

2018-2019 Progress Report



TeachingCity

TeachingCity Oshawa brings together the City of Oshawa and its education and research partners – the Canadian Urban Institute (CUI), Durham College (DC), Ontario Tech University, Trent University Durham GTA (Trent Durham), and the University of Toronto’s Faculty of Applied Science and Engineering.

The City and its partners focus on addressing Oshawa’s urban issues through innovation, collaboration, applied research and shared experiential learning opportunities with the aim to position Oshawa as a local, national and global community of urban research and learning.

TeachingCity Hub

The TeachingCity Hub is located at the corner of Mary and Bond streets in downtown Oshawa, and is a central location for the partners to meet, plan and implement collaborative projects.

The Hub is home to City Idea Lab during the school year, where students meet with faculty and City staff. See more about City Idea Lab on page 6.



(From left) Ontario Tech University Assistant Professor Dr. Scott Aquanno, Ontario Tech student Azkah Waseem, Lindsay Beyger from Ontario Tech and Gabriela McCune, the City's Supervisor of Recreational Programs collaborate on the Youth-Connect Mentorship Program in the City Idea Lab located at the TeachingCity Hub in downtown Oshawa.

“TeachingCity represents a giant step forward for the City of Oshawa. Together with our academic and research partners, TeachingCity is positioning Oshawa as a leading city of urban research and learning.”

- Mayor Dan Carter,
City of Oshawa

“Knowledge sharing and collaboration are essential to identifying new and unique approaches to solving urban issues. CUI is proud to be a partner of TeachingCity Oshawa, which prioritizes collaboration while working to develop action-oriented solutions. We are excited to continue this partnership, and we look forward to contributing to the TeachingCity’s 2019/2020 projects and initiatives.”

- Alexandra McDonough,
Senior Planner, Canadian Urban Institute

Welcome

This report highlights another successful year for the TeachingCity Oshawa partnership, which has taken the City of Oshawa's relationship with our post-secondary education and research partners to a new level and advanced our collective approach of applying experiential learning and research to city issues and projects.

Together, through TeachingCity, we are developing Oshawa as a "living laboratory" where students, faculty, research partners and City staff address urban issues collaboratively. We are co-designing solutions and policy for the future of our city and a better future for all. This year saw the launch of several research studies, including an update to the Corporate Facilities Energy Management Plan, a study to create a navigation system for firefighters and a study that will help us understand barriers to active transportation for Oshawa's older adults to help advance the City's Active Transportation Master Plan and inform the Oshawa Age Friendly Strategy. Work on two studies also continued this year – an examination of how vegetation affects water quality in 15 storm water management ponds across Oshawa, and the Municipal Natural Assets Initiative, which is studying the Oshawa Creek.

The City Idea Lab is another remarkable example of how the City is actively engaging, learning from and co-designing solutions with young, bright minds studying right here in our city. This collaborative, course-based initiative between the City and its academic partners focused on tackling several City-identified challenge statements this year, including how the City might engage youth in priority neighbourhoods; better map its cultural assets; and engage residents to help build community pride.

On behalf of City Council and the City's Corporate Leadership Team, we thank the Canadian Urban Institute and the professors and faculty from Durham College, Ontario Tech University, Trent University Durham GTA and the University of Toronto's Faculty of Applied Science and Engineering for their collaboration and mentorship, and of course, the students for their innovative work. Together, we have made great strides towards our shared goal to position Oshawa as a local, national and global community of urban research and learning.



Dan Carter
Mayor, City of Oshawa



Paul Ralph,
City Manager, Oshawa

Research Projects and Collaborations

Stormwater Management Pond Water Quality Research Study

This unique two-year research study began in May 2018 and will conclude in 2020. Graduate and undergraduate students from Ontario Tech University are focusing on 15 stormwater management ponds across Oshawa looking to understand how the amount and type of aquatic plants in these ponds influence the efficacy of their water quality treatment. Students are acquiring a range of field, laboratory and analytical skills while the City gains important, evidence-based information to guide its stormwater management pond policies.

Municipal Natural Assets Initiative

The City of Oshawa was one of five municipalities selected to team up with the Municipal Natural Assets Initiative (M.N.A.I.) in 2018-2019 to become one of the latest M.N.A.I. cohort communities across Canada. The project, which focuses on how municipalities can account for natural assets, is specifically looking at a portion of the Oshawa Creek and how to apply an asset management lens in order to value and account for the services provided by this important natural asset. The project involved University of Toronto Department of Civil and Mineral Engineering students and faculty undertaking the necessary modelling of a number of stormwater scenarios that may impact the Oshawa Creek.



Ontario Tech University master's student Alex Johnson conducts research at one of Oshawa's stormwater management ponds.

Active Transportation for an Age-Friendly Community Research Study

The City collaborated with Ontario Tech University and the Oshawa Senior Community Centres on a research study to understand both barriers to active transportation with older adults residing in Oshawa. The final outcome of the study includes an overview of the barriers older adults face when it comes to active transportation (cycling, walking, etc.) in our community and recommendations on how to address these identified barriers. The results of the study help to advance the City's Integrated Transportation Master Plan, the Oshawa Age Friendly Strategy (in development), and help to inform the City's planning policies.

“TeachingCity opens doors for Ontario Tech University to engage with its community and region in meaningful ways. Course-based projects like City Idea Lab, as well as ongoing research collaborations with the City of Oshawa, provide our students with valuable opportunities to apply the theories they have learned in the classroom toward creating practical, innovative solutions to difficult issues in our community. We are excited about the opportunities this partnership provides for us to develop tech-savvy leaders who will focus on improving the designs of technological innovations, while carefully considering how human interaction with technology can enhance our quality of life.”

- Dr. Steven Murphy, President and Vice-Chancellor,
Ontario Tech University

Fire Navigation Systems Project

Engineering students from Ontario Tech University undertook a project to design and develop a tactile feedback navigation system for firefighters. This system prototype utilized sensors and wireless communication technology attached to a firefighter's helmet to generate a map of the surrounding area and allow the mapping data to be sent wirelessly to an external team using Wi-Fi. The project also included a haptic guidance system that uses vibration to stimulate the sense of touch, in which vibration motors could be imbedded in firefighter clothing to help guide the firefighter out of the hazardous area. TeachingCity Oshawa hopes to expand on the students' idea in 2019-2020 and bring this technology closer to reality.

Corporate Energy Management Plan

Under legislation, the City regularly updates its Corporate Facilities Energy Management Plan, which was the focus of a TeachingCity Oshawa collaboration in 2018-2019. The City collaborated with Ontario Tech University to research and prepare the plan update. The final report will be presented to the Corporate Services Committee and City Council in June 2019. The report will include a summary of the City's annual energy consumption and greenhouse gas emissions for its operations, a forecast of results of previous and current measures for conserving energy consumed by the City's operations, and will outline proposed future energy management measures.

“By partnering with the City of Oshawa, we are able to give U of T Engineering students and researchers an opportunity to learn about and address complex urban issues in a real-life setting. We look forward to the coming year and developing new activities and projects with TeachingCity that will benefit the community.”

- Professor Brent Sleep,
Chair, Department of Civil & Mineral Engineering
University of Toronto



Ontario Tech University students (from left) Vincent Gordon, Athitthan Rupakanthan, Jonathan Taimla, Abishake Gnanaguruparan, Jonathan Saliba, Moriom Reza, and Trish Jennett, with Oshawa Fire Services Chief Training Officer Scott Wood, (far right) and Training Officers Scott Calder and Josh Doyle (back row left to right).



An Air Quality and Traffic Monitoring Project has launched in downtown Oshawa with TeachingCity partner the Faculty of Applied Science and Engineering at the University of Toronto.

Downtown Oshawa Air Quality and Traffic Monitoring Project

The City has joined the Southern Ontario Centre for Atmospheric Aerosol Research at the University of Toronto, A.U.G. Signals and North Line Canada in a research study to monitor air quality and traffic movements in Oshawa's downtown core. Launched in May 2019, the one-year assessment uses compact sensors to monitor air quality and traffic movements with an aim to increase the City's understanding of environmental issues in downtown Oshawa. Findings will also help identify options and opportunities for improving the pedestrian experience.

City Idea Lab

The City Idea Lab is a collaborative, course-based project between the City and its academic partners that offers experiential learning opportunities to post-secondary students via credit courses at the TeachingCity Hub.

Throughout the semester, the students applied their academic learning and worked in a lab environment to collaborate with City staff and faculty to co-design possible solutions to their challenge questions.

Each course focuses on a particular City-identified challenge question that is then embedded into both teaching practices and academic curriculum.

The 2018-2019 school year was the inaugural year of this program and was met with huge enthusiasm by students, faculty and staff.

In City Idea Lab classes, students received a presentation from City staff, which overviewed the services provided by local government, Oshawa's demographics and provided context to the challenge question the students were working on during the semester.



Several classes participated in a bus tour, which took them to key locations within the city related to their particular challenge question and to City Hall.



Catherine Richards, the City's Manager of Culture and Centralized Recreation Services works with students in the City Idea Lab.



256
Students



3
Post-Secondary
Education Institutions



9
Courses



43
City-Building Project
Ideas Generated

“TeachingCity Oshawa has allowed Trent students to be engaged with and to enable change in their community. Through City Idea Lab and other projects coordinated through TeachingCity Oshawa, students take their classroom theory and apply it to real-world challenges that face the City of Oshawa. Trent University Durham GTA is excited to partner with the City in these applied social justice innovations that are truly mutually beneficial to students and the Oshawa community.”

- Joe Muldoon, Head
Trent University Durham GTA

Student Showcases

Two City Idea Lab Showcases took place this academic year – one for each semester. The Fall Showcase occurred in December 2018 at the TeachingCity Hub, and the Spring Showcase took place at City Hall in the Council Chamber in April 2019.

Students from Durham College (DC), Ontario Tech and Trent Durham displayed their project posters that illustrated their active research on how to engage youth in priority neighbourhoods.



Ontario Tech University master's student Sherry Ilaahibaksh (centre) talks about her project with Ontario Tech President Dr. Steven Murphy (left) at the Fall Showcase.

2018-2019 Challenge Questions

How might the City of Oshawa...

- Engage youth in priority neighbourhoods?
- Communicate and map the cultural assets in the community?
- Design a WiFi network in the downtown?
- Address the community risk associated with unsheltered residents in our community?
- Create a more welcoming community for newcomers and our diverse student population?
- Engage the community to build community pride?
- Engage with art to tell the stories of Oshawa residents?



(From left) Dakota Evans from DC, Selina Bavinka-Davy from Trent Durham and Syed Turab Rizvi from Ontario Tech University display their project posters during the Spring Showcase.



RBC Helps Launch the Future

TeachingCity Oshawa partners DC, Ontario Tech and Trent Durham are grateful for the generous gift of \$322,000 from RBC Foundation as part of the RBC Future Launch program, which was presented at the Fall Student Showcase and will continue to fund the City Idea Lab until the end of the 2019-2020 academic year.

City Idea Lab - from Ideation to Implementation

In addition to helping students develop their own unique ideas to address urban issues, another goal of City Idea Lab is to have these ideas implemented when possible.

Two ideas generated by students from Ontario Tech University in the Fall 2018 term are currently being implemented in City recreation facilities.



Ontario Tech University students (from left) Petrina Mattison and Cora Morrison display their project poster for the Youth-Connect Mentorship Program.

The Box

“The Box” was another project idea generated through the Fall 2018 City Idea Lab program. The proposal was for City staff to work with youth to develop suggestion boxes that would be installed in recreation facilities.

The suggestion boxes would be designed, decorated and monitored by youth to increase engagement at the facilities.

In early 2019, two suggestion boxes were created by high school students at G.L. Roberts Collegiate and Vocational Institute, and the Oshawa Youth Council was engaged to paint and decorate the boxes. The suggestion boxes are now installed at the South Oshawa Community Centre’s Youth Room and Donevan Recreation Complex,

giving youth the ability to provide their comments and suggestions to City staff, enhancing engagement at the facilities.

Youth-Connect

The Youth-Connect Peer Mentorship Program was an idea generated through the Fall 2018 City Idea Lab program. Following the Fall semester, a practicum student with Ontario Tech worked to put this idea into action, and the program was launched in May 2019!

The Youth-Connect Peer Mentorship is a partnership between Durham College (DC), G.L. Roberts, Ontario Tech University and the City’s Recreation and Culture Services branch. The program aims to facilitate the academic journey of high school students to pursue post-secondary education. High school students at G.L. Roberts are paired with a post-secondary student mentor in order to learn about the different services available to them to facilitate their decision to attend post-secondary education. The purpose is to equip students at G.L. Roberts with the proper tools for success; this includes knowledge about the application process, the different programs of study and the various services available in a post-secondary institution.

“Community engagement is important to me and by working within the TeachingCity Hub walls, on a City-identified challenge question, not only did my class come up with new and fresh ideas which could lead to positive change, we also grew as students and citizens through the experiential learning journey.”

- Janis Williams, Journalism - Mass Media student, Durham College



DC graduate Leana Anderson (left) with her mural that is now in the TeachingCity Hub.

TeachingCity Hub Mural

A mural installation was added to the TeachingCity Hub in Fall 2018. The mural was designed by Leana Anderson, a young Indigenous artist and Durham College (DC) graduate from the School of Media, Art & Design's Fine Arts – Advanced Program. Ms. Anderson's mural is titled, "The Balance". It embodies ethical innovation and reflects the partnership's key principles: collaboration, innovation, applied research, experiential learning and knowledge transfer.



Pictured above is the Public Art Mural that was created by DC students and greets visitors to Oshawa City Hall.

Public Art Mural

A partnership between the City and DC saw a new public art mural installed on the retaining wall in front of City Hall, through the Community Collaboration Course in DC's School of Media, Art and Design. The artwork focuses on human rights, which augments the City's Diversity and Inclusion Plan. It was designed by 16 DC Fine Arts students, who gained first-hand experience working with City staff on creative placemaking, public art projects and community consultation. Moving forward the Community Collaborations Course will be a regular offering through City Idea Lab.

“ With each year that passes, TeachingCity keeps getting stronger and more innovative. Durham College students have participated in a number of initiatives in the past 12 months, each representing a unique opportunity to learn while also contributing to the overall goal of positioning Oshawa as a community of urban research. ”

- Don Lovisa, president
Durham College

Collaborations and Student Engagement

Access to Justice Hub

TeachingCity Oshawa is pleased to be involved with the Access to Justice Hub, which is a collaboration between the Durham Community Legal Clinic (DCLC), Durham College (DC), the Region of Durham and many service providers. The goal of the Access to Justice Hub is to expand free legal services to the residents of Durham who do not qualify for Legal Aid Services provided by the DCLC. These services are provided by DC students enrolled in the School of Justice & Emergency Services' Paralegal program. The Access to Justice Hub seeks to provide other complementary services to clients through the Region's financial empowerment staff and community service partners. This innovative approach will provide the City of Oshawa with an opportunity to engage with community members regarding a variety of City initiatives, and provide education on tenancy, fire safety and City services. TeachingCity Oshawa partners including DC, Ontario Tech University and Trent Durham envision future research projects at the Access to Justice Hub around the areas of social equity and inclusion.

Indigenous Cultural Workshop

Through a TeachingCity Oshawa collaboration, the City's leadership team took part in an Indigenous Cultural Workshop in 2018. Entitled "From Contact 'til Now", this workshop was presented by students and staff from the Indigenous Education and Cultural Services at Ontario Tech University. Through this powerful experiential workshop, the City's senior staff team gained knowledge of the truth of Indigenous history in Canada and learned about myths and stereotypes while exploring the Indigenous experience. This workshop helped advance the goals of the City's Diversity and Inclusion Plan.

Urban Issue Workshop

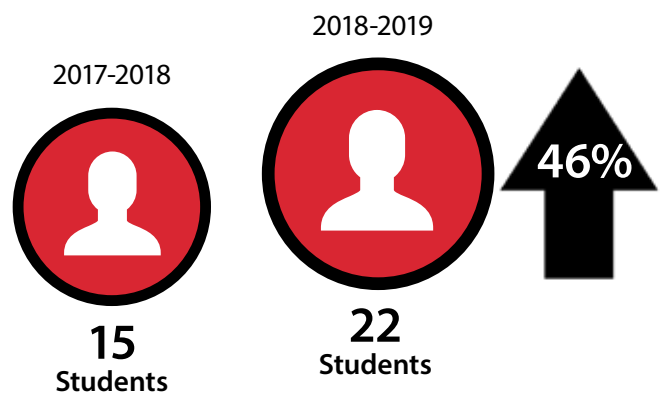
The Canadian Urban Institute worked with the City's senior staff team in 2018 to help identify current urban issues and potential collaborations to pursue through TeachingCity. City staff were introduced to interesting and unique approaches to urban issues across Canada and throughout the world, and worked to explore how these approaches could apply in Oshawa. This exercise met the TeachingCity objectives of knowledge transfer and collaboration.

Annual Student Artwork Exhibitions

As part of the City's Art and Culture in the Hall program, artwork created by students in DC's Fine Arts – Advanced Program is being exhibited at City Hall on an ongoing and rotating basis. Each exhibit is designed and installed by student artists, with guidance from faculty and The Robert McLaughlin Gallery.

Co-op/Placement Students

The City provided a number of co-operative education placements and other learning experiences to post-secondary students at DC and Trent Durham from Spring 2018 to Spring 2019. This included students from Durham College's Centre for Food and the Schools of Business, IT & Management, Health & Community Services, and Media, Art & Design, as well as Trent Durham's School of Graduate Studies.



Focused on Addressing Urban Issues

World Council for City Data – ISO 37120 Certification

In 2018, the City of Oshawa, through the TeachingCity partnership, initiated a data collection project with the aim of achieving certification from the World Council for City Data (WCCD) for the ISO 37120 Sustainable Development of Communities: Indicators for City Services and Quality of Life.

This ISO certification is the first international standard on City data, and helps to measure the performance of City services and quality of life. It is anticipated that the City of Oshawa will achieve the certification in 2019.

The standardized approach to data collection allows the City and its partners to assess performance, compare the city against other cities both locally and globally and identify potential areas of future sustainable development and research projects to be undertaken through the TeachingCity partnership.

2019-2020 Areas of Interest

TeachingCity Oshawa is interested in exploring projects or initiatives that fall into one of the following broad categories:

1. **Social:** Research, initiatives or solutions aimed at meeting the social needs of the community to advance the City of Oshawa's strategic goals of Social Equity and Cultural Vitality. Possible areas of study could include addressing diversity and inclusion, poverty reduction, and community or cultural development.
2. **Technology/Smart City:** Research, initiatives or solutions that use data and technology to create efficiencies, improve sustainability, create economic development, and enhance quality of life factors for people living and working in the city.
3. **Environmental:** Research, initiatives or solutions aimed at promoting the City of Oshawa strategic goal of Environmental Responsibility. Possible areas of study could include, but are not limited to climate change, mitigation and adaptation, invasive species, and water and air quality.

“This has been a great opportunity to work collaboratively on finding evidence-informed solutions to real-world problems, and showing students that they have the skills necessary to help address key issues facing municipalities and citizens. This opportunity has made several of our students realize that research can have an impact, and that working with older adults can be fun! It has certainly solidified my commitment to our city and to helping its residents live healthy, active lives.”

- Dr. Shilpa Dogra, Associate Professor in Kinesiology, Faculty of Health Sciences
Ontario Tech University

If this information is required in an accessible format, please contact Service Oshawa at: 905-436-3311 or email: service@oshawa.ca.



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