

Learning Toolkit+ Newsletter

SPRING 2018





Contents

—

4

LTK

5

ELM

8

ABRA

10

READS

11

IS-21

12

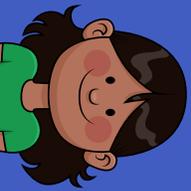
ePEARL

14

Kenya

17

China



What to watch for in the 2018 LTK+ Releases

TWO LTK+ UPGRADES ARE COMING IN 2018, ONE IN AUGUST AND ONE IN DECEMBER.

- 1** Revised and updated **Teacher** and **Parent Resource** pages for **ABRA** and **ePEARL** (August). These pages will include a new interface to make finding information even easier.
- 2** Improvements to ABRA's Interface and Functionality (August, December): We will continue to refine the activities, narration, and navigation for a better user experience. Watch for the new avatars!
- 3** **ABRA Research Data module** (August): Our researchers will be able to access rich data on student use of ABRA.
- 4** **ELM and ORME Resource** pages for teachers and parents, featuring videos, support materials, ideas, and tips (August).
- 5** **ABRA Teacher Assessment** module (December): Teachers will be able to review and track student and class progress in ABRA. The module will include graphs, printable reports, and expert tips.

Please send us an email (ltkdemo@education.concordia.ca) if you wish to receive future upgrade notices.

*New avatars
in August!*



Emerging Literacy in Mathematics

ELM DEVELOPMENT



Thanks to the [Max Bell Foundation's](#) continued support, the student module has been expanded; a new step has been added to our [Data](#) theme to help students further develop their skills.

Students are asked to categorize objects, create a bar graph, and then use that data to create a table that indicates the total amount of objects. We also designed and developed a new theme:

[Number Line](#). The students are given a word problem with a missing value for the starting point, displacement, or ending point. Students are asked to find the missing value by placing one point on the number line and then creating the displacement.

ELM's [Teacher Resources](#) page and the [Parent Module](#) have been redesigned. We have updated our existing resources and added new content, such as a promotional video, a teacher guide, and parent testimonial videos.

Emerging Literacy in Mathematics

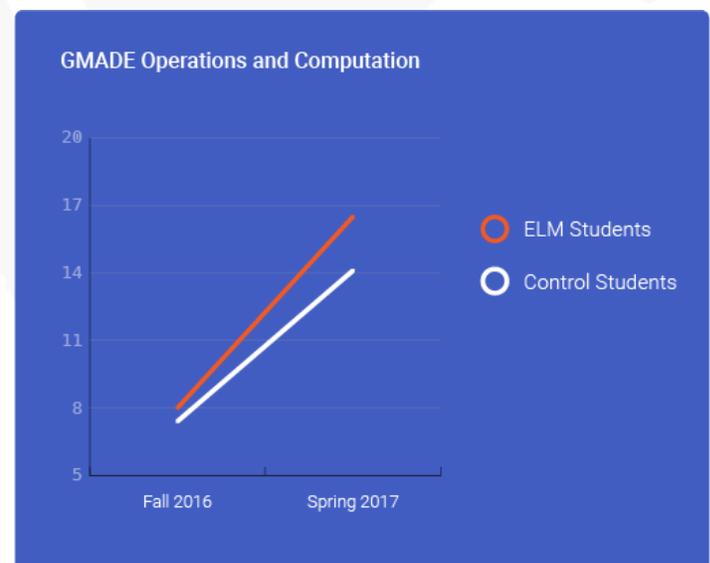
ELM RESEARCH - QUEBEC AND BRITISH COLUMBIA

Throughout the 2016-2017 school year, more than 480 grade one students and their 24 teachers from four partner school boards in Quebec (**English Montreal School Board, Commission Scolaire Point de l'Isle, Commission Scolaire Beauce-Etchemin** and **Eastern Shores School Board**) participated in phase 3 of the ELM research project. In addition, two teachers from the **Powell River School District** in BC used ELM in their grade one Math classrooms. The **Max Bell Foundation** supported this phase of the project in which we sought to confirm whether integrating a more complete version of ELM software into grade 1 classroom instruction would yield higher achievement gains and more positive dispositions towards learning mathematics.

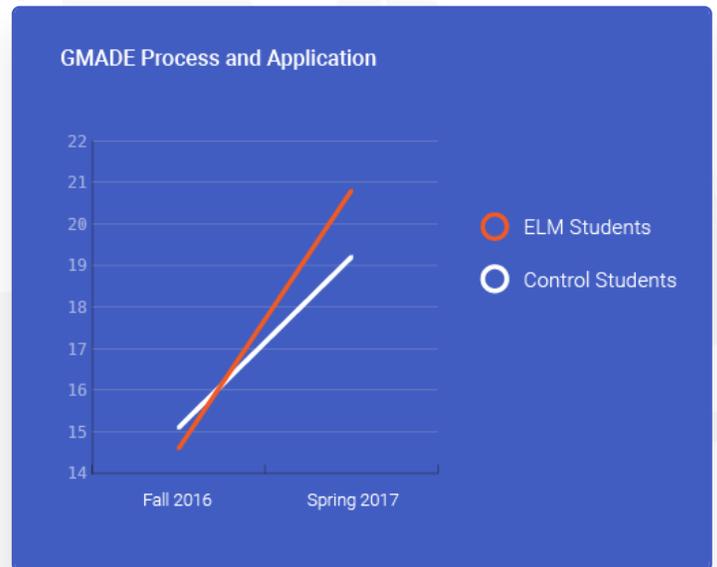
For three terms, the 12 experimental teachers taught the pivotal concept of Number and related operations within ELM, while the 12 control teachers continued with their usual approach to teaching the Math curriculum. We collected data using a standardized Math test (GMADE) before the ELM intervention and at the end of the school year, thus allowing us to compare the Math gains and attitudes towards Math, within both the experimental and control groups. Although no achievement data were collected in the Powell River

classes, the two participating teachers shared their experience with us, thus adding to the information the ELM teachers from Quebec provided during their focus group interviews.

Overall, the outcomes of this study suggest that in the hands of teachers, this more complete version of **ELM benefited the development of young students' mathematical abilities** when compared to those of students in the control group. As the graph below illustrates, especially significant gains were noticeable for the basic skills of using operations of addition and subtraction.



The effects of the ELM instruction were also important for **complex skills** such as taking language and the concepts of mathematics and applying the appropriate operations and computations to solve a word problem (adjacent graph). Further, students who used ELM as part of their Math instruction also **improved their attitudes toward learning Math**; they reported more enjoyment, along with less anxiety and boredom. As we expected, the time the students spent conducting the ELM activities was significantly associated with their achievement gains measured on a standardized test, thus making the trace data generated by ELM software a useful indicator of learning progress.



Similar to previous phases of the ELM project, this study proved that **ELM works in the hands of Math teachers**. The regular classroom teachers enjoyed full autonomy in making decisions about when and how ELM fit the curriculum and syllabus, how to integrate it into their mathematics instruction, as well as how much freedom they had in allowing their students to explore the ELM activities, including the selection and sequencing of activities. This study also showed that the teachers found ELM **easy to adopt** primarily because they felt that ELM was **easy to use**.

They especially appreciated that students can be assigned to work independently suggesting that ELM comfortably fits their instructional framework including both their Math teaching beliefs and pedagogical practice. In this regard, our future research should explore ways to expand the impact of ELM not only on students but also to advance teacher subject knowledge and pedagogy.

The Research was funded by **le Fonds de Recherche du Québec - Société et Culture**.

ABRACADABRA

Français

RECHERCHE

Des chercheurs de l'Université du Québec à Montréal et de l'Université Concordia procèdent actuellement au recrutement d'écoles intéressées à participer à la réalisation d'une recherche. Cette recherche a pour but d'évaluer l'effet de la ressource ABRACADABRA, lorsque celle-ci est utilisée par l'enseignante en complément des pratiques pédagogiques habituelles, sur l'apprentissage de la lecture et de l'écriture d'élèves de 1re année scolarisés en milieu socioéconomique moyen ou défavorisé (IMSÉ 6 à 10 inclusivement).

Si vous êtes intéressés à participer à la réalisation de cette recherche ou désirez obtenir de plus amples informations, vous pouvez communiquer avec l'une ou l'autre des personnes suivantes : **Line Laplante** Professeure, UQAM laplante.line@uqam.ca ou **Fannie Lacasse Pelletier**, Coordonnatrice de l'étude d'impact d'ABRACADABRA, UQAM abracadabra.fr@gmail.com

Condition Expérimentale

- > Formation de 3 jours offerte aux enseignantes par l'équipe de recherche (entre octobre et décembre 2018)
- > Implantation d'ABRACADABRA par les enseignantes, en complément de leurs pratiques pédagogiques habituelles (3 à 4 fois/semaine, 30 minutes ; de novembre 2018 à avril 2019)
- > Évaluation des élèves par les assistants de recherche (octobre 2018 et début mai 2019).



ABRACADABRA English

TEACHER ASSESSMENT MODULE

The new ABRA **Teacher Assessment** module, available in December 2018, will provide multiple ways to view and track students' progress.

Teachers will be able to review whole class data, including time spent on the activities, overall completion rates, and use of different stories. As well, the module will allow teachers to examine the performance of individual students, including any frequently made errors.



Teachers will access the module in two ways: through the LTK+ lobby page or the tool's **Manage** section. They can view data for specific date ranges, whether a day, a week, a month, or longer. Teachers will also be able to print reports for classes and individual users. If a child is struggling with an activity, teachers will be given practical tips for providing additional support and practice.

The **Teacher Assessment** module is being designed with input from teachers and experts to ensure it meets the needs of educators working with children of varying skill levels. It will join the **French ABRA Teacher Assessment** module as part of the CSLP's ongoing commitment to supporting classroom teachers and their use of the LTK+. The CSLP would like to thank our generous donor, the **TD Bank** as without their donation none of this important development work would have been possible.

READS

Theme

Language

Country

- Canada
- Kenya
- Australia
- China
- Ethiopia
- France
- Germany
- Ghana
- Greece
- India
- Iran
- Lesotho
- Mozambique
- Nigeria
- Norway
- Russia
- Saudi Arabia
- South Africa
- Sri Lanka
- Tanzania
- Uganda
- UK
- Unknown
- USA
- Yemen

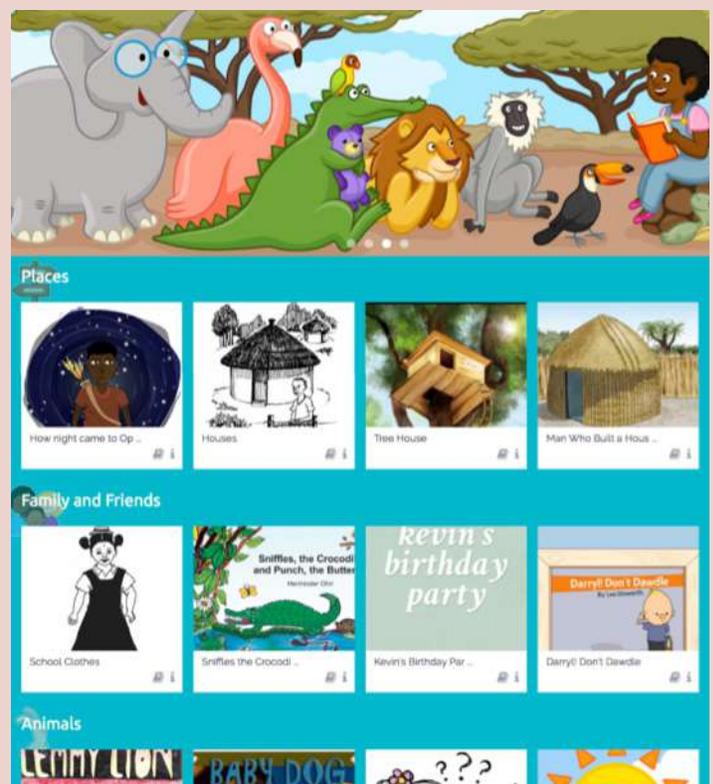
Level

Type

New filters!

The latest version of READS, our repository of electronic books, includes **over 700 online books** in a multitude of languages and genres. Since teachers are always searching for new and diverse reading materials, READS provides **easy access** to a variety of books online. Furthermore, students are taken on an exploration of various cultures, countries, and interesting customs, as we have books coming from all over the world! Browsing is made easy through the child friendly index page that features a carousel of images showing five selected themes at random. **Filters** and **key word searches** make searching by theme, level, country or language very easy!

This work was made possible by a generous donation from the **Abracen & Family Foundation**.



Letter to mum
By Ursula Nafula

Listen Read

A young girl prepares to welcome a new baby to the family by writing a letter to her mother.

Illustrator(s)	Narrator	Author(s)	Country
Catherine Gorenwald	N/A	Ursula Nafula	Kenya
Year	Reading Level	Number of pages	Theme(s)
2008	Beginner	N/A	Family and Friends
Publisher	Citation		
African Storybook Initiative	© African Storybook Initiative, 2018	Nafula, Ursula. Letter to mum. 2008. African Storybook Initiative.	

IS-21

QUEBEC RESEARCH

The 2017 study of IS-21 unfolded in the classrooms from the **English Montreal School Board** and the **Commission Scolaire Point de L'Isle**. The primary purpose of this study was to test the effectiveness of IS-21 on the development of students' **information literacy skills**. In addition, the study aimed at piloting the French version of the tool, as well as the set of pedagogical materials to support the use IS-21 by French speaking students and teachers.

We relied on the two-group research design where 176 grade-five students worked on a research project targeting the topics of Advertising and Recycling. In four experimental classes, the IS-21 software was used to support the inquiry of experimental students, whereas students in two control classes completed their project without using IS-21.

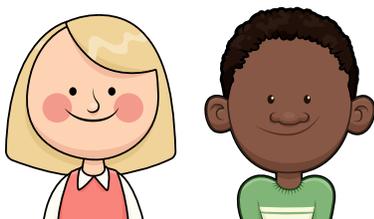
We tested students before (February 2017) and at the conclusion of the IS-21 intervention (May 2017). To measure a change in students' information literacy over time, we used the adaptation of TRAILS survey (*Tool for Real-Time Assessment of Information Literacy Skills*, www.trails-9.org) and the ORCA elementary research assignment (*Online Reading Comprehension Assessment*, www.orca.uconn.edu).

After removing the initial differences between the experimental and control groups, we were able to detect **significant effects of the IS-21 treatment on the student scores of the ORCA mini research tasks**. Conversely, we found no such effect on student information literacy as measured on the multiple-choice TRAILS assessment.

The comparison of the 2017 TRAILS results with those collected in previous pilots revealed that the **students exposed to IS-21 in 2014 and 2015 scored consistently higher than those of 2017 group**. This finding may be explained due to the fact that the researchers' involvement in the IS-21 implementation changed dramatically from the highest in 2014 (initial training, regular team teaching with the classroom teacher) to minimal in 2017 (initial training only).

We believe that a pedagogical innovation such as IS-21 is only viable when it is successfully driven and directed largely by the teachers themselves. Thus, our future research will focus on optimizing the support model so as to empower classroom teachers to adequately implement IS-21 within their regular classrooms.

This research was funded by the **Social Sciences and Humanities Research Council**.



ePEARL 4.0

FOR ADULT LEARNERS

Thanks to funding from *l'Entente Canada-Québec relative à l'enseignement dans la langue de la minorité et à l'enseignement des langues secondes*, the CSLP and its partners at Dawson and Concordia will unveil in June a new electronic portfolio, entitled ePEARL 4.0 designed to support **deep, meaningful learning** for college and university students and other adult learners.

This electronic portfolio will guide learners through the process of planning, doing, and reflecting on their work, all hallmarks of self-regulated learning. The flexible and intuitive interface will offer learners different degrees of scaffolding, depending on their needs.

Learners will be able to create work within the tool or upload a variety of files, from PDFs to videos. A sharing and commenting feature will allow learners to seek feedback from their peers, teachers, or other interested people.

The ePEARL 4.0 will encourage learners to link work to project-specific and personal goals as well as to professional competencies. The tool will help learners collect evidence, i.e. work, that demonstrates the development of skills and attributes need for obtaining a degree or a job.

The ePEARL 4.0 will also serve as a record of a student's learning progress and process. In later iterations, this ePEARL will offer a showcase for student work, which can be viewed by potential employers.

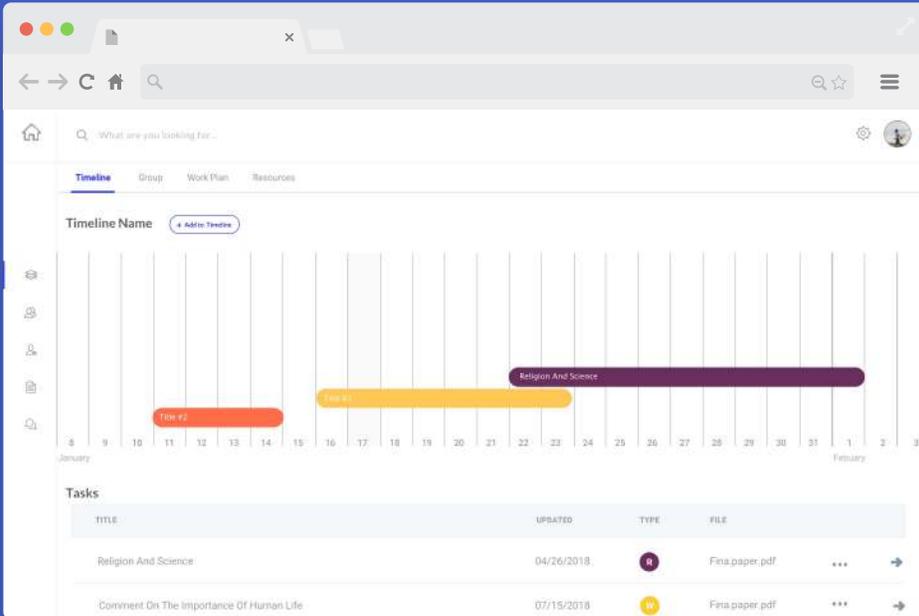
The development of this stage of ePEARL 4.0 has been possible thanks to the hard work and dedication of our partners: **Concordia University's Centre for Teaching and Learning, Dawson College's Office of Academic Development, and Bishop's University.**

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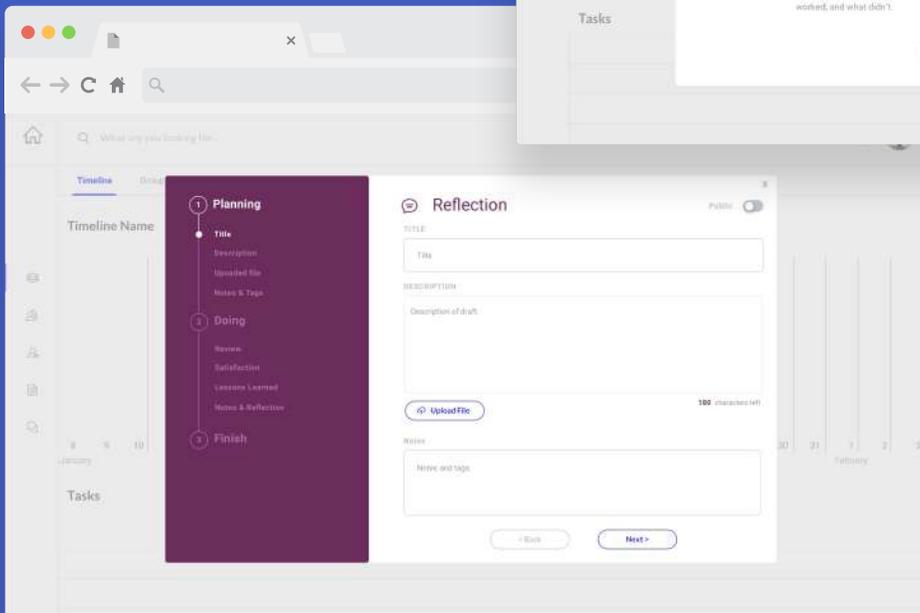
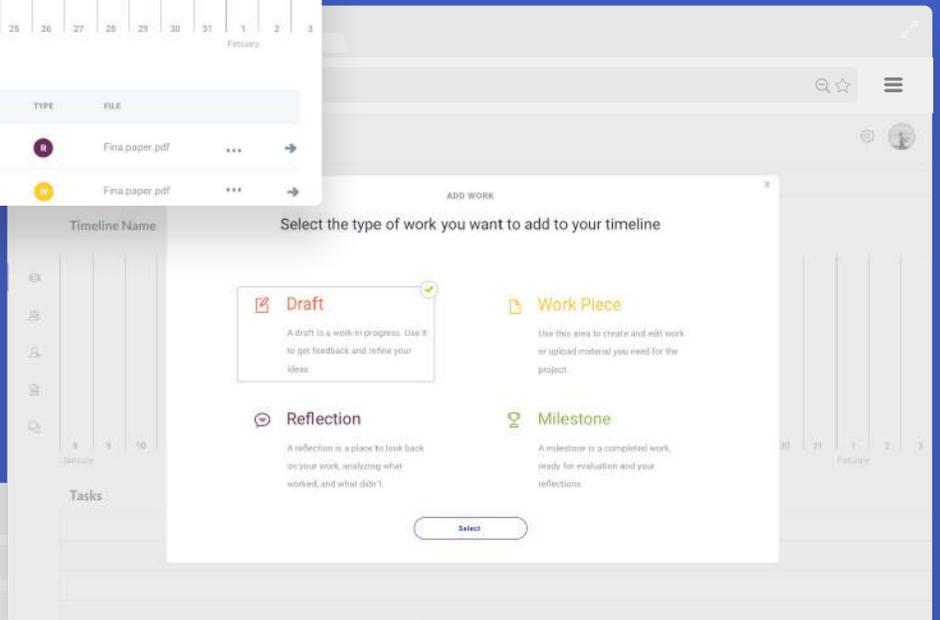
We are thrilled to have learned that the Year 2 funding for this project was successful! This will enable us to continue development work on ePEARL 4.0 and collect usability data from post-secondary students.

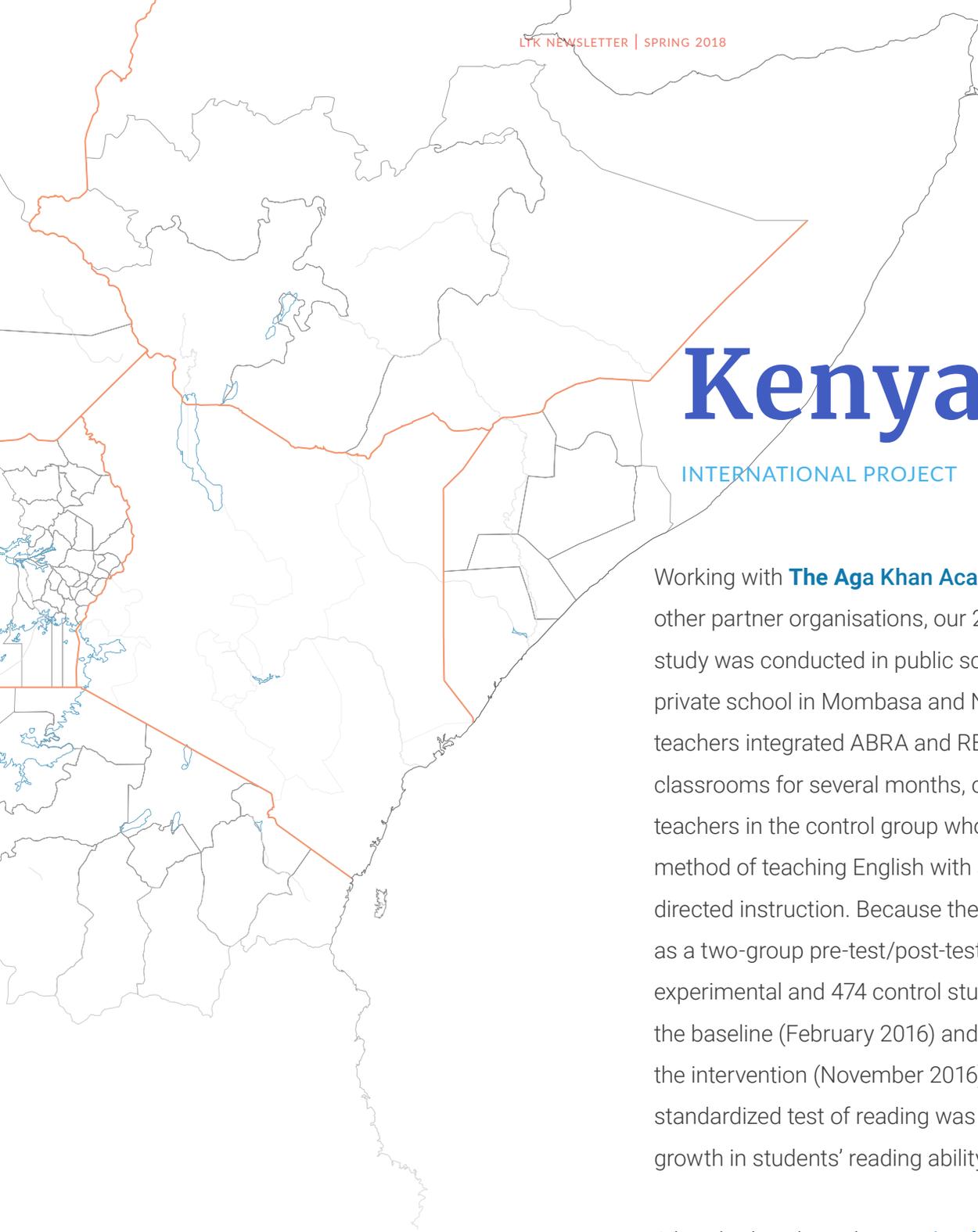
ePEARL 4.0

MOCKUPS



visual display of work





Kenya

INTERNATIONAL PROJECT

Working with **The Aga Khan Academies** and many other partner organisations, our 2016 Kenyan literacy study was conducted in public schools and one private school in Mombasa and Nairobi. Whereby 16 teachers integrated ABRA and READS in their grade 3 classrooms for several months, compared to ten teachers in the control group who relied on their usual method of teaching English with a focus on teacher-directed instruction. Because the study was designed as a two-group pre-test/post-test, the 498 experimental and 474 control students were tested at the baseline (February 2016) and at the conclusion of the intervention (November 2016). The *GRADE* standardized test of reading was used to measure growth in students' reading ability over time.

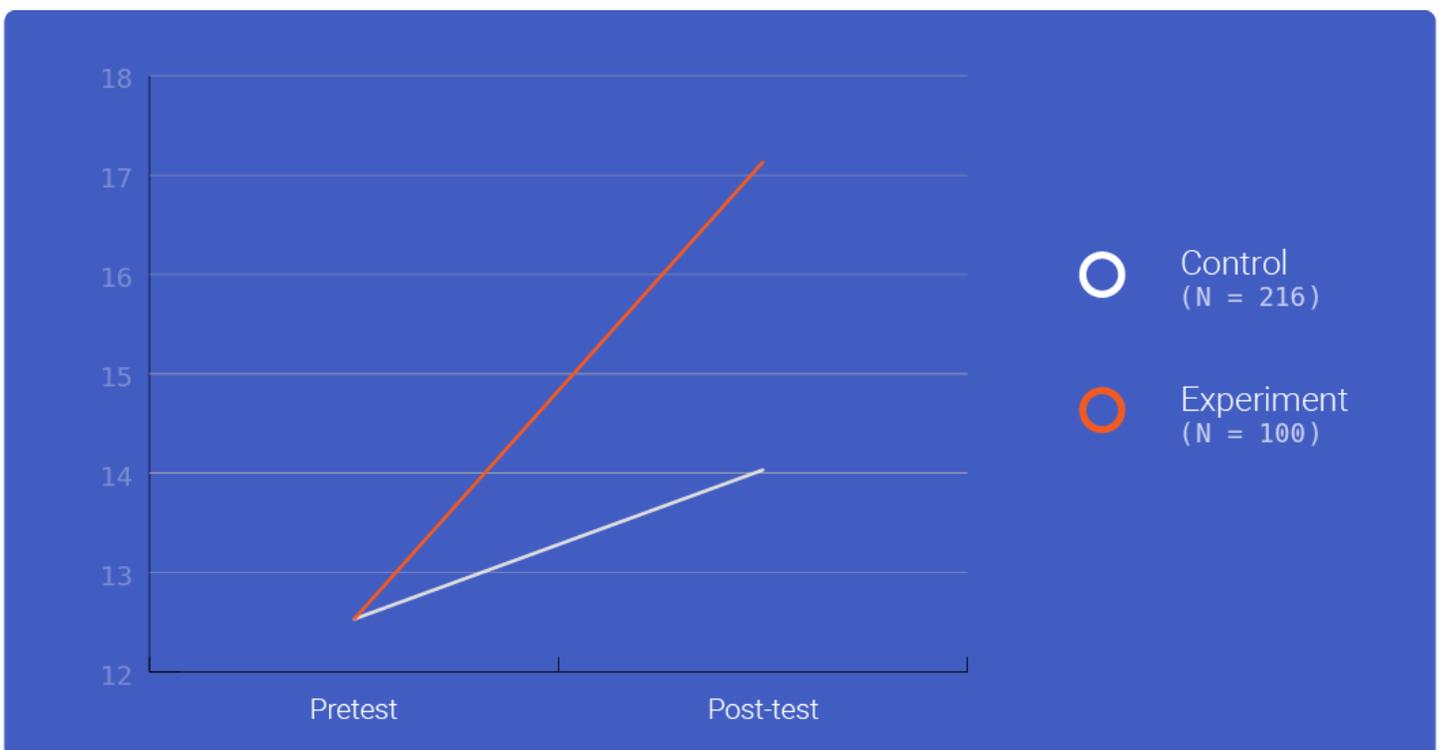
A hundred such students **gained from using ABRA and READS significantly more** than 216 low reading students exposed to the traditional literacy classes. For instance, graph on the next page shows the comparison in reading comprehension of low reading students from ABRA and READS and control groups.



Overall, the results revealed **larger gains by the ABRA and READS students** than the students in the control group mainly implying that even though ABRA is designed for beginning readers, **students in grade 3 can benefit from using the tools**. The improvements in reading of the 3rd graders in ABRA and READS classes were especially important for the subtest of Reading Comprehension. The positive findings extended to the Kenyan national exam results and showed effective for both genders. Specifically, the Kenyan end-of-the-year examination results for the ABRA and READS students were equally impressive with **significant differences in English, Social Studies, Science and Mathematics**, as compared to control students. The use of ABRA and READS was found to be equally effective for the

students of both genders. **Boys and girls** in the experimental classes demonstrated **enhanced performance** on the **GRADE** compared to students learning to read in the traditional manner.

The results also suggest that the use of both tools proved its **potential for low-reading students**, those in the **greatest need of reading instruction**. One hundred such students gained from using ABRA and READS significantly more than 216 low reading students exposed to the traditional literacy classes. For instance, the graph below shows the comparison in reading comprehension of low reading students from ABRA and READS and control groups.





Thanks!

These projects in Kenya have been funded by a grant from Canada's *International Development Research Centre* and a grant from Canada's *Social Sciences and Humanities Research Council*. These two grants are designed to study the impact of using the Learning Toolkit tools in Eastern Africa, Hong Kong and China. Working with over 20 partner organizations, these grants will also allow us to learn more about factors that facilitate the sustainability and scalability of using these tools.

Finally, reading improvements were particularly important for the new grade 3 students (N=282), while those 216 **students with more years of exposure to ABRA maintained their advanced position.**

In terms of the impact of ABRA and READS on teaching, teacher self-reports and observations suggest that the teachers continued to develop comfort in using the two tools as part of their English language teaching. Indeed, the **teachers improved their literacy instruction** as they were seen to rely on a more balanced approach in the teaching of key literacy sub-skills.

Areas for further development would include helping teachers better integrate ABRA and READS into the curriculum, and establishing stronger links between the ABRA content and learning activities in the classroom. Training and support efforts need to be responsive and relevant in order for teachers to be able to fully embrace the pedagogical sophistication offered by our tools. This training is necessary in order to move away from using drill and recitation methods of teaching, and towards a more learner-centred approach where ABRA and READS are embedded within the literacy instruction, and not simply added on during lab sessions.

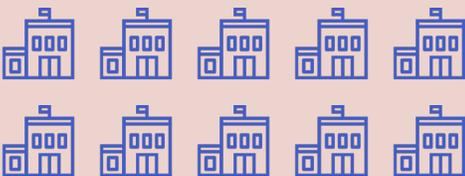


ABRA in China

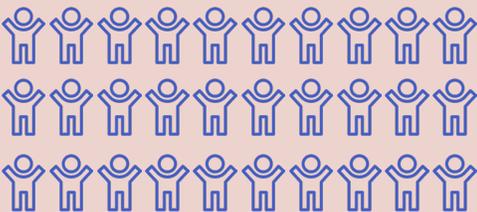
INTERNATIONAL PROJECT

A year long study

10 SCHOOLS



300 GRADE-THREE STUDENTS



Led by our partners at the Chinese University of Hong Kong, in 2017 a research project unfolded in the rural areas of China. More than 300 grade-three students from 10 schools participated in a year-long study. This study had a two-group pre-post test design: the students from five experimental schools used ABRA when learning English whereas the students from five control schools learned English without ABRA. Both ABRA and control schools were matched on demographics variables and academic performance. Measuring students' reading ability in the beginning and in the end of the school year revealed reading gains for all the students. However, these **improvements were substantially and significantly higher for ABRA students** in the six key reading outcomes including phonemic awareness, early literacy skills, initial letter and sound fluency, segmenting and non-word reading. The study provided evidence that ABRA is not only effective in the context where English is used as a first or second language such as Canada, Australia, Hong Kong or Kenya, but showed **particularly effective** in rural China where **English is taught as a foreign language**.

This research was funded by Canada's **International Development Research Centre**.



Learning Toolkit
www.concordia.ca/ltk

CSLP
www.concordia.ca/cslp

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