



SparksFly Exercise bikes in Canadian Classrooms: What are Educators Seeing?

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Simply put, the goal of the Run For Life organization is to encourage physical and mental fitness in our youth. The SparksFly initiative specifically focuses on deploying stationary bikes to classrooms across Canada to uphold this mandate. “Regional champions” all over Canada have helped raise funds for the bikes with much success - having deployed more than 2000 bikes to date. Our motto is, “healthy body, healthy mind”. Not only do we introduce a fun way to increase children’s level of fitness, but we also enrich the minds of those who use them. Based on our preliminary data we are confident about the multiple benefits of using a stationary bike in the classroom.

BACKGROUND CONTEXT

Over the months of January to June 2016, 108 educators from all over Canada completed a forty question on-line survey as part of Run For Life’s SparksFly initiative. The respondents represented seven provinces across Canada and included all types of educational settings (urban, suburban, and rural areas). Although the exercise bikes spanned pre-school to secondary school locations, the vast majority of bikes were set-up in elementary schools (K-8), with grades 3-6 being the most common grades to have a bike. The exercise bikes were mostly acquired through community funding (47%) or was purchased as part of an individual school’s budget (32%). Forty percent indicated that the exercise bike was part of a larger initiative at the school.

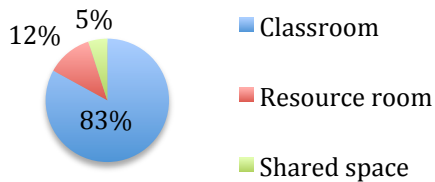
The research carried out by Run For Life in collaboration with Dr. Julie Mueller (Wilfrid Laurier University), had three main objectives:

- 1) Explore the application of the exercise bikes to get a glimpse into how they are actually being used in an educational setting.
- 2) Measure changes or outcomes that educators see in the children who use the exercise bikes.
- 3) Identify potential issues that might be faced by introducing exercise bikes in classrooms.

APPLICATION

The bikes were used on a regular basis with 98% of educators indicating that students’ used the bikes at least once a week. A majority of the teachers (62%) surveyed stated that their students used the exercise bike between 1 to 5 minutes per turn.

In-school location



The majority of bikes were located in classrooms with a smaller number of bikes being located in resource or other shared spaces. Within the classroom, bikes were placed in a variety of specific locations, more often at the back of the classroom (46%), but also at the front, side, and corners of the classroom.

Strategies for regulating the use of the exercise bike were both student and teacher directed. Many teachers initially used a more “equal access” approach with students taking turns or signing up on a schedule to allow for all students to “try out” the bike. Following an initial adjustment period of use, strategies were often changed to allow students to regulate their own use, e.g., a “bike cup” that was passed from student to student with the option to “pass” if they didn’t feel the need to use the bike. Other approaches prioritize student need from the beginning, with the teacher making suggestions, e.g., “sometimes I suggest a student take a break and go to the bike”, or it is self-monitored with students using the bike on their own terms.

Many educators provided guidelines around the duration and intensity of exercising on the bike. The majority of educators suggested that students bike at their own pace or bike until they feel calm and ready to focus on learning, rather than focusing on hard time limits and higher intensity cycling speeds (e.g., “students are allowed to use the bike at whatever intensity they feel is necessary for their current need”).

BENEFITS

Based on our responses, 92% of educators claimed that their overall, students enjoyed using the exercise bike in the classroom and that it was easy to use (Only 9% indicated some difficulty). The educators acknowledged that the exercise bike was used as an educational tool to help manage attention, focus or self-regulation issues, with 47% primarily using the bike for this reason. Half of the respondents indicated both education and health as reasons for using the exercise bike in the classroom (only 4% indicated it was *only* used for health reasons). To speak to these results, 87% of educators found that students who had difficulty sustaining attention or have trouble regulating behavior were particularly drawn to the exercise bike, and out of those 87%, most (89%) educators found that spinning on the bike had positive effects on those behavioural issues. The other 10% were unsure if there were any positive effects, with only 1% feeling that it did not have positive effects on those behavioural issues.



The perceived effects are outlined in Figure 1 and showed that the mental benefits of the exercise bikes were much more apparent to the educators than any physical effects. Educators identified multiple benefits of the exercise bike--usage led to students’ feeling more relaxed and alert, and also had positive effects on their self-esteem and sense of accomplishment. On the other hand, many educators were neutral or unsure about any physical effects of the exercise bike on the children.

A general “positive outcomes” measure was created through aggregation of the five variables listed below and was correlated with predictive variables including Duration of bike at school, Frequency of Teacher use, Grade, Class size, Province, School location, Type of school and School population. The only significant correlation was Duration of the bike at school ($r = .248$; $p = .045$), with positive outcomes increasing the longer the bike had been at the school.

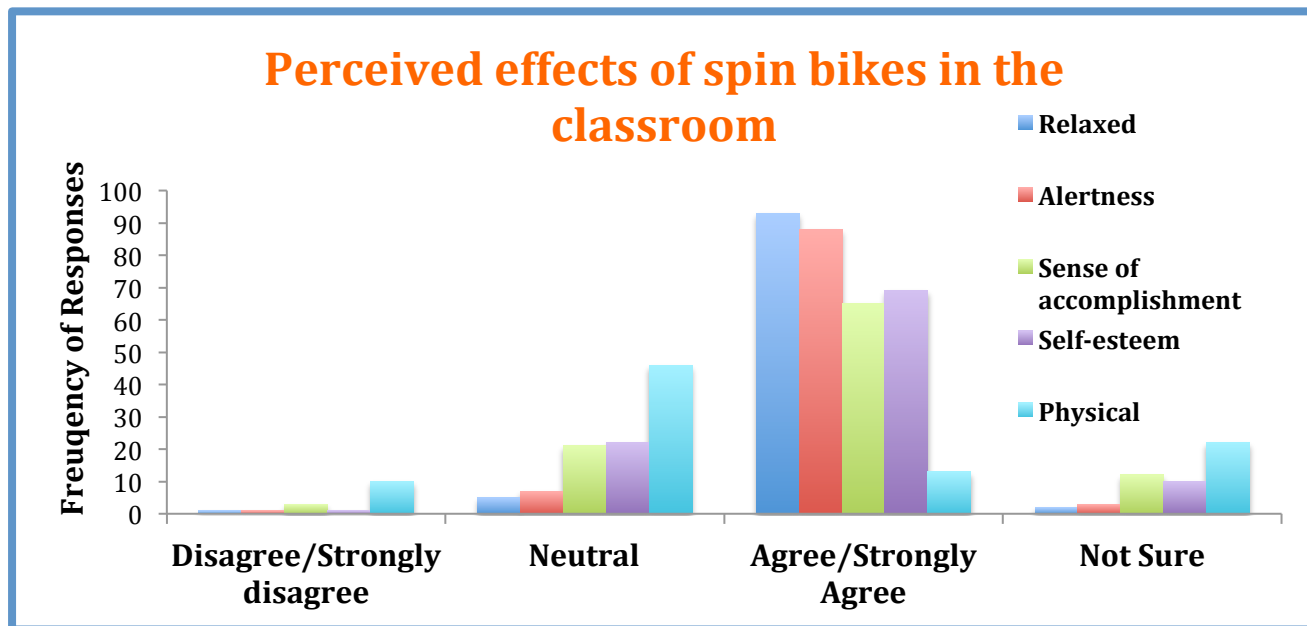


Figure 1.

POTENTIAL CHALLENGES

Distraction

Distraction is often seen as a reason not to introduce active learning or technologies into the classroom. However, in this case, three-quarters of the educators reported that the bikes were not a distraction, 11% remained neutral, and 6% agreed that the bike posed a distraction to learning.

Misuse and abuse

Many educators reported that at times it was difficult to get students off the bike and that disagreements would arise from multiple students attempting to use the exercise bike at the same time. However, the educators mentioned that this issue is more prevalent when the bikes are new in the classroom and is usually resolved quickly. A few educators also indicated that some students' used the bike in an unsafe manner by “climbing on the bike” or being “silly”. Co-establishing rules surrounding the bike and providing a timer when warranted were suggested solutions.

Other difficulties

15% of respondents had issues with bike maintenance, with most difficulties surrounding noisy bikes and pedal difficulties. A tool kit or simple instructions for bike maintenance (e.g., greasing the bike) should be provided.

KEY FINDINGS AND RECOMMENDATIONS

- There are multiple benefits and positive outcomes related to exercise bike use in the classroom.
Exercise bikes in classrooms are for everyone. They can help to boost alertness when students are feeling lethargic during classroom time, but can also be a release for students who have an abundance of energy.
- Bikes are not punishment. The exercise bikes are an easy and enjoyable activity for students and should be used in conjunction with other physical activities.
- Educators identified an adjustment period when student had some difficulties taking turns or deciding when they needed to use the bike.
Don't panic! Allow time for students and teachers to explore the bike and how it is best used by individuals and the class.
- Only 6% of educators saw the bike as a distraction to learning. The fear of the bike interfering with learning was not founded. Simple maintenance could help with any noise interference.

DIRECT QUOTES FROM EDUCATORS

"It would be nice to have more than 1 bike in the classroom since it has such a popularity! One bike is not enough!"

"I believe that the bikes should be like pencils or paper or technology in a classroom. Required for learning. These bikes have allowed my students to get out any excess energy, aggression, frustration, stress, anxiety. I cannot say enough good things about them."

"It's a no-brainer. Kids need to move and the spin bike is a sustainable strategy to promote wellness, mind-body connections and self-awareness"

"I can't believe what a difference a bike can make in a classroom. It is amazing."

"Without hesitation, I would recommend that every elementary classroom be fitted with an exercise bike. They are an educational technology that help students self-regulate, that instill a positive spirit in individual students specifically and within the classroom generally."