



Collaborative Inquiry Project
Healthy Schools Practices
Knowledge Network on
Student Well-being Research
Report

 **KNOWLEDGE NETWORK**
for **STUDENT WELL-BEING**

Collaborative Inquiry (CI) on Healthy Schools Practices

Throughout the 2018-2019 school year, 4 educators from four different schools in two unique school boards (rural vs. urban) in Southern Ontario, participated in a collaborative inquiry project. The project was supported by the Ontario Healthy Schools Coalition with funding from the Knowledge Network on Student Well-being via the Ontario Ministry of Education. The participating educators worked together to develop their inquiry question, and shared their learnings and ideas to improve their work in the classroom and school. They also discussed ways to deepen student's learning.

The latest research suggests that inquiry-based approaches empower teachers to advance their practice and student learning. According to the Ministry of Education, it is through this grassroots learning style that educators work together to improve their understanding of what learning is (or could be), generate evidence on what's working (and what's not), make decisions about next, and take action to introduce improvements and innovations.

This collaborative inquiry research project explored the following question: In educating students about fundamental physical literacy skills through a healthy school framework, would their physical activity levels, sense of well-being, and sense of acceptance and willingness to be physically active, improve?

Objectives: This paper examines the results from the 2018-2019 Collaborative Inquiry (CI) project done in four schools in Southern Ontario, involving students from grades 2 to 8.

Project Overview: 219 students in grades 2-8 were directly involved with the Collaborative Inquiry Project. Students participated in a pre- and post-test that investigated their thoughts and knowledge. Teachers also answered questions related to their learning experience upon completion of the program. In addition, teachers administered the Physical Literacy Assessment for Youth (Play Fun) to assess students' level of physical literacy, while the students completed the Physical Literacy Assessment for Youth self-assessment tool. Over 200 PLAY assessments were completed by teachers and students, assessing their physical literacy skills at the end of the program.

During the project, teachers implemented a variety of physical literacy learning opportunities, both in the classroom and in the school. For example, physical literacy learning was integrated into subjects such as math, science, literacy and geography. This demonstrated an embedding of the knowledge across the curriculum. The teachers also included activities that increased the supportive social and physical environments by implementing peer-led activities during recess. Participating schools included student-led projects that supported students from younger grades in developing better understanding of physical literacy and its impact on well-being. Some students were involved with leadership and mentorship, while others participated in the activities. The students who were involved in the project represented the following grades: grade 2 (9%), grade 3 (41%), grade 4 (6%), grade 6 (10.9%), grade 7 (10.5%) and grade 8 (22%). More boys than girls participated in the project (55% vs. 45%). The project's findings showed that a majority of students improved their fundamental physical literacy skills, increased their sense of belonging and acceptance at school, and improved their knowledge of their own well-being.

1. Student Feedback

Figure 1.A

Survey Question: Please provide your thoughts on the statements below.

... I enjoy being at school

	Not at all/ A bit	Somewhat	Quite a bit/ Very much
Before CI project	23.7%	30.6%	45.4%
After CI project	20.9%	21%	58.1%

Before the CI project, 45.4% of students enjoyed being at school quite a bit or very much, while after the project, this increased to 58.1% of students. This indicates that involvement in the CI project increased students' enjoyment of school.

Figure 1.B

... I feel like I belong at my school

	Not at all/ A bit	Somewhat	Quite a bit/ Very much
Before CI project	16.8%	19.80%	63.4%
After CI project	12.3%	17.2%	87.7%

The percentage of students who felt like they belonged at their school increased substantially through participation in the project, increasing from 63% to 88%.

Figure 1.C

... I felt accepted by staff at school

	Not at all/ A bit	Somewhat	Quite a bit/ Very much
Before CI	9.9%	15.9%	74.2%
After CI	8.6%	4.9%	86.5%

Prior to the CI project, approximately 74% of students felt accepted by staff at school. Following completion of the program, this figure increased to 87% of student participants feeling accepted by the staff at their school.

Figure 1.D

... I understand what physical literacy is

	Not at all/ A bit	Somewhat	Quite a bit/ Very much
Before CI	49.9%	24.3%	25.8%
After CI	8.9%	17.2%	73.9%

Before the CI project, 26% of students indicated that they understood what physical literacy was. After the program, this number increased to 74% of students having a clearer understanding.

Figure 1.E

... I feel accepted by students at school

	Not at all/ A bit	Somewhat	Quite a bit/ Very much
Before CI	20.7%	17.2%	62.1%
After CI	8.6%	20.9%	70.3%

Before participating in this project, almost 21% of students did not feel accepted by other students at their school. This number decreased to 9% upon completion of the project. Based on these results, it appears that the CI project increased student’s sense of acceptance by their peers.

Figure 1.F

... My school is a friendly place

	Not at all/ A bit	Somewhat	Quite a bit/ Very much
Before CI	15.8%	20.7%	63.5%
After CI	8.6%	22.2%	69.1%

Based on the above results, embedding physical literacy into schools and curriculum may improve student’s perspective of their school being a friendly place. A notable improvement is shown in Figure 1.F, with the percentage of students reporting that their school was not friendly dropping from approximately 16% before the project to only 9% after the project.

Figure 1.G

... Are there clubs or activities at schools that you want to be part of but do not feel welcome to join?

	No	Yes
Before CI	80%	20%
After CI	83%	17%

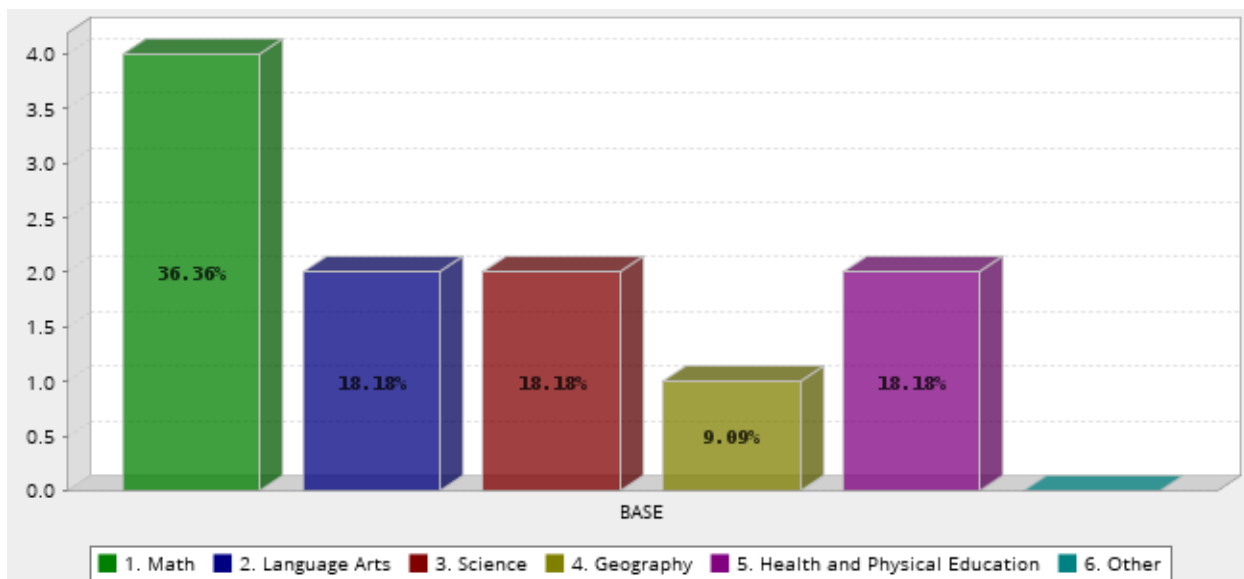
Before participating in this CI project, 20% of students were not comfortable joining a club or activity at their school. There was a slight decrease (3%) in the percentage of students not feeling comfortable after participating in the project.

2. Teacher Feedback

In surveying the teacher’s responses who implemented the program, some key findings were made.

Figure 2.A

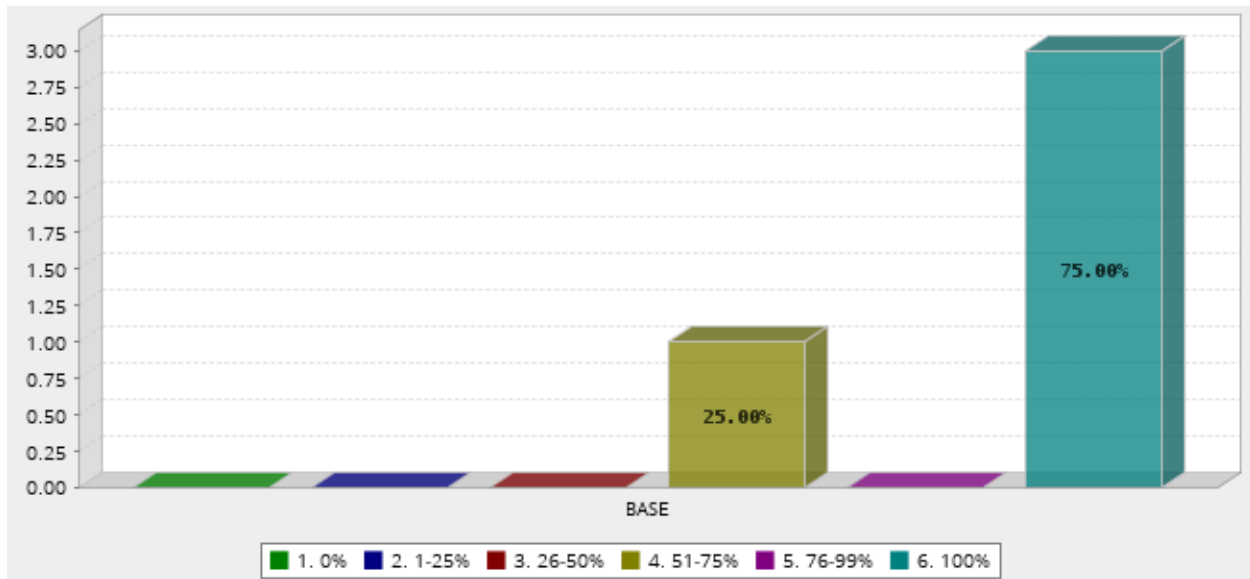
Survey Question: What subjects did you incorporate your healthy schools/physical literacy work into?



As shown in the figure above, teachers most often incorporated healthy schools/physical literacy into the math curriculum (36%). Teachers also reported that they incorporated healthy schools/physical literacy into language arts (18%), science (18%), and health and physical education (18%). The subject where physical literacy was incorporated the least by teachers was geography (9%).

Figure 2.B

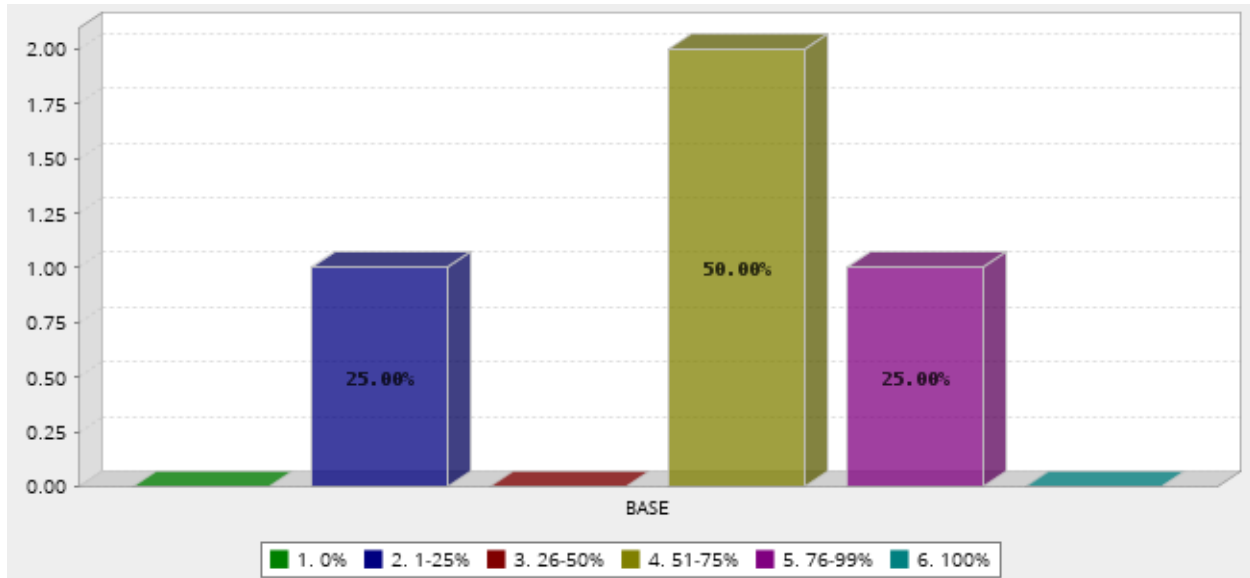
Survey Question: What percentage of students in your class was impacted by this work?



75% of teachers reported that all of the students in their class were impacted by the healthy schools/physical literacy work, while 25% of the teachers reported that 51-75% of their students were impacted by the CI project.

Figure 2.C

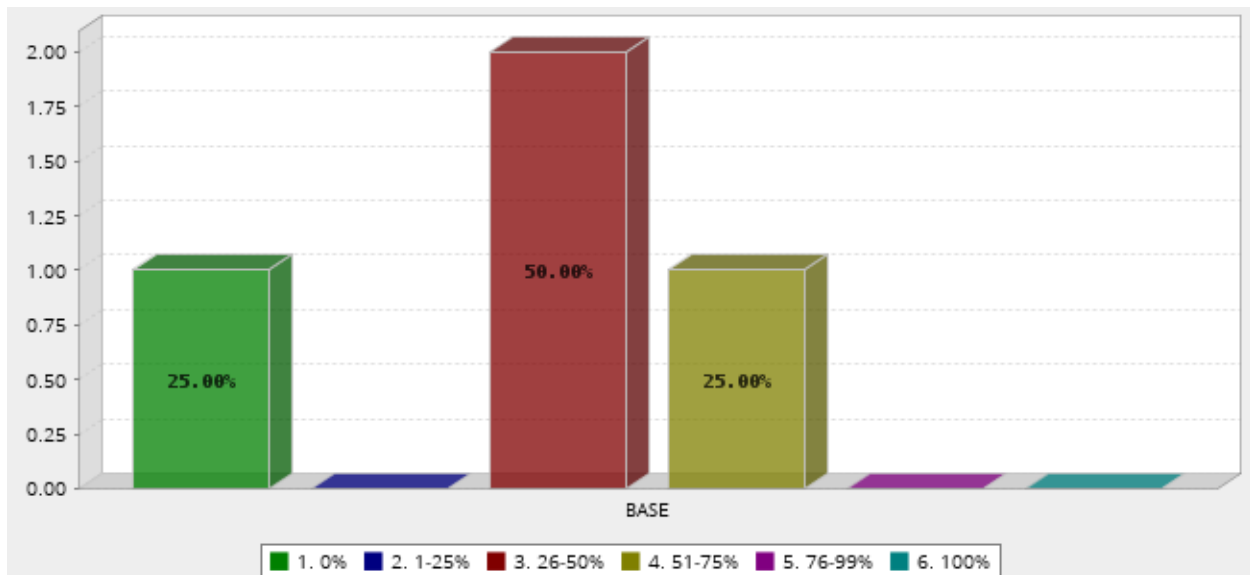
Survey Question: What percentage of students in your school was impacted by this work?



One teacher reported that 1-25% of the students in their school were impacted by the CI work, two teachers reported that 51-75% of students were impacted, and one teacher claimed that 76-99% of students were impacted.

Figure 2.D

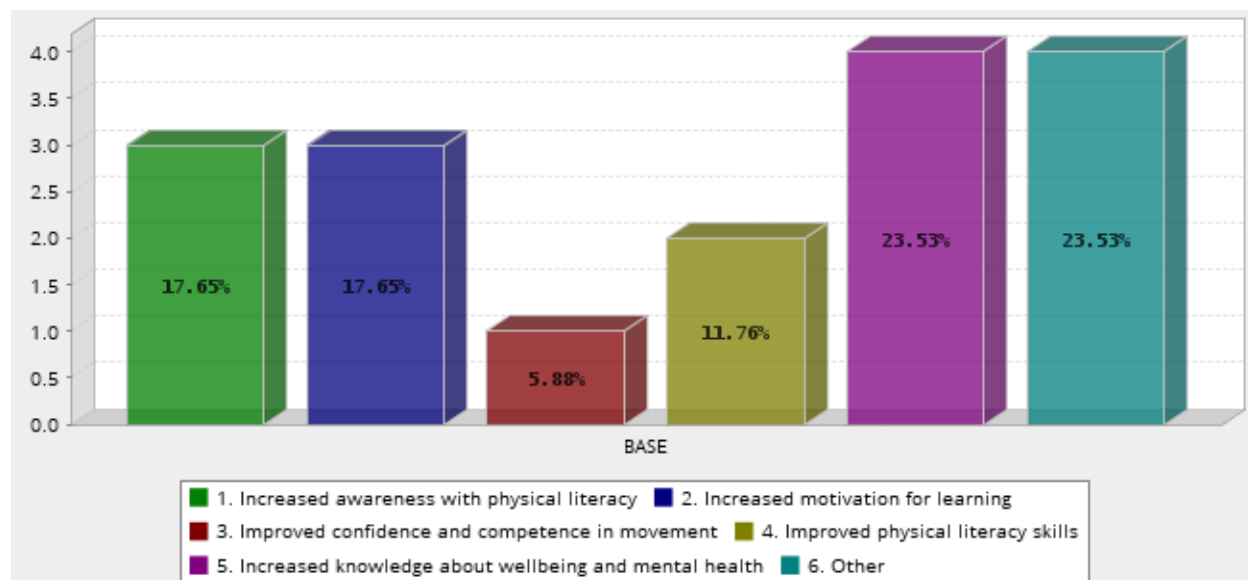
Survey Question: What percentage of staff in your school was involved with this work?



As shown in Figure 2.D, one teacher reported that 0% of the staff in their school were involved with this work, two reported 26-50% of staff involvement, and one teacher reported that 51-75% of staff were also involved with the work.

Figure 2.E

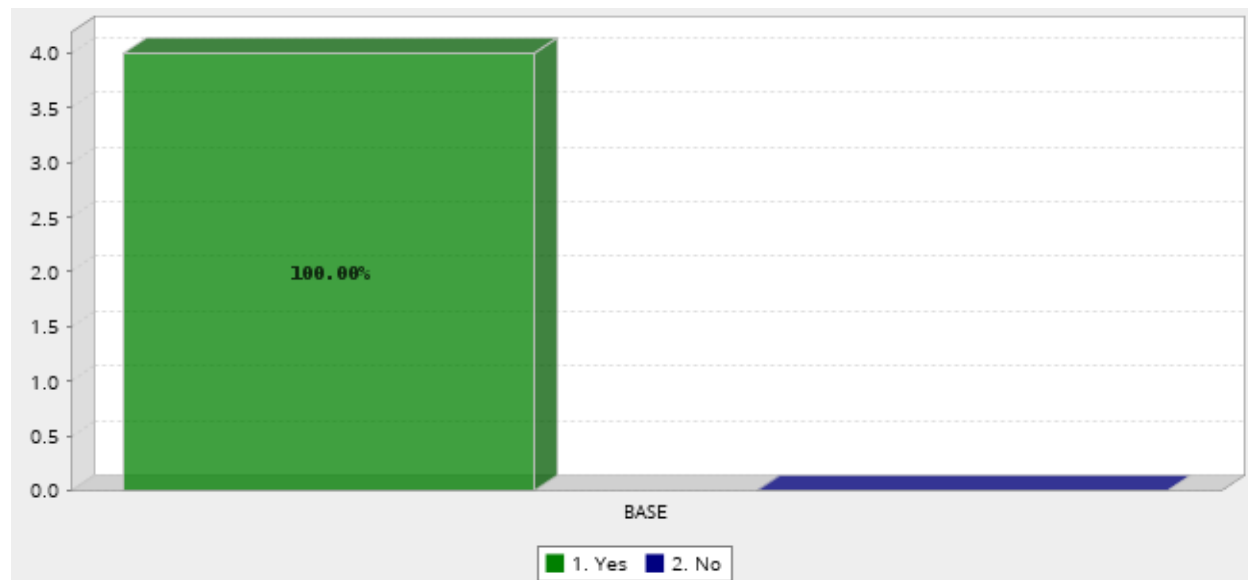
Survey Question: What were the benefits to students in your class with this collaborative inquiry? Check all that apply.



The collaborative inquiry project benefitted students in a variety of areas. A majority of the teachers noted an increase in knowledge about mental health and well-being (24%). The CI work also improved student awareness of physical literacy (18%) and an overall motivation for learning (18%). Only 6% of teachers reported improved confidence and competence in movement.

Figure 2.F

Survey Question: Would you do this again next year?



When asked if they would participate in the project again next year, 100% of the teachers responded “yes.”

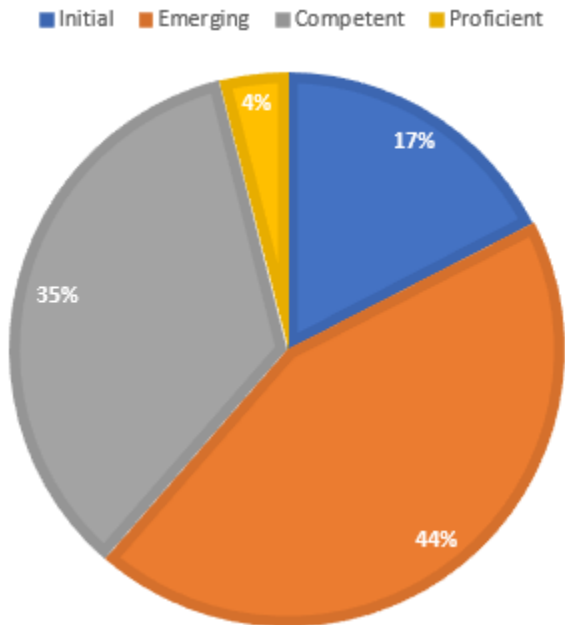
3. PLAY Assessments

Over 200 PLAY assessment tools were completed by teachers and students, analyzing their physical literacy levels at the end of the program. As shown in the figures below, pre-test and post-test data show the combined physical literacy competencies of all classes through the use of 18 building block activities such as running a square, skipping, overhand throws, and foot dribbles. Students were marked on a four-point scale in terms of their ability to complete the activity: “initial,” “emerging,” “competent,” and “proficient.”

Three out of the four teachers completed both pre- and post-data for their students. One teacher only provided pre-test data, and is not included in this portion of the report.

Figure 3.A

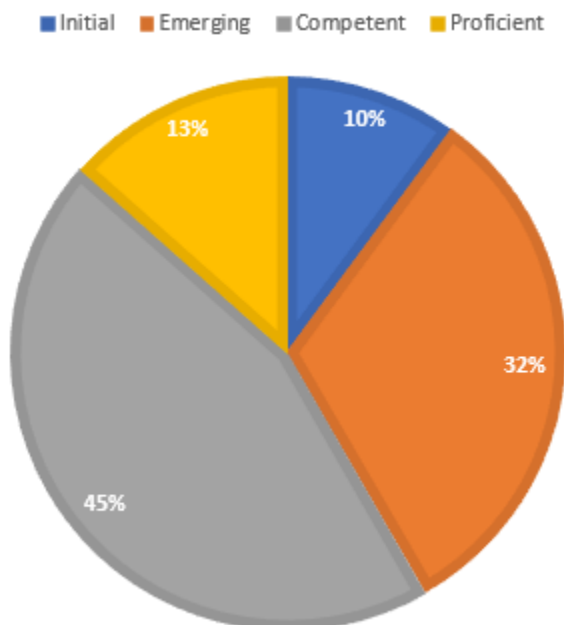
Pre-Test Class Data



In the pre-test assessment, 17% of students were marked in the “initial” phase when completing building block activities, 44% were in the “emerging” phase, 35% were deemed as “competent,” and 4% were “proficient.”

Figure 3.B

Post-Test Class Data



In the post-test assessment, 10% of students were in the “initial” phase, 32% were in the “emerging” phase, 45% were marked as “competent,” and 13% were found to be “proficient” in the building block activities.

When comparing the pre- and post-test results, the PLAY assessments show improved physical literacy levels among students. The overall number of students in the “initial” and “emerging” phases for building block activities in the pre-test decreased in the post-test assessment, and the number of students in the “competent” and “proficient” phases increased. The post-test assessment building block activities with the greatest number of students in the “initial” phase, thus proving to be the most difficult, were crossovers, hand dribbles, foot dribbles, jumping, hopping, and dropping to the ground. In order to lower the overall percentage of students in the “initial” phase, it is recommended that teachers place greater attention on these building block activities in the future. The post-test assessment building block activities with the greatest number of “proficient” students were the lift and lower activity, one-handed catch, running there and back, skipping, and the overhand throw activity.

Based on the results of this study, it is recommended that PLAY assessment tools continue to be administered in the future. Greater school involvement may yield better results, as this would allow for increased teacher collaboration surrounding physical literacy activities.

Conclusions: The results of this evaluation have demonstrated that the collaborative inquiry project not only increased students' knowledge in relation to physical literacy and mental health and well-being, but also aided in the creation of a more positive school atmosphere. There was a noticeable increase in the number of students who felt a sense of belonging at school, as well as a greater acceptance from other peers and staff members.

While 75% of teachers reported that all of the students in their class were impacted by the CI project, some recommendations for future work include:

- Equal integration of physical literacy into all school subjects;
- An investigation into the “other” benefits students received from the collaborative inquiry project, given that approximately 24% of teachers felt that their students benefited from the work in areas not mentioned in the evaluation.
- Greater involvement of other staff members in the physical literacy work, in order to increase the number of students reached.
- Ongoing collection of pre- and post-test results from all schools involved in the CI project in future years in order to determine accurate results.

Overall, the CI project was successful in improving students' sense of belonging and well-being, as well as their learning outcomes. The PLAY assessments were also successful in improving students' physical literacy levels, with more students marked as “competent” or “proficient” in the post-test assessment compared to the pre-test assessment results. Based on these results, it is strongly recommended that the collaborative inquiry project continue to be offered to students from grades 2-8 on an annual basis.