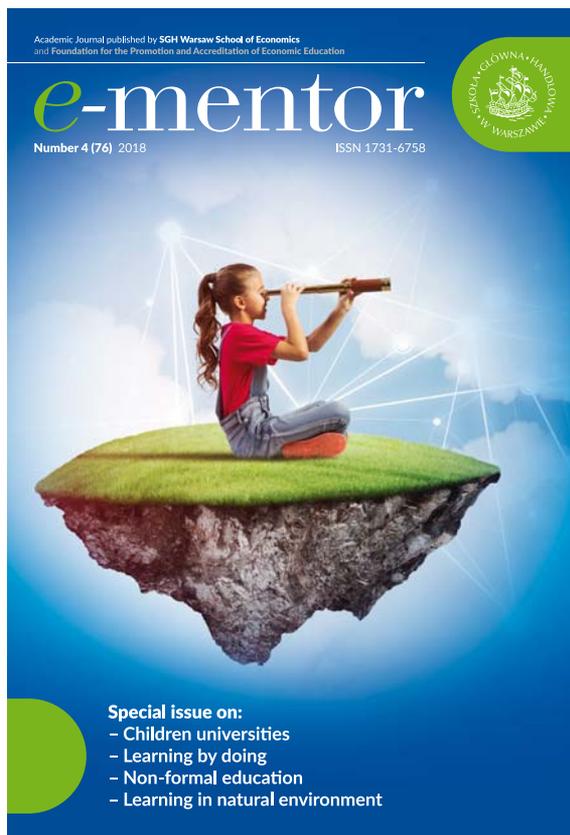


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# the role of partnerships in delivering a children's university program: a case study of the McMaster Children and Youth University



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*The McMaster Children and Youth University (MCYU) represents an educational outreach program based in Hamilton, Ontario Canada that has been built on the basis of partnerships with local organizations, school boards, and families. The MCYU also incorporates the training of the University students to the extent of knowledge communication to affect the program delivery. Consequently, this approach has resulted in the delivery of the program which consists of on-campus lectures and community-based workshops, which have demonstrated consistent growth over the last 7 years.*

## The McMaster Children and Youth University (MCYU): The Vision

The McMaster Children and Youth University (MCYU) was founded in 2011 in Hamilton Ontario, Canada, and represents the first Children's University Program in Canada. The MCYU is based on the model originally developed in Tübingen, Germany, where children are invited to experience lectures delivered by University Professors, both on-campus and in the community. The MCYU is similar to many European Children's University models that focus primarily on children's experience. However, the MCYU has uniquely adapted that concept to include a family-based learning and educational component. Holistically, the MCYU represents an educational program with a vision to reimagine both the elementary and post-secondary experience through the creation of innovative educational and pedagogical practices that aim to improve student-learning opportunities. Bringing together these two groups of learners in a unique partnership has resulted in some innovative practices for the MCYU which are guided by the belief that such partnerships of the university, public schools, families, and communities may foster the academic success of students. Central to this belief is that the youth who attend our program are bona fide bearers of knowledge and have a valuable contribution to be considered in advancing the scientific and social underpinnings of our society; and should

also be identified as producers of knowledge. For this reason, we have worked to establish partnerships with schools, parents and community-based organizations, including the City of Hamilton and its agencies to collaboratively enhance the learning experience for both the University students and middle school aged children (grades 4–8). However, the primary partners in such a co-creative effort are the youth in the community and their families along with undergraduate and graduate student volunteers (facilitators).

## The MCYU: Delivering a Multidisciplinary Educational Program

The MCYU focuses on the development of strong multidisciplinary partnerships in its approaches to education, learning, and practical implementation of its programming. For this reason, the topics addressed by our program encompass a broad range of disciplines covering Science, Technology, Engineering, Arts and Mathematics (STEAM). Ultimately, our long-term goal is to encourage critical thought and problem solving, and to encourage more engaged citizenship for all who participate in the program, including the MCYU student facilitators, the faculty, and the community youth. Towards this end, the MCYU has trademarked the slogan *Question Discover Create; question your environment, discover your potential, and create a brighter future*. This trademark now serves as the credo for all of the MCYU's programming and has become an iconic program logo. However, this slogan has become more than just a trademark: the youth can identify it as a series of actions and all of our programming elements may be categorized under all three of these words. Therefore, it not only serves as a guide for those who attend the program but also an outline for our MCYU workshop facilitators when developing the content and activities for each of the workshops.

The MCYU program<sup>1</sup> consists of two components offering two different types of experience which reflect the post-secondary environment:

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\*\* McMaster University

<sup>1</sup> more information about the program may be obtained at [www.mcyu.ca](http://www.mcyu.ca)

# The Role of Partnerships in Delivering a Children's University...

## 1. The MCYU Workshops in the City

Our community outreach component strives to engage the youth and their families in the communities where they live. These interactive workshops are one hour in duration and are delivered using an inquiry-based learning approach (IBL). By means of keeping with the philosophy of co-creation, the topics of these workshops are developed in conversation with our community organizations including public schools and the City of Hamilton Community Developers. This branch of the program focuses specifically on the community's identified needs and concerns, which are then aligned with areas of expertise within the McMaster University community. This discussion defines current topics of interest to the public, and the way in which these conversations unfold is an important learning point for all of the MCYU student facilitators. This strategy of workshop development results in interactive workshops that have proven to be very synergistic with the elementary school curriculum making them popular with the youth who participate and also with parents and teachers. The titles of these workshops are designed to be appealing to the youth, for example *Contagion* was a workshop to teach the youth virus biology so that they could apply their knowledge to build a 'zombie virus' (a super virus); *Advocacy Avengers* – was a workshop designed to promote civic engagement among the youth; and *Community Builders* – was a workshop to teach the youth how to design an ideal community where they would like to live. These workshops are primarily deployed in the Hamilton Wentworth District School Board (HWDSB), grades 4–8. In many cases, teachers select the workshop topics that supplement and align within the curriculum that the class is studying at the current time. The MCYU staff rigorously review the design and content of each workshop and this preparation is appreciated by the parents who bring their children to the program. When asked to compare the MCYU in the City workshops to other workshops her son had attended, one parent commented:

*The other difference was the MCYU sessions were presented with a real-life situations/problem which the kids were supposed to solve or come up with a solution for.*

2015, A.G.

The experience of this parent and her child reflects the MCYU's commitment to deep learning through inquiry. The youth are exposed to new content but more importantly are given the opportunity to discover and create new knowledge. This is what the parent is referencing – *this opportunity for students to practice being problem solvers in this instance* – rather than mere receptacles for information. In this way, the youth who participate in the MCYU workshops learn new ways to learn. This is a skill that builds lifelong learning that may help them to visualize

their future as students and on their career paths. This applied form of learning has long been known to be effective (Christenson, Reschly et al., 2008), but has not always been applied at lower academic levels. One of the stated objectives of the MCYU workshops is to collaborate with the Hamilton Wentworth District School Board (HWDSB) to provide an increased number of opportunities for the youth to participate in this type of deep learning that demonstrates the value of their schoolwork, and connects them with ways that these skills may impact their community and helps them to visualize future career paths.

## 2. The MCYU On-Campus Lectures

These types of experience provide opportunities for the youth and their families to explore the university environment with a view to break down some of the perceived barriers to pursuing a post-secondary education. The youth and their families attend monthly lectures delivered by the University faculty recruited from across all the six of McMaster University's Faculties (Business, Engineering, Health Sciences, Humanities, Science, Social Sciences). This interdisciplinary range of speakers serves to maintain our STEAM-related content. The specific topics are selected based on our faculty's area of expertise and, with the assistance of the MCYU program staff, the titles are shaped to ensure that the youth and their families will find them engaging. For example, an ecologist delivered a lecture entitled *'Movie monsters: The truth behind our wildest imaginations'*. This speaker focused on insect biology and how Hollywood film makers exploit insect physiology to create movie monsters. Other titles include *'Sweat so you don't forget'* – a lecture to describe how exercise improves cognitive function; *'Why dinosaurs don't throw snow balls'* – a lecture about the climate change; *'What your poo says about you'* – a lecture about the human microbiome; *'18<sup>th</sup> Century Literature Superheroes'* – a lecture about how boys and girls were depicted as heroes in 18<sup>th</sup> century designed to empower the youth in the civic engagement.

Our speakers are provided direction to ensure the content is family-oriented and interactive. The most engaging discussions occur when lecturers describe the unfolding of decisions surrounding their career path choices. This allows the youth to connect more closely with the faculty, opens up questions, and serves to reduce some of the apprehension that may be associated with the University environment for these families. The youth enjoy hearing these stories and many of the discussions during the question period stem from inquiries around the faculty members' career choices. Overall, we have found the question period very revealing as to the abilities of the young minds who attend the lectures. One comment, that has been consistently expressed by every faculty mem-

ber who has spoken in this forum, is their surprise at the depth and diversity of the inquiry expressed by the youth, some as young as 6 years of age.

The unity of these two programs is also valuable in mitigating some of the popular (or unpopular) perspectives on how the scientists or researchers are viewed through the lens of the popular media (Szu, Osborne et al., 2017). Furthermore, when 'real' researchers (undergraduate/graduate and faculty) present relevant research, there is a greater propensity for the youth to discuss the topic within their family or a group of friends. This is evidenced by a statement from the youth coordinator in one of our partner organizations:

*The MCYU Events were an amazing opportunity for my group of students. They were so eager to attend each month and would discuss the lectures and activities for days afterwards.*

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### **Strategies to Reduce Barriers to Attend Programming**

One of the areas where the MCYU has been relatively successful in breaking down perceived barriers to exploring post-secondary education is the issue of transportation. The McMaster University is situated between 10 to 15 km away from many of the communities characterized as under-resourced in socioeconomic terms. Based on the study carried out and published (April 10, 2010) by the 'Hamilton Spectator', a local newspaper, these communities are referred to as Priority neighborhoods. In many cases, families in these Priority neighborhoods do not have the means to travel to the University campus, either for financial reasons or lack of time. Therefore, the MCYU has supported the attendance of the youth from many of Priority neighborhoods by providing free busing. However, this would not be possible without the commitment and collaboration of a number of community service organizations, such as the Boys and Girls Clubs of Hamilton or the North Hamilton Community Health Centre. Over the years, we have had increasing numbers of the youth from many of our partner organizations attending these lectures. This is evidence that our strategy of reaching into the Priority neighborhoods with our student facilitator-mediated workshops and encouraging the youth and their families to explore the campus has raised awareness, increased engagement and resulted in increased attendance from these groups. Importantly, these are opportunities for families who may not have had the opportunity to experience the University campus, or to explore the post-secondary environment.

Incentives have also helped to provide long-term engagement for our program. Like many other Children's Universities around the world, the MCYU offers a 'Learning Passport'. This is a colorful card provided with a colorful lanyard that may be validated at each of

the MCYU on-campus lectures. If the youth attend six out of our eight annual lectures, they are eligible for our 'Certificate of Knowledge', a diploma-style document with the MCYU's seal. If they attend six out of eight lectures for four years, they receive a 'Bachelors of Knowledge' diploma, and if they continue this attendance rate for six years, they receive a 'Masters of Knowledge' diploma. To date, several young people have received the Masters of Knowledge. On average, we have approximately 80–90 young people who receive a 'Certificate of Knowledge' annually. In the 2016/2017 academic year, we had 23 young people from Hamilton's under-resourced communities, who obtained a 'Certificate of Knowledge', which was one of our proudest moments. This was due to the advocacy of our partner organizations and because we were able to provide free busing for the first time. Overall, our annual diplomas remain one of the major incentives for the youth and families to attend our events.

### **The Rationale for a Family-based Education**

The MCYU is a program that is passionate about open access to knowledge creation and providing the community access to the benefits of scholarly research and creative activities. However, these perspectives offered to the whole family allow for all those connected to the child's education to appreciate the resources that are available to the community. It also introduces families to the types of on-going research, teaching, and activities occurring on the campus. This opportunity to explore the University community ultimately allows families to understand the value of having a large post-secondary institution located within their community and contextualize the activities happening on the campus in terms of their own personal beliefs and values. Furthermore, the recognition of being a 'good neighbor' also has a significant value to research institutions like McMaster University. Key to this relationship is the concept of learning reciprocity. In fact, programs like the MCYU have been encouraged by McMaster University through the vision of the President and a policy referred to as the 'Forward with Integrity' Document. This vision has increased the University's interest in carrying out meaningful community engagement.

The Canadian Federal Research funding system has also been driving the interest of Universities to engage more deeply with the public. These agencies require that individual researchers carry out knowledge translation programs associated with their specific research areas. For many researchers this may be a daunting effort and they simply do not have the infrastructure to carry out knowledge translation beyond the publication of research articles and conference presentations. The MCYU is now working to establish itself as a platform that may be utilized by a variety of researchers to reach out to communities and encourage them to explore their areas of interest by connecting with

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the youth and their families. The MCYU on-campus lectures allow for a public forum in which researchers can engage families who may not have been able to learn about their individual research programs. In fact, as a program, the MCYU has created several new connections between researchers and members of the community. Once again, this has served to deepen the relationship between the University and its neighbors. In the long run, we are hopeful that this may help to serve as a form of advocacy for the on-going research happening at the University, and garner public support for funding for the University projects by influencing local politicians.

Other advantages of family lectures include the opportunity for families to spend time together and foster discussion about the experience, whether it is a workshop or a lecture. The exploration of alternate career paths and knowledge about the Canadian educational system is not always evident to new immigrants and families who do not have a history of post-secondary education. The MCYU on-campus lectures have provided an opportunity for these families to explore the alternate possibilities. This view is echoed by one of the community workers that bring the youth from Hamilton's Priority neighborhoods to campus.

*Many of their parents are new to Canada and do not have a lot of knowledge about post-secondary education. The events allowed them to be exposed to some of the possibilities out there. Simply getting to sit in a lecture hall was so exciting for the students! Since these events, the students have been asking more about post-secondary education. Thank you so much for creating this opportunity for young minds.*

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## The Role of Partnerships in the MCYU

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Over the last seven years, the MCYU has focused on developing partnerships with parents, community organizations and other programs within the McMaster University in supporting the learning environment for the youth in the community. These partnerships are also important for the sustainability and growth of the MCYU program by providing a forum to promote the program and to recruit volunteers. Since its inception, the MCYU has formed partnerships with 18 different organizations/groups in order to deliver its programming. These collaborations may be subdivided into four broad categories: partnerships with community organizations, University programs, parents, and the youth.

### Partnerships with Community Organizations

One of the primary reasons for partnering with community organizations is to utilize their wealth of expertise on how to effectively engage with members

of their local communities. Some examples of community organizations that participate in our program include the Hamilton Boys and Girls Club, the Hamilton YMCA, the North Hamilton Community Health Centre, and the Hamilton Pathways to Education. These groups primarily serve the youth in Hamilton's Priority neighborhoods and have collaborated with the MCYU in a number of ways: encouraging and supporting the youth attendance at our programs; providing feedback on how to attract parents; and advising on how to best shape the delivery of the MCYU workshops by serving as focus groups, and by providing letters of support and encouragement as the MCYU struggles to maintain its funding. The MCYU invested heavily at the start of its programming to meet those organizations and listen to their advice and form meaningful relationships, and ensure that their feedback was thoughtfully considered when the MCYU shaped the delivery of our programming. One of their primary requests was that the MCYU works with the students to help them visualize a place for themselves in the post-secondary environment.

Our single largest community partner is the HWDSB. The school board works with the MCYU to identify schools and principals having the resources to accommodate the MCYU workshops. In this forum, the teachers and principals have become significant advocates for the program and they often provide feedback to improve the workshops. Furthermore, many of the teachers have also participated in priming their classes in preparation for the MCYU programming by posing questions and establishing the inquiry-based learning environment. The collaborations with the schools have provided significant improvements with our workshop program, both in the delivery and the content.

Public libraries are the places where the MCYU may jointly engage parents and the youth. These collaborations help to attract the youth spanning a very broad range and families spanning a very broad socioeconomic spectrum. The MCYU programs help the libraries to foster curiosity in order to encourage family-based learning; objectives overlapping with those of the MCYU. Furthermore, when the parents are present at those workshops, they often ask the MCYU facilitators questions about the University programs that they see their children attending; this interaction also helps to reduce the perceived barriers to attending post-secondary educational institutions.

### Partnerships with the University Organizations

Partnerships with the university organizations are central to sustain the MCYU as a university-based program. Therefore, the MCYU works to highlight the research efforts of the various faculties across the campus and has formed alliances with the other McMaster University programs in order to recruit volunteers, student facilitators, and the MCYU staff. For example, the MCYU workshop-based manager's salary program is supported by the MacPherson Institute for Leadership, Innovation & Excellence in Teaching, and our program administrator's workspace is provided by

the Department of Pediatrics. A number of faculties provide their time, on a volunteer basis, to grow the program and ensure its quality. The University, recognizing the value of the program to the surrounding community as well as the students and staff, has kindly provided significant funding to help with the program implementation and growth. In addition, partnerships with individual researchers are also valuable to the MCYU in establishing an expertise base. When facilitators choose to develop outreach workshops on certain subjects, access to the faculty who are willing to guide and evaluate the accuracy of the workshop content is important in growing the credibility of the MCYU within the community. Due to the broad spectrum of the content covered by the MCYU it is not possible to manage the content accuracy with only one or two faculty supervisors. These alliances with students and the faculty also help to mobilize research/knowledge concepts relevant to the individual faculty members, and the student facilitators help to shape that content in a way the public, especially the youth, can better appreciate. This symbiotic relationship is essential to attracting increasing numbers of the faculty members to participate in the MCYU program.

One of the most valuable alliances is between the MCYU and the undergraduate and graduate students who become the MCYU facilitators. The MCYU provides mentorship and training to help students leverage their academic background into developing practical strategies to address challenges faced in the communities of Hamilton. However, such challenges may be translated to many communities around the world. For example, how to address the need for better hand washing in an effort to improve the youth hygiene was developed as a workshop entitled 'Beat the Bug.' The need to understand biodiversity in our natural environment and to encourage conservation efforts was developed as a workshop called 'Backyard Biodiversity.' The development of these workshops aids in the building of practical skills in critical thinking and communication: vital skill sets in the current employment landscape.

### **Partnerships with Parents**

Perhaps one of the most valuable partnerships we strive for is the partnership with parents. Despite the challenges that may exist in engaging parents, there is evidence to support that adolescents feel more engaged and comfortable when their parents are involved in their education (Xu, 2002). For the parents, such opportunities generally take the form of parent-teacher meetings, and involvement in school fundraising activities or committees. Rarely are there co-learning opportunities. In fact, Eccles and Harold suggested that teachers would like the parents to be more involved in the education process and parents also wished to be more active in their child's education (Eccles and Harold, 1993). This is the primary rationale for the family-based approach taken by the MCYU. The co-learning opportunities that are offered by the MCYU workshops provide parents and the youth with

the opportunity to work and ask questions together. These situations allow the parents to invest in their children's education while spending time together and are predicted to result in improved academic standing in the case of very young children (Schlee, Mullis et al., 2009). However, the MCYU has not carried out such an evaluation and the efficacy of the MCYU's program on academic upskilling remains to be determined. One primary barrier faced by many of the parents in the families targeted by the MCYU in Hamilton's priority neighborhoods is simply availability of time for co-learning or participation in their children's education. The demands on the low income or single income families in these neighborhoods make parental engagement difficult. However, the MCYU continues to engage with groups such as the Boys and Girls Clubs of Hamilton and the North Hamilton Community Health Centre to explore innovative strategies in developing these opportunities.

Currently, the MCYU strives to offer parents and children a voice in directing the growth of the program by conducting post-event surveys that allow participants to make suggestions for logistical improvements and the selection of topics that they would like to see covered in future sessions.

### **Partnership with the Youth**

The goal of the MCYU is to provide agency to the youth. Our stated vision is 'We aim to work with the youth to help them become more engaged citizens.' While our lectures allow the youth to directly question the work of research and thought leaders from the McMaster University and our workshops allow them to work with the MCYU facilitators to co-create solutions to real world problems, one of the most participatory opportunities sought after by the families is the Youth Advisory Board. Every year the MCYU selects between 10–12 young people (along with their parents) to participate in the meeting during which their opinions about the program and suggestions for improvements are recorded. Traditionally the MCYU interacts with two broad age groups: 6–9 and 10–14 years old. The parents are interviewed separately as a group while the youth participate in games and activities that are designed to understand their likes and dislikes about the program. Through such activities, the MCYU has recently made major modifications to their website. The contributions of the youth are central to the mission of the MCYU and represent our primary partnership.

The partnership with the youth has also driven the engagement of graduate and undergraduate student volunteers. The youth are quite interested in querying the experience of the MCYU facilitators in order to learn about their academic experience and career aspirations. This line of questioning usually surprises facilitators as there is quite often the perception that the youth in the middle school are not at all focused on post-secondary experience and career development. In fact, the MCYU has found that the opportunities for these discussions are highly valued by the com-

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munity and especially the youth. It is the enthusiasm of the youth and their parents that has allowed the program to maintain a growth rate ranging from 20 to 25 percent during the last five years. This growth has contributed to increased funding and stimulated the delivery of an increased number of engagement opportunities.

## Acknowledgements

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## Abstract

*The McMaster Children and Youth University (MCYU) was founded with a vision to develop family-based educational engagement through community partnerships. The cornerstone of the program is the MCYU's credo, Question Discover Create. Question your environment, Discover your potential and Create a brighter future. The MCYU has developed partnerships with community organizations, University organizations, parents and the youth to facilitate its two primary outreach efforts. The first arm of the program, the on-campus lecture series, has reached more than 6000 young people and their family members over the last 7 years. This component of the program allows attendees to engage with the University faculty through family friendly lectures and provides an opportunity to pose Questions. The MCYU also provides inquiry-based workshops in public schools, libraries and community centers which are facilitated by multidisciplinary teams of undergraduate and graduate students from the McMaster University. These workshops allow the youth to experience the feeling of Discovering new knowledge and Creating solutions. In the 2017–2018 academic year the MCYU workshops connected with 964 unique individuals through 101 workshops. Many of those young people attended several workshops demonstrating the MCYU's success at sustainable educational engagement. Taken together, the MCYU's mission is to foster more engaged citizenship in our youth.*

**Key words:** co-creation; family-based education; educational partnerships; youth-citizenship

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