancing English Learning and Teaching (CEELT) at the Chinese University of Hong Kong. Both she and Dr. Alan Cheung will be leading a new project to learn how ABRACADABRA can be used to increase the English literacy of students in Hong Kong.

Dr. Barley Mak visiting Irene Tsimiklis's class

During her visit, Dr. Mak visited classrooms in two schools — Tanya Beccat's class in Leonardo da Vinci Academy (EMSB) and Irene Tsimiklis's class at Hillcrest Academy (SWLSB), to discover how ABRACADABRA has been effectively integrated into Canadian classrooms. Both of these teachers are recipients of the LTK Award of Excellence.

Tanya Beccat & Dr. Barley Mak

Recent Publications

Abrami, P. C., Bures, E., Idan, E., Meyer, E., Venkatesh, V., & Wade, A. (in press). Electronic Portfolio Encouraging Active and Reflective Learning (ePEARL). In R. Azevedo & V. Aleven (Eds.), *International handbook of metacognition and learning technologies*. New York: Springer Science + Business Media.

Abrami, P. C., Venkatesh, V., Meyer, E., & Wade, A., (in press). Using electronic portfolios to foster literacy and self regulated learning skills in elementary students. *Journal of Educational Psychology*.

Centre for the Study of Learning and Performance. (2012). *The learning toolkit: A teacher's guide*. Montreal, QC: Author. ISBN: 978-0-8894-7-503-8

Di Stasio, M., Savage, R., & Abrami, P. C. (2012). A follow-up study of the ABRACADABRA web-based literacy intervention in grade1. *Journal of Research in Reading*, 35(1), 69-86. http://dx.doi.org/10.1111/j.1467-9817.2010.01469.x

Savage, R., Abrami, P. C., Piquette-Tomei, N., Wood, E., Deleveaux, G., Sanghera-Sidhu, B., & Burgos, G. (2012). A (pan-Canadian) cluster randomised control effectiveness trial of the ABRACADABRA web-based literacy program. *Journal of Educational Psychology*. Advance online publication. http://dx.doi.org/10.1037/a0031025

Venkatesh, V., Bures, E., Davidson, A.-L., Wade, A., Lysenko, L. & Abrami, P. C., (2013). Electronic portfolio encouraging active and reflective learning: A case study in improving academic self-regulation through innovative use of educational technologies. In A. D. Ritzhaupt & S. Kumar (Eds.), *Cases on educational technology implementation for facilitating learning* (pp. 350-386). Hershey, PA: IGI Global.

Wolgemuth, J., Savage, R., Helmer, J., Harper, H., Lea, T., Abrami, P.C., Kirby, A., Chalkitim K., Morris, P., Carapetis, J., & Louden, W. (in press). ABRACADABRA Aids indigenous and non-indigenous early literacy in Australia: Evidence from a multisite randomized controlled trial. *Computers & Education*.

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