

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

Jill Osler, MSc
For Ever Active Schools
Fall, 2019

Table of Contents

[Introduction](#)

[Background, Project Activities and Cycling Clinic Changes/Improvements](#)

[Final Data and Interpretation](#)

[Caregiver Survey](#)

[Caregiver Survey Results and Discussion](#)

[Student Participant Survey](#)

[Student Participant Survey Results and Discussion](#)

[Cycling Counts](#)

[Conclusion](#)

Introduction

Initiated in 2001, Safe Healthy Active People Everywhere (SHAPE) is an Alberta wide non-profit organization that promotes active and safe travel planning in schools and communities. Its mission is to have every Albertan regularly choose safe, healthy, active modes of transportation. SHAPE provides support to school communities by working directly with school councils and principals to develop, implement and evaluate active school transport plans, making active transport easier and safer. Through these initiatives, students are encouraged to commute actively which promotes student health, benefits the environment, and reduces traffic congestion in school zones. SHAPE has partnered with Ever Active Schools (EAS), a provincial initiative within the Health and Physical Education Council of the Alberta Teachers Association, to implement this project. EAS provides provincial leadership that promotes and supports healthy, active school communities. EAS accomplishes this mandate by providing learning opportunities, communication and knowledge exchange, developing resources and being a catalyst for collaboration and partnerships supporting the healthy school community.

Approach to the evaluation: EAS engaged an external consultant (Jill Osler) to complete an evaluation for the Bringing City Cycling Strategies to Life in K - 12 Schools Initiative. The purpose of this evaluation is to compare the baseline and post initiative data to understand what changes arose as a result of this initiative.

Background, Project Activities and Cycling Clinic Changes/Improvements

Project Purpose, Objectives, and Outcomes:

Purpose:

To support active transportation and acknowledge changes to cycling because of the new bike lane infrastructure in Edmonton, Ever Active Schools and SHAPE AB recruited students to participate in their City Cycling Strategies project.

Objectives:

1. Development of a cycling education program, resources, partnerships, and YEG Bike to School Day.
2. This initiative aims to increase cycling knowledge, safety awareness, and self efficacy of 60 student cyclists.

Outcomes:

RESULT (Output or Outcome)	INDICATOR	COLLECTION METHOD
Shift in family travel modes to and from school from vehicle to cycle	# of families choosing to cycle	Pre and Post Family Travel Survey

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

Increase in students cycling to and from school	# of students choosing to cycle to and from school	Pre and Post Student Travel Survey
Increased literacy of cycling and existing infrastructure	% of knowledge increase	Pre and post cycling and cycling infrastructure surveys
Community engagement	# of participants/# of schools	head count

Project Activities:

1. Development of a cycling education program, resources, partnerships, and YEG Bike to School Day.

- Creation of a 6 hour cycling program for K-12 students including safety education, route mapping, cycle maintenance, hand signals, navigating intersections, bike locking, route etiquette, as well as on road cycling.
- Full day of in-class and hands-on cycling education based out of Queen Alexandra Community Hall. Following a cycle lead, 65 students navigated the cycling infrastructure of Edmonton's Downtown and Southside networks and gained knowledge and experience while riding and using the many different types of cycling strategies learned during the in class and practice sessions. Participants engaged with the City of Edmonton's (CoE) Bike Plan team offering student/youth voice for the future planning of Edmonton's cycling infrastructure.
- Partnership building with the cycle community in Edmonton secured the support of the Edmonton Active Transportation Network, Bike Edmonton, Paths for People, Yield, Canadian Tire, and the City of Edmonton's Bike Education and Bike Plan teams. Each organization contributed to program planning, clinic execution, resource and promotional material sharing, and the provision of bicycles and helmets for students in need.
- Ever Active Schools partnered with the CoE and Bike Edmonton to launch Edmonton's first Bike to School Day on June 4, 2019, to increase awareness of cycling as a safe, active mode choice for the journey to school and to increase awareness of the City of Edmonton's on-line cycling resources. They collaborated with Bike Edmonton to run similar cycle education programs for youth in Edmonton. This now formal partnership sees EAS promoting Bike Edmonton's Train the Trainer Cycling program in project schools. As well, with left over project funds, a City Cycling Strategies Clinic Guide was developed. Molly Turnbull (Bike Edmonton) and Karly Coleman lead this work.
- EAS is working with SHAPE AB to revise its popular Walking Buddies program to a Walking and Wheeling Buddies program.

2. Project set up (development of surveys, recruitment to clinics, community engagement, data collection)

- With Clinics 1, 2 and 3 we have reached students from 19 Edmonton schools (4 was our target): Garneau, Scona, Westminster, Academy at King Edward, S. Bruce Smith, Centennial, Lynnwood, Earl Buxton, Tempo School, Nellie Carlson, Escuela Millcreek, St. Mary, Clara Tyner, Constable Daniel Woodall, Jean Forest All Girl Academy, St. Teresa of Calcutta, Bessie Nichols, Westbrook School, Our Lady of Mount Carmel
- 65 participants have completed the clinics (60 was the target).

3. Project promotion and material distribution; project scaling municipally and provincially.

- In terms of project scaling, Parkland School Division 70 has secured a grant from RBC for 5 cycling clinics to be delivered in Spring 2020, with planning starting in the coming months.
- Ever Active Schools will be applying for grant funding through the Edmonton Community Foundation to deliver 5 enhanced cycling clinics in Edmonton in Spring 2020, delivered at different community leagues around the downtown core zone. These clinics will include tools for trip chaining, showing cyclists how to incorporate ETS and LRT legs into longer commutes. These funds will also be used to explore the creation of a municipal/provincial cycling coordinator.

Cycling clinic changes/improvements:

- Moved from school-based to community league-based model of delivery.
- At the request of Clinic #1 students, we increased hands-on learning by increasing what was being taught at the 4 on-site stations.
- At the request of caregivers, we added bike locking and driving past vehicles with opening doors to the station education sessions. Bike locking was included in clinic 1; driving past parked cars was added for clinic 2. Additionally, how to fall "well" was also added to clinics 2 and 3 at the request of cycle educators.
- For clinic #3, we raised the age of the youngest participating students from Kindergarten to grade 3. Some caregivers were enrolling students who were not confident riders (balance and stopping problems, unable to complete 2.5 hour ride), despite the information provided to them that this was not a learn to ride program.

Final Data and Interpretation

Caregiver Survey

Measure: A pre and post clinic survey was done with the caregivers of the student participants to assess: their grade, their child's use of active transportation, their comfort and confidence with their child cycling, their child's knowledge and comfort with cycling, their support of active transportation, and barriers they face. In the post survey it was also examined if the clinic had an impact on their family's cycling behaviour.

Caregiver Survey Results and Discussion

Grades:

Pre-survey: The grades of the students ranged from kindergarten to grade 11, with 14/26 respondents (54%) saying their child was in grades 5 or 6. Only 3/26 participants were above grade 7.

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

Post-survey: The grades of the students ranged from kindergarten to grade 7, with 9/17 respondents (53%) saying their child was in grades 5 or 6. No caregivers of children above grade 7 filled in the post survey.

- The average age of the caregivers' children being younger is in line with the goal of this project, as older students are already likely to feel more confident, have more experience with cycling and have more independence.

Does your child currently cycle or use active transportation to get to school or around your community?

- *Pre-survey only:* 6 said no, 20 said yes with a mix of walking and cycling and around community and to and from school. This question was used to inform the clinic facilitators about the experience of the participants so they could be prepared.

What would keep you from cycling, or allowing your child to cycle, in your community? (pre and post):

- **Pre:** Time, weather, traffic, and large road crossings were the primary themes that emerged as barriers to cycling.
- **Post:** Speeding drivers and traffic were the primary themes at post. There were fewer comments in this survey about barriers, which indicates that caregivers feel more confident after the clinics to overcome these.

Are there any specific skills you feel your child needs to gain in order to cycle safely in your community? (pre only)

- Hand signals, practising on bike lanes, fixing bike chains, confidence and enthusiasm about cycling, and navigating around traffic were the primary themes that emerged.
- All of these skills were worked on in the clinics and helped inform the content.

Tell us how much you agree with the following statements about you and your child(ren): Going into this program (pre)/As a Result of this Program (post). Boxes highlighted in **Green** demonstrate some of the most positive changes.

	STRONGLY AGREE	AGREE	NEITHER	DISAGREE	STRONGLY DISAGREE
1. My child knows more about cycling safely	Post 70.6% Pre 3.9% ↑ of 66.7%	Post 29.4% Pre 73.1% ↓ of 43.7%	Post 0% Pre 15.4% ↓ of 15.4%	Post 0% Pre 7.7% ↓ of 7.7%	Post & Pre 0% =No change
2. My child has improved cycling skills required for active transportation	Post 64.7% Pre 8% ↑ of 56.7%	Post 29.4% Pre 68% ↓ of 38.6%	Post 5.9% Pre 12% ↓ of 6.1%	Post 0% Pre 12% ↓ of 12%	Post & Pre 0% =No change

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

3. My child knows where there are safe routes to cycle in our community and to and from school	Post 58.8% Pre 4% ↑ of 54.8%	Post 35.3% Pre 40% ↓ of 4.7%	Post 5.9% Pre 32% ↓ of 26.1%	Post 0% Pre 20% ↓ of 20%	Post 0% Pre 4% ↓ of 4%
4. I feel confident and safe allowing my child to cycle in our community and to and from school	Post 47.1% Pre 8% ↑ of 39.1%	Post 35.3% Pre 44% ↓ of 8.7%	Post 5.9% Pre 20% ↓ of 14.1%	Post 11.8% Pre 28% ↓ of 16.2%	Post & Pre 0% =No change
5. I am more likely to encourage my child to cycle for active transportation	Post 75.6% Pre 24% ↑ of 51.6%	Post 5.9% Pre 56% ↓ of 50.1%	Post 11.8% Pre 16% ↓ of 4.2%	Post 5.9% Pre 4% ↑ of 1.9%	Post & Pre 0% =No change
6. I am more likely to encourage other modes of active transportation (scootering, skateboarding, walking, etc)	Post 62.5% Pre 20% ↑ of 42.5%	Post 25% Pre 56% ↓ of 31%	Post 12.5% Pre 24% ↓ of 11.5%	Post & Pre 0% =No change	Post & Pre 0% =No change

- The results of these 6 items above show significant increases across all in “strongly agreeing” with the statements. Caregivers, therefore, feel as though the outcomes of the clinic were met. They feel that their child(ren) know more about cycling safely, have improved skills for active transportation, and know where there are safe routes. Additionally, they feel much more confident and safe allowing their child(ren) to cycle, and are encouraging more active transportation. These results demonstrate that these clinics are a success and should be replicated with more children in Edmonton and other various communities.

Does your family intend to bike to school more often? (post only)

- 79% of families plan to bike to school more often, a great success for the program.

Is your family more aware of the cycling infrastructure in Edmonton? i.e. shared pathways, bike lanes, etc. (post only)

- 100% of families are more aware of the infrastructure for cycling. This shows that this program has greatly enhanced awareness.

Is your family more likely to use the cycling infrastructure in Edmonton? i.e. shared pathways, bike lanes, etc. (post only)

- 93% of families are more likely to use the infrastructure for cycling. This demonstrates that the clinics had a very meaningful impact on the way families perceive cycling in Edmonton in terms of confidence, safety, and knowledge of the infrastructure.

Since your child participated in the cycling clinic, have your family cycling habits changed? (post only)

- 75% of families stated that yes, their habits have changed in a positive way.
- Some of the ways that habits have improved are, more family cycling and more use of cycling as active transportation for errands, with many participants stating confidence in their child as the driving force behind the change.

What do you feel was the most important part of this program? (post only)

- Over half of caregivers stated that safety education was the most important part of the clinic. Other prominent themes were the building of confidence to navigate the infrastructure and for long rides, and having on road experience.

Was there anything you did not like or felt was not covered during the program? If so, what was it and how would you change it? (post only)

- The overall feedback was overwhelming positive, with caregivers saying the long ride, bike maintenance and cycling education were all very beneficial.
- One practical suggestion was to have the kids practice locking their bikes with different types of locks on varying bike rack styles. Instructors had reviewed locking bicycles to different apparatus (racks, fences, posts, etc) but they did not use different lock styles.

Student Participant Survey

Measure: A pre and post survey was done with the student participants to assess: their grade, their use of active transportation, their comfort and confidence with cycling, their knowledge of cycling, the importance of daily physical activity, and the barriers they face. In the post survey it was also examined if they had fun learning at the clinic and if they enjoyed the program.

Student Participant Survey Results and Discussion

Grades:

Pre-survey: The grades of the students ranged from kindergarten to grade 11, with 39/61 respondents (64%) saying they were in grades 3-6. Only 3/61 participants were above grade 7.

Post-survey: The grades of the students ranged from kindergarten to grade 11, with 33/52 respondents (63%) saying they were in grades 3-6. Again, only 3/52 participants were above grade 7.

- The average age of the participants reflects the same data as the caregiver survey, and again highlights that having the majority of student participants being in elementary

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

school matches the objectives of this project, including building confidence and skills in them, as the older students are already more likely to have that experience.

What would keep you from cycling in your community? (pre and post)

- **Pre:** There were a few themes that were very prominent amongst the students that were not present in the caregivers' survey. 1. Many students said their parents were the barrier. 2. Fear of 'bad people' and crime, 3. Not wanting to bike alone. Additionally, the themes that overlapped with the caregivers' survey were: bad weather, heavy traffic, and large road crossings as barriers to cycling.
- **Post:** Speeding drivers, bad weather, construction and traffic were the primary themes at post. Interestingly, the 3 themes from the pre-survey (parents, bad people and biking alone) that were so prominent, were either minor or completely non-existent at post. Much like in the caregivers post survey, there were fewer comments in this post survey than the pre survey about barriers, with many students saying 'nothing', which indicates that post-clinic they feel more educated about how to work around potential challenges.

Tell us how much you agree with the following statements about yourself: Before I started this program/As a result of this program. Boxes highlighted in **green** demonstrate some of the most positive changes/results.

	STRONGLY AGREE	AGREE	NEITHER	DISAGREE	STRONGLY DISAGREE
1. I know more about cycling safely	Post 71.2% Pre 12.9% ↑ of 58.3%	Post 25% Pre 62.9% ↓ of 37.9%	Post 1.9% Pre 16.1% ↓ of 14.2%	Post 0% Pre 6.5% ↓ of 6.5%	Post 2% Pre 2% =No change
2. I know where there are safe routes to cycle	Post 63.5% Pre 35.5% ↑ of 28%	Post 32.7% Pre 35.5% ↓ of 2.8%	Post 3.9% Pre 19.4% ↓ of 15.5%	Post 0% Pre 8.1% ↓ of 8.1%	Post 0% Pre 2% ↓ of 2%
3. I feel confident and safe cycling in my community	Post 59.6% Pre 48.4% ↑ of 11.2%	Post 38.5% Pre 40.3% ↓ of 1.8%	Post 0% Pre 8.1% ↓ of 8.1%	Post 2% Pre 2% =No change	Post 0% Pre 2% ↓ of 2%
4. I am more likely to encourage others to cycle for active transportation	Post 49% Pre 19.7% ↑ of 29.3%	Post 39.2% Pre 44.3% ↓ of 5.1%	Post 7.8% Pre 29.5% ↓ of 21.7%	Post 0% Pre 3.2% ↓ of 3.2%	Post 3.9% Pre 3.3% ↑ of 0.6%
5. I am more likely to use other modes of active transportation	Post 63.5% Pre 43.5% ↑ of 20%	Post 25% Pre 48.4% ↓ of 23.4%	Post 9.6% Pre 4.8% ↑ of 5.1%	Post 1.9% Pre 3.2% ↓ of 1.3%	Post & Pre 0% =No change
6. I understand the importance of daily physical activity	Post 75% Pre 62.3% ↑ of 12.7%	Post 19.2% Pre 34.4% ↓ of 15.2%	Post 3.9% Pre 3.3% ↑ of 0.6%	Post & Pre 0% =No change	Post 0% Pre 2% ↓ of 2%

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

7. I know that cycling is one way to be more active	Post 73.1% Pre 77.1% ↓ of 4%	Post 25% Pre 16.4% ↑ of 8.6%	Post 2% Pre 6.6% ↓ of 4.6%	Post & Pre 0% =No change	Post & Pre 0% =No change
8. I have improved my skills using cycling for active transportation (post only)	71.15%	21.15%	5.77%	1.92%	0.00%
9. I had fun learning (post only)	78.85%	13.46%	3.85%	0.00%	3.85%

- The results of these 9 items show very positive changes, with significant increases across all but one item in “strongly agreeing” with the statements, and with that one item having a significant increase in “agreeing”.
- Student participants met the outcomes of the clinic. Students know more about cycling safely, have improved skills for using cycling for active transportation, and know more about where there are safe cycling routes. Additionally, the students are encouraging others to use active transportation and are more likely to use other modes themselves. Almost all of the students (94%) understand the importance of daily physical activity. The students also had fun learning with 92% agreeing or strongly agreeing!
- These results demonstrate that these clinics are a success and should be rolled out to more children, as the students are much better equipped for cycling in the city.

What do you hope to learn from the program? (pre only)

- The student participants stated learning the Edmonton bike routes, learning how to fix their bikes, safe bike riding techniques, and proper bike signals as their most prominent themes. Additionally, many participants said they wanted to learn to be healthier and to have fun! All of these anticipated learnings were addressed through the clinics, showing that expectations were met for the participants.

What did you like most about the program? (post only)

- The most common theme was that the student participants liked the long bike ride the most, with specifics including being downtown, going downhill, and crossing the high level bridge. Additionally, many students said that learning how to use the bike lanes, the stations, the bike tune up, and learning bike signals, were their favourite components. A number of students also said they liked everything! Given what students were hoping to learn from the program, these results can be seen as great successes.

Was there anything you did not like about the program? If so, what was it and how would you change it? (post only)

- The majority of participants (58%) felt there was nothing they did not like about the program. The themes of those who would change something were: 1. they did not like

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

biking in the rain, 2. some found the slower pace was frustrating due to the younger kids and suggested splitting groups by age or grade so you could do a more advanced group, and 3. there were too many reminders of what to do as they biked.

Do you have any final comments or suggestions? (post only)

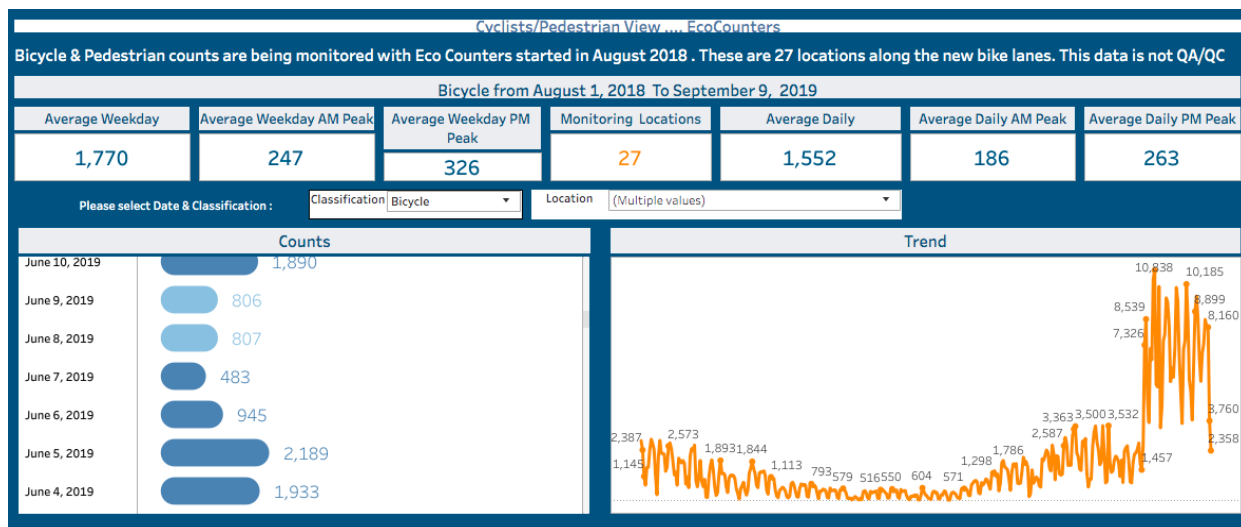
- The students were very happy with the program, with most saying that they loved it, made new friends, liked getting outside and had fun.

One student said "This was really fun! I loved all of the physical activity. It made me feel awake and happy. The weather was not pretty but it was awesome anyway. Thank you!"

- There was a suggestion to offer an advanced 'how to fix your bike' clinic for older students.

Cycling Counts

- The data below was collected from August 1, 2018 to September 9, 2019 by the City of Edmonton. As can be seen in the "Trend" graph below, the number of cyclists in Edmonton is increasing rapidly, along with the development of cycling infrastructure, in particular, the protected bike lanes network. This rapid increase in the number of cyclists demonstrates why these cycling clinics are necessary: as cycling becomes more commonplace in Edmonton, we want to ensure that all students are empowered to cycle and can feel safe and confident alongside adult riders in the lanes.



Conclusion

- The evaluation of the Bringing City Cycling Strategies to Life in K-12 Schools shows that after participating in the clinics, the student participants and their caregivers feel more confident: students feel more confident in their own skills and caregivers feel more confident in their children's skills. Since the clinics, families are cycling more for active transportation and have a greater awareness of the bike infrastructure in Edmonton.

Bringing City Cycling Strategies to Life in K - 12 Schools Evaluation

- In terms of sustainability, the clinics will be offered in 2020 in Parkland School Division and EAS is planning to deliver 5 additional cycling clinics in Edmonton in Spring 2020.
- These three cycling clinics that educated 65 student participants met their objectives to increase cycling knowledge, safety awareness, and self efficacy of 60 student cyclists.
- The clinics were tremendously successful for both the students and their caregivers and will continue to be impactful as they roll out to more communities.