

Teaching Our Cities Evaluation: Impacts on Schools, Students, & Educators

Project: Teaching Our Cities

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Executive Summary

In 2016, Common Ground High School received a grant from the Environmental Protection Agency to build capacity and teach skills in environmentally themed urban public high schools, through a program called Teaching Our Cities (TOC). TOC aims to create a new, diverse generation of environmental stewards, working to make a visible difference in communities across the country. As part of a 20-month commitment to TOC, a group of 36 educators, administrators, and students from six urban public high schools participated in six workshops led by Common Ground High School (CGHS). Working with CGHS, New Knowledge Organization Ltd. (NewKnowledge), a nonprofit research and evaluation think tank, conducted the external evaluation of TOC, to understand its impacts on creating a cohesive community of educators and increasing students’ engagement in environmental leadership. NewKnowledge used the Community of Practice (CoP) framework as proposed by Wenger, Trayner, and de Laat (2011), to understand the project’s impact.

Our findings reveal:

- Participants were able to attain the first four cycles of a CoP in a short and accelerated time frame;
- The community of educators can still use support in strengthening their CoP and remains eager to do so; and
- The majority of students were likely to volunteer in efforts they cared about, talk to family and friends about their experiences, and agree that they could use the skills they learned in the past year.

INTRODUCTION

In 2016, Common Ground High School received a grant from the Environmental Protection Agency (EPA) to build capacity and teach skills in environmentally themed urban public high schools, through a program called Teaching Our Cities (TOC). TOC aims to create a new, diverse generation of environmental stewards, working to make a visible difference in communities across the country. As part of a 20-month commitment to TOC, a group of 36 individuals – including teachers, principals, administrators, and students – from six urban public high schools participated in workshops led by Common Ground High School (CGHS). Schools included CGHS, Connecticut River Academy (CRA), the Greene School (GS), Boston Green Academy (BGA), Two Rivers, and New Roots. One school, Two Rivers, was initially involved in the TOC but did not receive mini-grant support or sign on to all aspects of the project. This sixth school merged with another school at the end of the 2016-2017 school year, and then withdrew from the project. In total six workshops were convened, one at each school except for Two Rivers, which did not host a workshop, and CRA, which hosted two of them.

The first workshop convened at the end of November 2016 and the final workshop met in November 2017. The first oriented participants to the overall scope of Teaching Our Cities, introduced the capacity-building framework to be used throughout the project, and ensured the participants' schools were ready to meet the reporting guidelines of their EPA mini-grants. Successive workshops followed the capacity building framework and deepened relationships and practices within the communities involved. Workshops focused on a range of activities and took place at different school sites. Over the course of the project, schools made commitments and shared resources.

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Community of Practice

NewKnowledge uses the Community of Practice (CoP) framework as proposed by Wenger, Trayner, and de Laat's (2011), to understand community wide impacts.

A CoP refers to a way of learning in which a group of individual, in a common enterprise or profession, share information and experiences, and collaborate to strengthen their skills and knowledge. NewKnowledge uses the conceptual framework to assess the value of communities in the learning process. In this model, a CoP is defined as a *learning partnership among people who find it useful to learn from and with each other about a particular domain*. This definition is based on the premise that networking and community involvement enables individual and collective learning, helping to improve both the participants' performance and that of their organizations.

To make the connection between activities of a community or a network and improved performance, Wenger et al. (2011) have identified five levels or cycles of value creation associated with the CoP. The cycles are not hierarchical and one cycle does not necessarily lead to another cycle. Collectively, the cycles form a dynamic framework of aspects of the learning partnership, and are the foundation for the process of monitoring, assessing and measuring indicators, and collecting related value-creation stories. The cycles are:

Cycle 1. Immediate value: Activities and interactions

Activities and interactions between members have value in and of themselves. Examples include passing along information, connecting with someone to solve a problem, recruiting a new member, having fun, providing new perspectives, or generating cooperation. Typical indicators of immediate value are level of participation, activity or engagement, quality of interactions, value of participation, and value of connections, collaboration, and reflection.

Cycle 2. Potential value: Knowledge capital

The activities and interactions of Cycle 1 may not be realized immediately, but rather can be tapped as knowledge capital whose value is in its potential to be realized later. Knowledge capital refers to any number of tangible and intangible assets,

including skills, ideas, connections, resource tools, level of trust, confidence, and practices that can be produced or leveraged by a group.

Cycle 3. Applied value: Changes in practice

Changes in practice refer to the identification of the changes or innovations that occur when knowledge capital is applied in specific situations. Knowledge capital may or may not be put to use.

Cycle 4. Realized value: Performance improvement

Realized value refers to improvements that the applications of knowledge capital are having on the particular activity or performance stakeholders are trying to achieve. Changed practices may or may not lead to improved performance.

Cycle 5. Reframing value: Redefining success

Reframing value is realized when learning within the community of practice leads to reconsiderations of how success is defined. It includes re-conceptualizing strategies, goals, values, metrics of assessment, and shared constructions of meaning.

Both monitoring indicators and documenting narratives across a CoP's evolving cycles will generate cumulative evidence beyond anecdotes. Together these sources of data paint an increasingly robust picture of the contributions of a community overall. They can help both researchers and the community itself better understand its trajectory and work toward a shared vision of success.

This Report

The bulk of this report is a synthesis of four previously completed topline reports. These reports are named below:

- *Initial Educator Survey Topline Report* (Gupta, R., Rank, S., Gloeckler, S., 2017, NewKnowledge Publication #EPA.132.257.01)
- *Mid Program Survey Topline Report* (Gupta, R., Rank, S., LaMarca, N., 2017, NewKnowledge Publication #EPA.132.257.02)
- *Student Survey Topline Report*. (Gupta, R., Rank, S., Crim, H., 2017, NewKnowledge Publication #EPA.132.257.03)

- *Administrator Report* (Gupta, R., Rank, S., Crim, H., 2017, NewKnowledge Publication #EPA.132.257.04)

Additionally, data from a final survey, deployed on November 17, addressing the continued growth of a CoP, is included here. This instrument was similar to the mid-program survey, and focused on identifying the presence or absence of characteristics of a CoP. Questions had minor changes to reflect the stage of the project and timing of deployment. A total of 21 participants completed the survey.

METHODS

Over the course of the project, a mixed-methods effort was conducted to collect data using multiple sources to strengthen the validity of our findings. NewKnowledge created and deployed five instruments designed to understand the respective perceptions of the educators, students, and administrative staff involved in the workshop. These instruments are the First Workshop Survey (originally called the Educator Survey), the Mid-Program Workshop Survey, the Student Survey, the Administrator Interview Protocol, and the Final Workshop Survey, which correspond to the four topline reports noted and the appendix to this report.

Instruments

The First Workshop Survey was designed to gain insight into participants' backgrounds, motivations for participating, and their expectations following the first workshop. This survey consisted of six modules: Background information, Nature of Involvement, Motivations for Involvement, Building Community of Practice, Impacts of the Workshop, and Additional Support.

We designed the Mid-Program Workshop Survey to gain insight into participants' needs and progress in the program, and determine their movement towards the development of a community of practice. The survey was deployed after the third workshop, which was hosted by the Greene School in Rhode Island in May 2017. This survey consisted of four modules: Background Information, Building Community of Practice, Impacts of Workshop, and Additional Supports.

The Student Survey was designed to gain insight into how students experience the TOC efforts implemented in each

school, how that experience impacted their views about urban-focused environmental and social issues, and their growth as change agents in their urban communities. The online survey was deployed at the end of the school year in spring 2017. This survey consisted of nine modules: Background Information, Engagement with Teaching our Cities, Conceptualizing Environmental and Human Issues, Community Action and Involvement, Confidence in Problem Solving, Identity as a Change Agent, Critical Thinking and Academic Skills, Environmental Careers, and Demographic Information.

Lastly, we co-created an interview instrument with Common Ground to conduct interviews with administrators at the schools involved in the TOC project. Interview questions focused on understanding the administrators' roles in the project, how they became involved, their schools' top priorities, and how TOC has impacted them. Two NewKnowledge researchers were able to conduct interviews with representatives from four of the six schools in August of 2017. Each interview lasted between 30 and 45 minutes.

The Final Workshop Survey focused on identifying the presence or absence of characteristics of a CoP and encompassed five modules: Background Information, Motivations for Involvement, Building Community of Practice, Impacts of the Workshop, and Open-ended feedback.

Analysis

For all survey data, descriptive statistics and summaries of qualitative results were given in each topline report. Two NewKnowledge researchers analyzed the four administrator interviews and synthesized the data to represent major themes that emerged. Both survey and interview data have been incorporated and synthesized into this final report.

We focused on Wenger, Trayner, and de Laat's (2011) outline of the five sequential cycles of value, in order to fully appreciate the depth and "richness" of communities of practice (CoP): immediate value, potential value, applied value, realized value, and reframing value.

Participants

Of the 36 workshop participants, 24 individuals completed the First Workshop survey. Nearly half of these individuals ($n =$

10) had participated in previous and similar Learning Exchange activities hosted by Common Ground; 11 learned about the workshop as a result of a personal invitation from Joel Tolman, Common Ground's director of Impact and Engagement; and 12 were motivated to participate by a desire to create curriculum that will inspire students. Twenty-two participants completed the Mid Program Survey, and 21 participants completed the Final Workshop Survey (see Appendix for results).

Of the 208 students who started the student survey, 157 completed it. Three schools – CGHS, Connecticut River Academy (CRA), and the Greene School (GS) – had a sufficient number of respondents to warrant comparison by percentages. Boston Green Academy had fewer than 10 responses and could not be compared with the other three schools; New Roots had no responses and was therefore excluded from the results.

RESULTS

Community of Practice

Looking over the course of the TOC project, we find evidence for the first four cycles of Wenger et al.'s framework, which suggest an accelerated movement along the community of practice cycles, given the relatively short time since its inception. Each cycle and the factors which evidence its completion are discussed below.

Cycle 1: Immediate Value

Our First Workshop survey, given at the end of the first Common Ground workshop, indicated that educators were already interested and motivated to create a community within which learning and collaboration could take place. Educators and administrators valued the opportunity to hear from others at different schools and were inspired to collaborate through face-to-face learning, connection, and work. They felt excited to share and disseminate what they had learned in the workshop with their colleagues and were looking forward to establishing a dialogue between the many educators moving forward.

That they valued a community was further enforced from our mid-program and final workshop surveys, which revealed participants' greater confidence in their abilities. In the final

survey, one participant wrote that *[they] feel good about the new things [they've] learned, and glad that [they are] going to be able to make a positive impact*. Participants also shared strong continued enthusiasm in the development of the network to date.

Participants were supported through their exposure to the other schools with similar interests in sustainability and shared desire for community-based work. A participant from the final survey wrote that *intentionally maintaining the network of support is critical, beneficial, and inspiring*. They acknowledged and valued the act of sharing ideas and resources toward the betterment of their role as leaders.

These findings show that educators, administrators, and students who completed the survey perceived an immediate value to cultivating a community of practice. This is the first step toward the creation of self-regulating and perpetuating community of practice.

Cycle 2: Potential Value

From the Mid Program Survey and the Final Workshop Survey, we note that participants displayed a continued commitment to cultivating a CoP. Educators and administrators had begun to value a community of educators that had the potential to support their work. They also perceived the importance and value in collaborations between schools as a way of strengthening their common goals. One participant shared that *[their] partner schools have people in similar roles to [themselves], and [has] been consistently drawing on those connections to think about shared challenges*. Thinking about the long-term, data from both the Mid Program Survey and the Final Survey show that educators continued to express a desire to create more opportunities to discuss and learn from other schools, facilitate more internal collaboration and support in their own schools, and be able to easily share resources among the network.

Cycle 3: Applied Value

Findings from the administrators' reflections further supported evidence that a community of practice has indeed started to grow. Administrators were able to articulate how their respective schools placed emphasis on collaborative efforts

with multiple stakeholders including students, which was highlighted by TOC.

Administrators further felt there was, to a large degree, buy-in from teachers and other administrators at their respective schools. This buy-in, although not 100%, was certainly sufficient to warrant the claim that interest was high and teachers, principals, and administrators were engaged in the intention of building a community of practice.

Administrators agreed with the educational staff that they were able to engage with a supportive cohort of peers and exchange ideas and resources. They felt the community of educators they were members of had positive impacts on their professional development.

Administrators described tangible impacts on their respective schools in how learning experiences were restructured to motivate and engage students in more relevant and interesting ways. Indeed, students also shared how their school experiences helped them develop an interest in volunteering around an important cause to them while using the skills they learned. These insights and changes in the schools participating in TOC reveal that creating a community between schools was not only a good idea with strong potential, but actually lead to real and improved results. One participant suggested that schools could engage in partnership relationships or mentor-like relationships because *one school may want to learn more about a specific practice of another school*.

Cycle 4: Realized Value and Cycle 5: Reframing Value

Typically, the fourth and fifth cycles of CoP are more commonly observed in longer term networks. Although we do not explicitly see the fourth cycle present, the Final Workshop survey did reveal evidence that it may emerge. This was apparent among student participants who were reflecting on the changes in their learning experiences. One student, for example, reflected that *as a student – [having been involved with the workshops it is easier to understand] – the themes and components of our schools more thoroughly*. Another student said that *[they] plan on discussing student voice more in school and speaking with student government about what to do to make sure that each student is heard*, thus

reflecting on how best to engage students in a student-driven curriculum.

Program Impacts

The majority of students across all schools reported engaging in TOC activities at least sometimes during the school year. These included projects, research, field trips, classes, and reflections about environmental and social issues. Overall, students displayed a good grasp of environmental issues such as water pollution, toxic pollution, climate change, and air quality that had implications on human health, but they reflected a limited awareness of the intersections between social and environmental issues, such as poverty and employment, affordable housing, and racism.

The majority of students were likely to volunteer in efforts they cared about, or talk to family and friends about their experiences over the past school year. Over half of the students also agreed or strongly agreed that they could use the skills they learned in the past year. We found these results consistently across schools, which supports the claim that TOC is having an effective impact.

Administrators were hesitant to make claims about the impact TOC had on students in their respective schools. However, they all held aspirations for positive student impact. More specifically, some felt that as students engaged with their communities through the TOC projects, they would see more value in the lessons and begin to identify areas of personal interest in the future.

Educators also reported positive impacts from the TOC. They had greater appreciation, confidence, and comfort with using expeditionary or project-based learning strategies and teaching about urban environmental issues effectively to students after participation in TOC, compared to before. By the time of the mid-project workshop, teachers expressed having higher confidence in their abilities to take action in making changes to their curriculum. This sentiment continued through the final workshop survey. They felt they were able to revisit curricula and integrate more possibilities for student and community engagement, expand expeditionary experiences through interdisciplinary project-based learning, and incorporate more sustainability themes in their teaching.

DISCUSSION

Within a year of its inception, the TOC model has begun to create a community of practice with an accelerated trajectory. For the short time-span for which it has been in place, movement towards concrete applications from the shared community learning is unusual.

We interpret this as an exciting opportunity to inform existing research and practice in building a community of practice by identifying the key factors that enabled its rapid evolution. Joining the TOC community with a pre-determined project in mind may have enabled educators to jump start conversations, with very clear questions, requests, and concerns. In projects we have worked on in the past, which aim to create CoPs with educators working on environmental topics, we observed slower CoP growth rates. One reason for this may be that in previous projects, efforts were made to actively create a CoP as an integral part of the project structure, while TOC educators volitionally chose to initiate a CoP themselves. This difference between asking participants to adhere to a CoP structure from the outset versus allowing that structure to come from the participants themselves may have impacted the rate of CoP growth; the CoP may have progressed more rapidly due to a willing group of individuals that were eager to create such a community. Efforts where members were already working on similar work prior to joining the TOC project may have also helped progress towards building a CoP.

We suggest that TOC is following this latter framework for connecting educators, with promising results for the community's continued growth. An additional factor that may have influenced the progress in TOC may have been the decision to connect teams rather than individuals from each school. A team-based focus at each school may have also eased communication burdens through shared responsibilities, and allowed more time to refine their projects.

As with any collaborative effort involving partners from multiple organizations, concerns were shared about ongoing support for more networking opportunities during the project and beyond, to sustain the community created. This points to the need for continued support before the TOC CoP is fully

autonomous. However, we also interpret this as keen interest in being connected in the future to learn from each other.

Recommendations

Based on our results, we recommend:

- For future workshops with the educators in the CoP, structure, plan agenda and work-time effectively to ensure attendees maximize in-person opportunities to collaborate and engage in shared learning.
- Actively engage students in conversation about the TOC curriculum to raise their awareness of it and enable them to attribute their learning and development to these changes; this will also enable future evaluations to more directly connect TOC experiences to student impacts.
- Critically reflect on the various modes of support, guidance, and resources that Common Ground facilitated to identify those that helped develop the TOC community of practice; we anticipate this can lead to a model to inform the wider community of practice work.
- Strategize about continued opportunities to foster long-term interaction and shared learning among educators in the community of practice; this point was reiterated by educators in the community of practice as well as administrators at their schools.
- Continue to strategically engage youth leaders to identify their unique role and perceived value in the community of practice.

CONCLUSION

In a very short time, Teaching Our Cities appears to have planted strong seeds for the creation of a community of practice among five environmentally focused high schools. Although concerns have been raised about the continuation of communication and sharing among these schools, they are in a strong place to continue to cultivate an inspiring and rich community with some effort.

Such a community has the potential to foster curious and engaged students as well as motivate educators and administration staff. Creating a conversation and dialogue between these schools has already spurred interest, inspiration, and a desire to collaborate toward the betterment of the communities surrounding the schools. We feel optimistic that with additional future support, these schools will continue to grow in tandem, supporting each other and their students, to lay the ground work for future communities to do the same.

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