An Analysis of a Community-Based Alternative Education Program to Determine the Efficacy of Program Content

By

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Dedication

To my family.

Without your patience, love, and generous supply of baked goods I would not have made it this far.
Abstract

In 2010, a community needs assessment in northern Kingston, including neighbourhoods such as the Inner Harbour and Rideau Heights, reveal a high school dropout rate averaging 21.7% (Shore, 2010). This was even more concerning when compared to the city’s overall average dropout rate of 10.5% (Shore, 2010). In 2010, Kingston Community Health Centers (KCHC) introduced Pathways to Education (P2E), aiming to decrease dropout rates as a way to help break northern Kingston’s poverty cycle. P2E provides at-risk high school students with access to weekly individual and group tutoring, social and career mentoring, advocacy, and financial support. P2E has recently introduced a new program model that combines both tutoring and mentoring. Toward an eventual program evaluation, an analysis was done to collect and examine quantitative data on the interactions between students and volunteers. Feedback forms were anonymously completed by volunteers over an eight-week period. Volunteers spent most of their time tutoring math and English. There were statistically significant correlations between volunteer and perceived student engagement and the amount of time spent with students as well as the number of students in a group. It is recommended that further research be done to examine the benefits of collecting both quantitative and qualitative data in an after school setting, as well as making data collection a regular occurrence in similar agencies.
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Lastly, I would like to thank my friends and family for their consistent support and for reminding me to breathe and take things one step at a time. Thank you.
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Chapter I: Introduction

In 2010 a community needs assessment was conducted in northern Kingston, including neighbourhoods such as the Inner Harbour and Rideau Heights, which revealed that, across this area, high school dropout rate averaged 21.7% (Shore, 2010). This high dropout rate was even more concerning when compared to the city’s overall average dropout rate of 10.5%. Of the northern Kingston community members Shore (2010) spoke to, 45% had not completed their high school education.

A neighbourhood can have a major impact on a student’s chances of dropping out of high school (Murry, Berkel, Gaylord-Harden, Copeland-Linder, and Nation, 2011). Low socioeconomic status (SES) is the second highest predictor of dropping out, preceded only by a combination of low SES and low school attendance (Suh, Suh, & Houston, 2007). Low SES students are eight times more likely to dropout than those with a higher SES (Brownell et al., 2010). Dropping out of high school can not only negatively impact the student but can also have negative effects on government, including lower tax revenues, increased crime rates, and increased spending on health care and social assistance (Tyler & Lofstrom, 2009).

In 2010, Kingston Community Health Centers (KCHC) introduced an after-school program called Pathways to Education (P2E). P2E is a Canadian agency, with 17 locations across the country, whose aim is to help youth in low-income communities graduate from high school and transition to post-secondary education. This agency was brought in as a way of helping break the cycle of poverty in northern Kingston by aiming to reduce the area’s high school dropout rate. According to Litke (2005), after-school programs can be a highly useful developmental support for low-income students. Sahin, Ayar, and Adiguzel (2014) agreed by saying that after school programs are “a means to foster interpersonal competence, help define life goals, and promote educational success…” (p.310). P2E provides students with access to weekly individual or group tutoring as well as social and career mentoring, advocacy, and financial incentives. These services are provided at no cost to participants, who gain support and meaningful activities they may not otherwise have had access to (Miller, 2003).

At the time that the present study was being designed, P2E was introducing a new program model that combined the use of tutoring and mentoring. To assess whether the new program met students’ needs, P2E aimed to compare data from both the old and new versions of the program. However, due to staff turnover, location changes, and the introduction of new program software, it had been difficult for P2E to consistently collect and analyze data, and act on results. However, P2E’s new permanent location and stable staffing complement had enabled them to look towards collecting and analyzing data in order to evaluate the new program.

P2E currently receives funding from the provincial and federal governments, and also from the private sector. Policy makers often tie funding allotments to quantitative data such as program attendance and other such factors (Litke, 2005).

Often, programs are required to provide data on outputs and outcomes such as impact on the community. In the current study it is hypothesized, that the quality and quantity of time spent between volunteers and their students will affect their overall engagement during programming.
Feedback forms were created to provide the agency with the data that is required to provide sufficient evidence for the program’s continued presence. Due to the age and number of students attending programming, feedback forms were administered to volunteers instead of to the students. The aim of the present study was the collection and analysis of this data to provide insight into possible resources and support that could be provided to volunteers, staff, and other support sites.

This report will review the literature on topics such as poverty, dropout rates, after school programs, the current role of P2E, and the use of thematic analysis in the collection and analysis of data. This will be followed by a description of the study’s participants and the methods for collecting and analyzing the data. Subsequent to the methodology, the results of the study will outline the three main uses of the analyzed data and the future plans of the program. Finally, the discussion section will summarize the study, draw conclusions from the results, and provide insight as to their value and contributions of this research, the limitations, and make recommendations for future research on P2E.
Chapter II: Literature Review

Poverty and Education

Neighbourhood poverty. Ainsworth (2002) identified the characteristics of neighbourhoods and their effects on the students that live in them. Students are often unknowingly influenced by the adults in their area (Ainsworth, 2002). In neighbourhoods with adults who went to school or had steady employment, they often modeled those behaviours and attitudes for students living near them. The same was found with less ideal role models, who often modeled antisocial attitudes and behaviours toward school and work, negatively influencing students (Ainsworth, 2002). The low-income neighbourhoods in which these role models resided often offered fewer resources, information, and opportunities than higher income neighbourhoods (Ainsworth, 2002).

According to Murry et al., (2011), this lack of opportunities can also influence a student’s norms, values, access to social institutions, and stress levels. Murry et al., (2011) studied the effects of neighbourhood and poverty on adolescent development by moving higher-poverty families to lower-poverty neighbourhoods. Initially the male participants made significant gains in achievement and homework, while female participants were less successful. However, these improvements did not last, implying that there was more to the effects of neighbourhood poverty than just location such as student opinions on education and social class (Murry et al., 2011).

Likewise, Murry et al., (2011) found that a student’s view on school and its benefits, as well as the number of peers who had chosen to drop out of high school also had negative effects on the amount of time spent on homework. Students’ views, not only about school, but also about social class, socio-economic status, and poverty also influence the level of effort they put towards school work and ultimately whether or not they will decide to drop out of high school (Sullenberger, Hostetter, & Wood, 2012).

Sullenberger et al., (2012) interviewed forty six high school students about how they construct social class. Most viewed socio-economic status as shaped by three factors: family of origin, the completion of higher education, and social mobility (Sullenberger et al., 2012). The students viewed social class and social economic status as determined by an individual’s family and their current place in society: someone in a lower class would most likely never get above middle class and would therefore not bother to try to excel in school, believing that such efforts would be meaningless.

Sullenberger et al., (2012) explained that in order to help alleviate the effects of neighbourhood poverty, society has to understand the current views on poverty and how those interpretations can negatively contribute to the cycle of poverty.

Dropout rates among students. Neighbourhood poverty is but one of several factors that contribute to a student’s probability of dropping out of high school. Brownell et al., (2010) found that it was not only the nature of the risk factors that effected dropout rates, but the number of risk factors also had a significant impact on a students’ final decision.
Brownell et al., (2010) examined the social and academic outcomes for at-risk high school students in Manitoba and found that there were several factors beyond perceived learning ability that prevented them from reaching their full educational and developmental potential. Their study focused on three main factors: involvement with child welfare, income assistance, and having a young mother. Out of the 11,703 at-risk students studied, 84% with all three factors failed to complete high school; of those with only a single risk factor, 41% to 57% did not complete high school. As well, one third of the students with all three risk factors ended up receiving income assistance and more than 44% of all the female students with three risk factors eventually became teen mothers. These findings demonstrate how the presence of multiple risk factors, without intervention, can further contribute to a continuous never-ending cycle of risk factors.

It is popular opinion that the main factor contributing to whether a student chooses to drop out of high school is due to the presence of low marks (Suh et al., 2007). However, Suh et al., (2007) analyzed data from the National Longitudinal Survey of Youth 1997 and of the 4,327 adolescents included in the survey only 43% who had a low grade point average actually ended up completing high school despite their marks. In other words, most students with low grades are able to graduate.

Like Brownwell et al. (2010), Suh et al., (2007) list several factors other than low grades that could effect at risk students including low socio-economic status, changing schools, their parent’s level of education, having a negative outlook on the future, and being suspended from school.

Moreover Bridgeland, DiIulio, and Morrison (2006) examined how lack of parental involvement could also negatively impact students. In a survey of sixteen to twenty five year-olds who identified themselves as high school dropouts, 47% of those surveyed stated that their parents’ work schedules often interfered with their ability to keep up with their school life. As well, 70% of dropouts surveyed said they were confident that they would have been to graduate high school if they had been encouraged to put in the necessary effort, while 74% even said that given what they came to know, they wished that they would have stayed in school instead of leaving.

Not only are there many causes and factors that affect dropout rates, there are also many consequences for students if they decide to leave high school (Tyler & Lofstrom, 2009). Dropping out of high school will make it less likely that these individuals will be employed, while lowering their chances at receiving a reasonable income, and contributing to a decrease in their overall health (Tyler & Lofstrom, 2009). Tyler and Lofstrom (2009) also listed the societal costs of dropping out, including an increase in criminal rates, lower tax revenues, and an increase in public spending on health care and public assistance.

Both Suh et al., (2007) and Tyler and Lofstrom (2009) agreed that there is a need for programs to help students stay in school. Suh et al., (2007) went on to explain that these programs should not only provide mentoring for students, but also offer career counselling and be run by caring and committed adults.
After-School Programs

**Decreasing dropout rates.** High school is an important milestone that often leads to further education, training, and meaningful employment (Brownell et al., 2010). Bodilly and Beckett (2005) have described an increasing need for supervised after-school activities and establishments that can help contribute to students’ growth. For students thinking of dropping out, after-school programs can help students develop positive feelings towards school and learning by bringing together parents, schools, and communities to help aid and encourage students (Miller, 2003).

Vandell, Reisner, and Pierce (2007) followed 3000 low income students for two years, half of whom were attending a variety of after school programs. They found that the students who regularly attended their after school programs experienced significantly more positive outcomes even when combined with other experiences such as sports teams, clubs, babysitting, and other such activities.

The majority of after school programs share similar goals: increasing academic performance, promoting healthy and positive development, decreasing delinquency, substance use and abuse, and problem behaviours such as aggression, and increasing appropriate social skills and behaviours (Bender et al., 2011). Bender et al. (2011) concluded that after school programs have been reasonably successful in achieving many of these goals.

Miller (2003) explained that after school programs can also be effective for creating a positive peer culture that values learning and applying new skills in order to help students positively contribute to society. By being in a constructive and safe environment students can not only build meaningful relationships with adults who are positive role models, but can also develop relationships with peers who have a more optimistic outlook on school and their future (Miller, 2003). This allows after school programs to become a middle ground between school and home and can thus help increase teacher and parent involvement in the student’s personal and academic life (Miller, 2003). The relationships that form between the students and programming staff can help students realize the benefits that they can gain from attending programming (Little, Wimer, and Weiss, 2008).

After school programs help engage students in valuable activities that teach them new skills and help them find ways of applying skills that they have already learned in school (Miller, 2003). They can be highly beneficial in helping students figure out who they are as learners in order to help empower them to become agents of their own learning. In doing so, students can become more independent, and take more initiative in learning and practicing skills.

**The role of Pathways to Education.** Tyler and Lofstrom (2009) identified five elements of a successful after school program: (a) close mentoring and monitoring of the students involved; (b) individual case management; (c) including family by keeping them involved and informed; (d) using a career-oriented and experiential approach to learning; and (e) attention to outside problems that may have an impact on a student’s behaviour and performance in the program. The most successful after-school programs observed by Tyler and Lofstrom (2009) had incorporated most if not all of the above elements.
Pathways to Education (P2E) is one program that has integrated all of these five elements into their programming. The P2E model is based on four pillars: academic tutoring, social mentoring, advocacy, and financial support. The program engages the academic tutoring and social mentoring pillars by combining both individual and group academic tutoring, with career preparation, social mentoring, and recreation activities. Advocacy is provided to students through individual support at school by helping connect with teachers, school staff, and parents. The last pillar is financial support is provided through incentives and yearly bursaries.

According to Litke (2005) after school programs often experience problems with attendance. Students value their time, often helping out with family or hanging out with friends outside of class (Litke, 2005). Litke (2005) explained that for students to attend programming they want to make sure they are being fairly compensated for their time. This is why P2E offers financial incentives based on attendance in the form of cafeteria cards, grocery vouchers, and bus tickets. These incentives also help combat the negative effects that hunger can have on academic performances as well as providing transportation for those who may struggle with attendance or punctuality.

The struggle with funding. Miller (2003) looked at after school programs and found that there are several qualities that are required to provide effective and high quality programming. Some of these aspects include: having staff who are understanding, and well trained; flexibility; on-going evaluation and self-assessment; as well as adequate funding without the constant threat of loss.

For non-profit organizations, funding for after-school programs is a constant struggle (Miller, 2001). Funding for such programs is limited, often tied to attendance or granted on a short-term basis (Miller, 2003). Policy makers think of after school programs as a silver bullet solution, offering funding based on immediate quantitative evidence demonstrating the program’s effectiveness (Litke, 2005). This can cause agencies to become entangled in a struggle to meet both the requirements of the funders and the needs of their own clients (Bodilly & Beckett, 2005). Litke (2005) suggested that, in order to alleviate some of the pressure on agencies, policy makers need to instead look at some of the qualitative evidence that programs can provide.

Johnson and Onwuegbuzie (2004) have summarized the longstanding debate over the merits of quantitative data versus qualitative data. Those in favour of quantitative data argued that social observations ought to be handled similarly to how scientists handle physical phenomena and that the social sciences ought to be objective, unbiased, and emotionally detached. On the other hand, those in favour of qualitative data argued that social sciences cannot be objective and that research is value-bound (Johnson & Onwuegbuzie, 2004). Johnson and Onwuegbuzie (2004) concluded that neither form of data was superior to the other and instead advocated for the use of both in mixed-method research designs. Using both kinds of data can create a more expansive and creative approach to increasing knowledge.

Regardless of the type of data used, Miller (2001) described an agency’s knowledge base as one of the three main elements for after school programs when it comes to obtaining the necessary resources. Miller (2001) argues that funding will be in vain if these programs do not deliver substantial evidence as to how they help students. Agencies need to collect more
information on how their programs work and the approaches they use in order to help promote and encourage sustainability.

To increase the funding of programs and resources for dropout prevention, there needs to be more evaluation (Tyler & Lofstrom, 2009). However, outcome evaluations can become difficult to implement and can even be misleading, in the absence of information on programs (Miller, 2003). There is currently a gap in the literature on performing program evaluations for after school programs due to the difficulty in obtaining data on program process and its effectiveness (Miller, 2003).

Bowen, Rose, and Ware (2006) stated that there was a lack of reliable and valid assessment tools for education settings. The few existing assessment tools often struggle with clear definitions of the concepts used by learning-focused agencies (Bowen, Rose and, Ware, 2006). Evaluations of after-school programs have tended to focus on academic outcomes, attendance records, and standardized test scores (Bowen et al., 2006). Also, there is currently little literature on the effects of after school programs on the experiential impact that they may have on students, such as on social skills and interactions (Bodilly and Beckett, 2005). Also, few agencies are able to confirm whether higher levels of program participation and attendance are actually linked to more positive outcomes, which is a problem given that many funders rely on attendance scores and associate these higher attendance scores with higher program effectiveness (Bodilly and Beckett, 2005).

**Collecting program data.** Incorporating data collection into an agency’s standard procedures can make it less stressful for staff and can thus increase their motivation to participate (Bender et al., 2011). By being involved in the data collection process, staff may feel valued, therefore increasing the efficiency of the data collection process while reducing staff fatigue. By increasing staff participation, their understanding of data collection may increase and they may thus have a stronger commitment to the process. Working with staff who are directly involved with programming can also help evaluators identify more specific outcomes as well as some of the possible positive and negative factors that may pose a risk to these outcomes (Bender et al., 2011).

To make the data collection process as stress-free as possible for both staff and students, Bender et al. (2011) suggested that surveys be made as short and easy to understand as possible. Surveys, though a valuable source of data and information for agencies, can be difficult for students to complete, while also maintaining their attention and interest (Bender et al., 2011). Bender et al. (2011) found that the use of technology and incentives in administering them can help maintain students’ engagement while completing surveys. Granello and Wheaton (2004) explained that, with the constant changes in technology, online data collection methods are less expensive and more time efficient than traditional methods such as paper surveys. Miller (2003) also recommended that agencies collect data over an extended period of time to obtain meaningful results. A study by Vandell et al. (2007) the data showed the benefits of attending after-school programs over a span of two years.

Overall, Litke (2005) explained that funders need to shift some of their focus away from quantitative data such as attendance scores and standardized test results, and instead pay more attention to benefits of programming to individuals. Like (2005) went on to state that after school
programs have the potential for being successful as long as agencies, funders, and policy makers remember to listen to what it is that adolescents are saying that they want and need out of programming.

Summary

As effective as after school programs have been in decreasing high school dropout rates, it is important for them to continually evaluate their effectiveness and impact on the community. Data collection for these programs is an important yet difficult step in the implementation of program evaluations. The current study addresses the gaps in current literature by collecting and analyzing both qualitative and quantitative data in the setting of an after school program. Program evaluation and an understanding what occurs during that programming are important for non-profit organizations like P2E, that are funded on the basis of data on processes and results. While P2E’s program evaluation will not be conducted by the current researcher, the collection and analysis of collected data will be a key aspect to the program evaluation to be conducted by the School of Urban and Regional Planning at Queen’s University later on.
Chapter III: Methodology

Participants

There were a total of 33 participants in the study, including mostly P2E volunteers and a few staff.

Those participating in the study were first approached by the researcher who explained the goal of the study and the requirements for taking part. If interested in helping with the study, the participant was asked to sign a consent form which outlined the potential benefits and risks to taking part in the study (Appendix A). After signing a consent form, participants were shown a blank feedback form as well as a form that was completed prior to the start of programming and that acted as a sample for participants while the researcher explained to them how to complete the forms and where to put them when finished (Appendix B). Participants were reminded that the forms were completely confidential and that since filling out the forms was optional, they would not be held accountable if they were unable to complete them.

Design

A mixed-method case study design was used to evaluate the data were collected through the use of feedback forms which were completed by volunteers and staff at the end of each night. This method was chosen due to its simplicity and ease of use. The results will inform a future study to be conducted by the School of Urban and Regional Planning at Queen’s University. Forms were collected by the researcher and sorted by P2E location. Upon completion and verification of data entry, the hard copies of the forms were destroyed.

Measures

Both qualitative and quantitative were collected through the use of feedback forms. The feedback forms were created by the researcher and the Community Relations Facilitator (CRF). Feedback forms were formatted with tables and included questions on how much time was being spent with students, how many students were in a group at a time, what activity was being done with the students, the volunteer’s engagement level for the night as well as the perceived engagement level of the students. The purpose of these questions was to find out more about the interactions between students and volunteers, as well as how these interactions differed at each site. Open-ended responses were coded and categorized before being inputted into excel. An exploratory and inductive approach was used to code the activities recorded by staff and volunteers. Possible categories were recorded before analysis began in order to make the coding process easier, however, these pre-determined categories were open to modification during analysis as there was no way to predict all categories that might be used. Possible categories included: Academic Work, Open Discussion, Personal Issues, Recreation, Independent Learning, Life Skills, and Communication. Feedback forms also included two items in which staff and volunteers were asked to rate their own and their students’ level of engagement. Ratings were on a ten-point numeric scale: one representing the feeling of being unengaged and ten representing high engagement.
Procedure

Data were collected at each of the three P2E locations in Kingston, one of which was split into two sites since it ran for four nights a week unlike the others that ran only two nights. Forms, which only took a few minutes to fill out, were completed at the end of the participant’s shift after the students had left. One site ran programming after school from 2:30pm until 4:00pm, whereas the other two sites ran programming from 5:00pm until 8:00pm split into two separate one and a half-hour sessions. Feedback forms, consent forms, envelopes, and pens were provided at each site. Both blank and completed forms were stored in envelopes. Data were entered into an Excel table.

Potential participants were approached prior to the start of programming and asked to take part in the study. After signing a consent form, the participants were shown a blank feedback form as well as an example form in order to learn how to complete the sheets (Appendix B). Participants were encouraged to fill out a total of six feedback forms. Participants were also reminded that feedback forms were anonymous and would not be used as any form of assessment on their performance. Participants were told to talk to either the researcher or the CRF if they had any questions or concerns. The researcher and/or CRF were present for each session in order to collect the completed feedback forms, which were placed in an envelope to be sealed at the end of each night and placed in a locked office. Weekly meetings took place between the CRF and researcher to discuss the data collection procedures. The study protocol was reviewed and approved by the Research Ethics Board at St. Lawrence College.
Chapter IV: Results

Summary of Research

The present study aimed to provide insight into the interactions between students and volunteers during programming in order to provide the agency with more data for resource development and continued funding. Feedback forms were used to find out more about the interactions between students and volunteers, as well as how these interactions differed at each site. The present study also wanted to look at the relationship between engagement in programming on the one hand, and on the other the amount of time spent with students and the size of the groups. The researcher as well as the Community Relations Facilitator (CRF) used both Microsoft Office Excel and IBM SPSS Statistics to compile and analyze the data.

Coding Process

During the coding phase, data was split into both quantitative and qualitative data. Qualitative data included the overall activities that were being engaged in by volunteers, such as academic work, alternative mentoring, career related activities, open discussion, personal discussion, and other. These activities were placed in a table and also included further sub headings based on the information recorded by volunteers. Quantitative data was sorted into a separate table that compared the date, number of students in a group, time spent, volunteer engagement, and perceived student engagement. Both sets of data were also further broken down by each of the four sites.

Programming

The majority of the quantitative data collected was in reference to the frequency and types of programming options that students took part in. When students arrived at programming, they could choose between one of two initial options: either academic support, which was normally for the students who had homework or had to study, or alternative mentoring which could include other options such as career mentoring or recreation. Figure 1 displays the percentage of each program option that volunteers engaged in with students. Overall, there were six different activities that volunteers engaged in with students: academic assistance, alternative mentoring as well as career help, and both personal and open discussions.
Overall, volunteers spent a total of 25% of their time at programming assisting students with academic work, which could include homework help, tutoring, or studying help. Volunteers also spent a total of 34% of programming time over the eight weeks engaging in alternative activities with students including games, crafts, workshops, and recreation. An additional 22% of time over the eight weeks was spent engaging in personal conversations with students.

**Academic support.** The types of academic interactions recorded by volunteers were coded and sorted by subject following the data collection phase in order to get a better understanding of what subjects students were requiring help with the most. Figure 2 shows the frequency of subjects that volunteers assisted with tutoring. The four most frequent subjects across all sites were math, English, chemistry, and geography. The frequency of subjects was also examined by site. Table 1 displays the frequency of tutored subjects by site for the eight weeks. Most sites listed math and English as their top two most tutored subjects, with the exception of Site A-2 and C where chemistry, science, and Native history were more frequent.
Table 1

Frequency of Tutored Academic Subjects by Site

<table>
<thead>
<tr>
<th>Subject</th>
<th>A-1</th>
<th>A-2</th>
<th>B</th>
<th>C</th>
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</tr>
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Alternative mentoring and discussions. Alternative mentoring activities were also split up among the four sites. Categories included games (55%), recreation (19%), visual arts and crafts (10%), life skills (5%), individual learning activities (3%), computers (3%), watching videos (3%), and completing surveys (2%). Games, consisting of board games such as Apples to Apples and Monopoly, were the most frequently engaged activity across all sites. The only exception to this was Site B, which had access to a gym and thus had recreation as the most frequent alternative activity that volunteers engaged in.

Although a component of alternative mentoring, career mentoring was counted separately as it usually applied only to grade twelve students. Sub-categories included attending workshops, assisting with resumes, helping with job applications, school applications, and discussions surrounding jobs and post-secondary school. Figure 3 shows the proportions of frequencies which volunteers reported assisting with different career-related mentoring activities.
Volunteers were also encouraged to record the general topic of discussions with students, as shown in Figure 4. Approximately 60% of the discussions between students and volunteers centered on the student’s home life, while another 29% of the recorded discussions were related to their extra-curricular activities. Volunteers also reported talking about school (8%), the future (2%), and exams (1%).

In addition to the other categories that were measured, there were 22 reports of what was coded as “shuffling”. Out of the 22 reports, 64% of these were from volunteers at Site B. Volunteers described “shuffling” as circling the room while checking in with students or moving from one student to another to briefly check their progress and offer assistance.
Engagement

In addition to measuring the content of student and volunteer interactions, volunteer engagement and perceived student engagement were recorded via a one to ten rating scale; one representing the feeling of being unengaged and ten representing high engagement. The mean engagement score for volunteers was 8.36, with a standard deviation of 1.25. The mean perceived student engagement was 7.82, with a standard deviation of 1.33. Figure 5 displays the average volunteer and perceived student engagement each night over the eight weeks. The graph shows a slight positive trend for each set of data suggesting that both student and volunteer engagement increased over the eight weeks.

![Figure 5. Line Graph of Average Volunteer and Perceived Student Engagement Over Time](image)

Time spent. Program sessions consisted of two separate hour and a half sessions each night. There is no set amount of time that volunteers can spend with students. The mean number of minutes volunteers spent with students averaged 43.06, with a standard deviation of 36.20. Figure 6 and Figure 7 shows the overall relationship between the time spent with students and volunteer and perceived student engagement.

Overall, volunteers spent between five and eighty minutes with students. Engagement ratings for volunteers and students ranged between five and ten. Both graphs show a slight positive trend, suggesting that as time increases, so does engagement for both volunteers and students. Spearman’s rank-order correlations were calculated to assess the relationship between
the amount of time spent with students and volunteer and student engagement, respectively. There was a slight positive correlation for both volunteers ($r_s = .004$, $n = 228$, $p < .001$) and students ($r_s = .004$, $n = 228$, $p < .001$), which was statistically significant.

Figure 6. Scatter Plot of Volunteer Engagement in Comparison to Amount of Time Spent with Students (Min)

Figure 7. Scatter Plot of Perceived Student Engagement in Comparison to Amount of Time Spent with Students (Min)
Number of students. Throughout the sessions, volunteers were allowed to work with multiple students in an evening, whether individually or in a group. The mean number of students that volunteers reported working with at once was 2.19, with a standard deviation of 1.90. Figure 8 and Figure 9 display the overall relationship between volunteer and perceived student engagement with the number of students in a group at once. As with the time variable, engagement levels for students and volunteers ranged from five to ten. The majority of volunteers worked with anywhere from one to five students at a time. Both graphs show a slight negative trend, meaning that as the number of students increases, engagement levels for both groups decrease. A Spearman’s rank-order correlation was run to determine the relationship between the number of students working with a volunteer and the level of engagement of both volunteers and students. There was a strong negative correlation for both volunteers ($r_s = .316$, $n = 231$, $p < .001$) and students ($r_s = .867$, $n = 231$, $p < .001$), which is statistically significant.

Figure 8. Scatter Plot of Volunteer Engagement in Comparison to the Number of Students in a Group
Figure 9. Scatter Plot of Perceived Student Engagement in Comparison to the Number of Students in a Group
Chapter V: Discussion

Summary of Research

The aim of this thesis was twofold. Firstly, it aimed to better understand the interaction between volunteers and students during programming, as well as how factors such as time and group size affect engagement. Secondly, this thesis sought to provide the agency with data for use in a future program evaluation to be conducted by the School of Urban and Regional Planning at Queen’s University.

Non-profit programs are often required to demonstrate their effectiveness through the use of program evaluation and performance measures in order to receive funding (Litke, 2005). At the time of this thesis there were several gaps in the literature around data collection and program evaluations in after school programs. The goal of this study was not only to provide the agency with data on program activities and processes, but also to add to the literature on data collection in similar settings.

Data collection was done through the implementation of volunteer feedback forms. Over an eight-week period, feedback forms were completed at the end of programming each night by the volunteers at each of the four sites. They were asked to record the number of students they worked with that evening, how many minutes they spent with each student, what activities they took part in or what was discussed, as well as their own engagement level and the students perceived engagement level for the evening.

Results showed that volunteers spent a total of 25% of their time over the eight weeks providing academic support to students and 34% of their time engaging in alternative mentoring activities. This suggests that not all of the students attending programming to work on academics require assistance with their work. Of those students who did require tutoring, most requested help with subjects including math, English, and geography. As well, volunteers did not talk much about school during programming, with 60% of discussions between volunteers and students centered on home life. As for engagement, both volunteers and students had high engagement scores, with the volunteers’ scores being slightly higher. Overall, there was a slight positive correlation between student and volunteer engagement and the time being spent together, with volunteers spending anywhere from five to eighty minutes with students. There was a strong negative correlation between volunteer and student engagement and group size, most volunteers working with one to five students at a time, suggesting that group size plays a factor in both volunteers and students engagement level.

Strengths and Implications

The findings of the present thesis support existing views on program content and engagement in after-school programs, including the need for more volunteers who are knowledgeable in math and English. Staff and volunteers were open to completing feedback forms and incorporating them into their routine, which suggests that such data collection and feedback could successfully become a part of the agency’s ongoing operations.
With the gap in the literature on data collection in after school programs, the present thesis provided information on, and insight into the benefits and challenges associated with collecting program data. The findings of the present study support the current literature advocating that funders request and consider both quantitative and qualitative data sources in their decision making.

**Limitations and Challenges**

Most of the limitations of this study were anticipated from the literature on the potential biases of data collection in after school settings. Limitations of the current study center around time constraints and volunteer bias. Time constraints imposed a limit on the amount of data collected. Ideally, it would have been better to collect data for the full school year, rather than for the eight weeks that were possible in the present study. Also, there were inconsistencies in the number of feedback forms completed each night, resulting in some nights with no data. The negative effect of missing data might have been mitigated by addressing the topic with volunteers during their orientation prior to starting programming. Tutorials could have been done with most volunteers present, highlighting the importance of completing forms, thus allowing other volunteers to prompt their colleagues to complete the forms. There were minor inconsistencies in how the forms were filled out, due to the irregular attendance of volunteers. Volunteers who took part in the study did not all begin tutoring at the same time. Given that most of the volunteers were post-secondary students, some started tutoring later in the semester while others stopped part way through, making the process of training and obtaining consent difficult.

Other limitations involved biases, especially related to volunteers. Due to the students who attended programming being under age, obtaining consent from each of their guardians would have taken too much time and coordination, and accordingly, consent was only obtained from the volunteers. This means that the student engagement was rated based on the volunteers’ perceptions of the students’ overall level of engagement, which may differ from the students’ own perceptions. Volunteers were assured prior to participating that the forms were anonymous and were in no way a personal assessment of their performance.

Lastly, the feedback forms were intended to be as user-friendly as possible. As volunteers were instructed to fill them out at the end of programming each night, their accuracy in recalling earlier encounters during the programming period may be compromised. Also, the volunteers were asked only to rate their overall engagement for the night and the overall engagement of the students they worked with. There was no way to look individual interactions and engagement, in terms of whether volunteer’s engagement levels varied depending on the student or the activity. As well, due to the anonymity of the forms, it was not possible to look at how interactions varied among individual volunteers. Since feedback forms required volunteers to refrain from identifying students, students may have also overlapped from one volunteer to another, thus taking away the possibility of looking at the change of each student’s individual engagement scores as well as how many of the students sought help from the volunteers in an evening.
Recommendations for the Future

In view of the limitations described above, it is recommended to extend the duration data collection to have more time to obtain the necessary consent in order to look at both volunteers’ views on student engagement but students’ views on volunteer engagement as well. It would be particularly helpful to see whether volunteers’ perceptions of student engagement levels match up with students’ own ratings of engagement. It may also be beneficial to find a way to incorporate data collection into current programming in order to make access to volunteer and student feedback easier and more frequent.

It is also recommended that more research be done on the process of collecting program data using a combination of both quantitative and qualitative data. This would help add to the current literature on the utility of multiple types of data to assess the effectiveness of after-school programs. Such research may make it easier for non-profit agencies to increase and continue their funding.
Multi-Level Challenges to Service Implementation

**Client level.** Data collection requiring the participation of volunteers can be difficult as volunteers can be of varying demographics. Thus, feedback forms must be as user-friendly as possible in order to encourage completion. Not only should time be taken to fully explain how to complete these forms and to answer any concerns or questions, but those implementing the data collection must assure participants that these forms are not a personal assessment of their performance. Volunteers must be encouraged to be as honest as possible. They may be afraid to be honest to avoid being disciplined or judged for not meeting the expectations of the agency. Thus it is important not only to remind the volunteers about how valuable their help is and that there will be no penalties for being honest. Explanation and presentation of forms should be done with multiple participants to encourage them to prompt each other, as it is common for volunteers to get to the end of the night and forget to complete them.

**Program level.** Many after school programs have multiple sites to provide services to as many people as possible. Thus, it is important to make sure implementation of data collection is consistent and regular checks of consistency are key. Staff and volunteers may not always be willing to dedicate their time to the extra work that completing feedback forms may require. Thus, data collection should be made to fit comfortably with the way the agency already runs in order to make participation as easy, stress-free, and natural as possible.

**Organizational level.** Such agencies may not only have multiple sites, but may also have locations in other towns and cities. As each location may have different demographics as well as varying policies and procedures, data collection should be implemented at multiple locations. This will help encourage sharing and cohesiveness between cities in order to improve on current strategies.

**Societal level.** Non-profit organizations receive funding from the provincial and federal governments, and from corporations and individuals. Performance measurement and program evaluations are a way to help show the effectiveness of agencies and thus increase their funding. Being able to demonstrate effectiveness is also highly important for agencies that rely heavily on volunteers and other members of the community. By increasing the community’s willingness to aide these agencies, they will also be able to help rid some of the negative stereotypes and assumptions that society may have about the populations these agencies work with.
References


Appendices
Appendix A: Consent Form

Project title: A Thematic Analysis of a Community-Based Alternative Education Program to Determine the Efficacy of Program Content

Principal Investigator: Tori Conway
Name of supervisor: Ellyn Clost-Lambert, Laura Campbell
Name of Institution: St. Lawrence College
Name of sponsor: N/A
Name of part partnering institution/agency: KCHC Pathways to Education

Invitation
You are being invited to take part in a research study. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at KCHC’s Pathways to Education. As a part of this placement, I am completing a research project (called an applied thesis). I would like to ask you for your help to complete this project. The information in this form will help you understand my project. Please read the information carefully and ask all the questions you might have before you decide if you want to take part.

Why is this study being done?
This study is being done to get a better idea of what staff, volunteers, and students do during their time together at Pathways to Education (P2E). The information collected throughout this study will also be used to help apply for grants, train volunteers, and look at how changes are meeting the students’ needs. Your feedback and observations are an important part of collecting this information, which is why I am asking you to help by filling out a daily feedback form.

What will you need to do if you take part?
If you choose to take part in this study you will be asked to fill out a one page feedback form at the end of every night. The form asks you to write down the activities you did with your student(s) that night, an estimation of how long you spent on each, and you and your student(s) engagement (refer to the attachment). You will need to fill out a form every night you are at Pathways to Education until the beginning of December 2014. This study will be looking at what happens during programming in order to
better help future volunteers and students and we will in no way be evaluating your individual performance.

**What are the potential benefits of taking part? (if applicable)**
The benefit of participating in this research study includes learning more about what you do each night with your student(s), how long you take on each activity, and how you or your student(s) engagement can effect what you do. You may also feel good knowing that you are helping the program improve and contributing to the development of better ways of preparing volunteers.

**What are the potential benefits of this research study to others? (if applicable)**
The information from this research study will help improve the program by better preparing volunteers, better meeting student needs, and applying for grants to help further fund the program. These improvements will also help make the program better for students in the future.

**What are the potential disadvantages or risks of taking part?**
The risks of taking part in this research study are minimal but may include becoming tired or bored from filling out the form or sometimes it may make you feel stressed or sad.

**What happens if something goes wrong?**
If you have any strong reactions to filling out the form or you forget to fill it out one night, you may talk to me or the Facilitator of Community Relations, Ellyn Clost-Lambert.

**Will my information you collect from me in this project be kept private?**
Any information that identifies you will be kept strictly confidential unless required by law and will be removed from the data. You will not be identified by name in any reports, publications, or presentations resulting from this project. All information collected will be coded and kept in KCHC’s own servers, on-site. Only the program researcher and the Community Relations Facilitator will have access to the information. All internet connections on-site are secure and all laptops are encrypted. All data and consent forms will be kept on file at the agency for five years and on file in a locked cabinet at St. Lawrence college for ten years.
Do you have to take part?
Taking part is voluntary. It is up to you to decide whether or not to take part in this research project. If you do decide to take part, you will be asked to sign this consent form. If you do decide to take part in this research project, you are still free to withdraw at any time, without giving any reason, and without incurring any penalty, or negative effects.

Contact for further information
This project has been approved by the Research Ethics Board at St. Lawrence College. The project will be developed under the supervision of Laura Campbell, my supervisor from St. Lawrence College. I really appreciate your cooperation and if you have any additional questions or concerns, feel free to ask me, Tori Conway (TConway24@sl.on.ca). You can also contact my College Supervisor (lacampbell@sl.on.ca) or you may also contact the Research Ethics Board at reb@sl.on.ca.
Consent
If you agree to take part in this research project, please complete the following form and 
return it to me as soon as possible. A copy of this signed document will be given to you 
for your own records. An additional copy of your consent will be retained at the agency 
and in a secure location at St. Lawrence College.

By signing this form, I agree that:

✓ The study has been explained to me.
✓ All my questions were answered.
✓ Possible harm and discomforts and possible benefits (if any) of this study have 
  been explained to me.
✓ I understand that I have the right not to participate and the right to stop at any 
  time.
✓ I am free now, and in the future, to ask any questions I have about the study.
✓ I have been told that my personal information will be kept confidential.
✓ I understand that no information that would identify me will be released or 
  printed without asking me first.
✓ I understand that I will receive a signed copy of this consent form.

I hereby consent to take part.

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**Appendix B: Completed Feedback Form**

*Please do not put any names on this form.*

Date: **October 14, 2014**

Site: **Weller Avenue**

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<th>Student Tally</th>
<th>What did you do with your student(s)?</th>
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<td>II</td>
<td>Talked about homelife.</td>
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<td>I</td>
<td>Worked on math homework. used tutorial on Ipad.</td>
<td>8 Mins</td>
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<tr>
<td>III</td>
<td>Discussed how media effects society and latest fashion trends.</td>
<td>20 Mins</td>
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<tr>
<td>II</td>
<td>Helped with sociology homework, discussed possible</td>
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<td></td>
<td>Created study notes for Biology test.</td>
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</tr>
<tr>
<td>I</td>
<td>Worked on resume.</td>
<td>20 Mins</td>
</tr>
<tr>
<td>IIII</td>
<td>Played Monopoly.</td>
<td>25 Mins</td>
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Rate your student(s) overall level of engagement: 1 2 3 4 5 6 7 8 9 10

Rate your overall level of engagement: 1 2 3 4 5 6 7 8 9 10

In general how engaged were your students tonight? You?
Appendix C: Graph of Volunteer and Perceived Student Engagement over Time

Volunteer vs. Perceived Student Engagement
Appendix D: Graph of Volunteer Engagement vs. Time Spent with Students

Volunteer Engagement vs. Time Spent with Students: Overall

[Graph showing the relationship between volunteer engagement and time spent with students]
Appendix E: Graph of Perceived Student Engagement vs. Time Spent with Students

Perceived Student Engagement vs. Time
Spent with Volunteers: Overall
Appendix F: Graph of Volunteer Engagement vs. Number of Students in a Group

Volunteer Engagement vs. Number of Students in Session

![Graph showing volunteer engagement versus number of students in a group](image-url)
Appendix G: Graph of Perceived Student Engagement vs. Number of Students in a Group

Student Engagement vs. Number of Students in Session