Investigating the Impact of a Career Education Program on School Engagement

Dawn Sutherland
Faculty of Education
University of Winnipeg

Kathy Levine
Faculty of Social Work
University of Manitoba

Brian Barth
Research Assistant
University of Manitoba

Abstract
The Career Trek program is designed to instil some protective factors that develop positive self-esteem in participants and promote school engagement. In addition, the program tries to challenge the general motivational decline towards schooling in middle years. The purpose of the current study is to examine the impact of participation in Career Trek on school motivation. Thirty-three Career Trek participants completed questionnaires related to academic motivation and self-esteem and responded to questions in an interview at the beginning and end of the Career Trek programming year. Ten non-participants in Career Trek also completed the same tasks as control measures. Career Trek participants positively increased in measures related to academic motivation while controls decreased in these indicators. School satisfaction decreased significantly in the Career Trek participants. Discussion centres on the possible explanations and future directions for research.

Keywords: Career education, academic motivation, risk factors, protective factors and self-esteem
Le programme *Career Trek* vise à inculquer des facteurs de protection pour développer une estime de soi positive chez les participants et promouvoir leur engagement scolaire. De plus, le programme tente d’éviter, chez les élèves du cycle intermédiaire, une baisse de motivation. Cette étude propose d’examiner l’impact du programme *Career Trek* sur la motivation des élèves à l’école. Trente-trois participants au programme *Career Trek* ont complété des questionnaires se rapportant à l’engagement scolaire et à l’estime de soi. Des entrevues avec chaque participant ont aussi eu lieu au début et à la fin du programme. Dix non-participants ont accompli les mêmes tâches afin d’établir des mesures de contrôle. La motivation académique a augmenté pour les participants au programme *Career Trek* mais diminué pour le groupe contrôle. Cependant, la satisfaction scolaire des participants au programme *Career Trek* a subi une baisse considérable. La discussion tente de cerner des explications possibles et d’identifier des pistes pour de nouvelles recherches.

**Mots clés:** formation en développement vie-carrière, motivation académique, facteurs de risque, facteurs de protection et estime de soi

**Introduction**

In 1997, Red River College, the University of Manitoba and the University of Winnipeg launched Career Trek, a joint initiative intended as a poverty prevention program. Career Trek was designed to encourage academically at-risk youth in Winnipeg to pursue post-secondary studies. The relationship between living in poverty and poor education is well established. Therefore, one objective of the program was to mitigate the potential negative life trajectories of many at-risk youth by exposing them to the range of career options available at three post-secondary institutions. However, involvement at the post secondary levels typically requires the completion of secondary school. It was anticipated that by inviting children to explore a variety of careers in an experiential manner at post-secondary institutions, their motivation to remain in school and pursue post secondary studies would increase. To this end, a second objective of Career Trek is to increase a participant’s educational self-esteem and academic motivation.

The purpose of the current study is to examine the impact of participation in Career Trek on children’s academic motivation and self esteem. We begin by examining issues identified in the literature that relate to the environmental challenges experienced by inner city youth to academic success and career.
development. Our theoretical premise is drawn from Bronfenbrenner’s ecological model (1979), a conceptual framework that emphasizes the importance of understanding students in the context of their family, peer, school and community systems. We then describe the Career Trek program, an intervention designed to expose inner city children to post-secondary educational institutions, and the wide range of careers that are available in the various faculties and departments. Career Trek’s intent is to establish and reinforce the relationship between completing primary and secondary school and moving on to post secondary education as one means of being actively involved in the employment sector, and minimizing the risk of living in poverty in the future. Given this, we hypothesized that participating in the program will increase student’s academic motivation, self esteem and motivation to remain in school.

**Winnipeg’s Inner City: Children and Youth At-Risk**

Risk can be defined in many ways; Landry and Tam (1988) describe risk as “...variables associated with the development of intellectual delays and mental and physical health problems in children.” Risk variables have also been described as elements of an individual’s character and of their environment that contribute toward negative life outcomes (Howard, Dryden, & Johnson, 1999). Jones and Jones (2001) describe being at-risk as an outcome variable, generally referring to children who are likely to drop out of school. Rutter (1987) defines risk as any factor that contributes to a negative developmental trajectory including factors in the home, school and community. Rutter’s conceptualization of risk is likely more accurate because it acknowledges that multiple risk and protective factors are involved, and that the composition of these factors is dynamic, and sensitive to change within the individual’s environment.

The inner city of Winnipeg, Manitoba is a challenging social, economic and educational environment for children and families. In 2001, the majority of households in Winnipeg’s inner city had incomes below the poverty line (Institute of Urban Studies, 2005). More than 50% of households with children attending Winnipeg’s fifteen inner city elementary schools have incomes below the low-income cut-offs (Silver, 2000). Silver further reports that more than one in every four inner city households in 1996 were headed by single parents and, while he cautions against unwarranted extrapolations, he emphasizes that “...there is a higher probability that...inner city single-parent families will have incomes below the poverty line” (31).

Child poverty remains a persistent problem in Manitoba. Nationally, since 1989, Manitoba has consistently been among the top three provinces in terms of children living in poverty in every single year. Aboriginal, visible minority and immigrant children, many of whom reside within the inner city, are
disproportionately impacted by poverty (Social Planning Council, 2004). The strong correlative relationship between poverty and poor educational outcomes is well established. Children in high poverty neighbourhoods perform at a significantly lower level on measures of academic achievement compared to children in low poverty neighbourhoods (Kohen, Leventhal, Brooks-Gunn, & Hertzman, 2003; Leventhal & Brooks-Gunn, 2004). Moreover, compared to non-urban peers, urban racial and ethnic minority youth who are exposed to external and environmental challenges including poverty experience significantly higher school dropout rates, and low educational attainment (Constantine, Erickson, Banks, & Timberlake, 1998; D’oyley, Kakembo, McFarlane, Perry, Andruske, & George, 2001). However, there exists considerable variation with respect to explanations for this difference. High-poverty neighbourhoods are strongly associated with residential mobility as a consequence of the poor quality and limited availability of housing stock. In 2001, the inner city of Winnipeg had the highest proportion of houses that required major repairs compared with other neighbourhoods (Institute of Urban Studies, 2005). The lack of quality housing that is affordable for the lowest income families typically results in short term residential occupation, and the subsequent frequent school moves are noted to have a negative impact on children’s academic achievement (Crowley, 2003).

Children living in the inner city are also exposed to the effects of living in areas with high crime rates. Although the rates of youth crime have remained relatively stable over the past decade, individuals with few economic resources are at higher risk of both perpetrating and being victimized by physical violence. More specifically, male youth from ethnocultural minority groups, compared to youth from the dominant culture, are at higher risk of engaging in violence due to poverty, racism, and poor educational and employment opportunities (National Clearinghouse on Family Violence, 2004).

Additionally, children living in inner city neighbourhoods may not have opportunities to interact with people who are employed, or with families that have a consistent income earner. For many of these families, their ability to participate in the employment sector is significantly related to their own educational attainment. In 2001, approximately 30% of individuals aged 15 or older who resided within the inner city had attained a Grade 9 education (Institute of Urban Studies, 2005). When this is the case, the relationship between schooling and post-schooling employment takes on a different meaning (Wilson, 1987). These findings have particular implications for some groups of inner city children. For example, 52% of aboriginal youth living within urban environments leave school early, including the elementary years (Statistics Canada, 2001).
Although the additive model of risk cannot be applied in isolation of protective factors, there is evidence to support the positive correlation of the number of risk indicators with the likelihood of negative outcomes (Landry & Tam, 1998). Furthermore, Sameroff, Seifer and Barkon (1997) demonstrate that children’s development is most compromised when several risk factors occur together. Factors associated with the risk of early school leaving include lack of social support, family structure, low socio-economic status, race and ethnicity, and mother’s educational attainment (Richman, Rosenfeld, & Bowen, 1998; Wang & Walberg, 1996). Therefore, the cumulative effect of poverty, inadequate housing, high crime neighbourhoods, low educational attainment and parental unemployment is that Winnipeg’s inner city children are less likely to develop the cognitive, academic, and motivational skills necessary for the transition to post-secondary education, and therefore, are less likely to become productive members of society.

Ecological Framework

Bronfenbrenner’s (1979) ecological perspective is a conceptual framework for understanding individuals, families, groups and communities. Development is recognized as a process in which the individual is shaped by the complex interplay of biological, genetic, psychological, social and cultural forces within the environment. Human behavior is therefore viewed as a product of the reciprocal interactions and transactions between the individual and his/her environment over time. The introduction of the ecological perspective as an increasingly accepted paradigm of research and practice in the social sciences signifies an important shift, moving from a focus on the individual to a focus on the individual embedded within the context of the surrounding systems. These include: the macro environment, which encompasses both the natural environment and social, economic, and cultural constraints; the exo system which includes institutional relationships; the mezzo system which examines an individual’s relationships with groups, organizations, informal networks and the extended family, and the micro systems which are represented by parent-child relationships and the child him/herself. From an ecological standpoint, transactions between and amongst the different levels, i.e. at the interface become a focus of intervention, rather than an exclusive emphasis on the individual. Moreover, there is an emphasis on the strengths and resources located within each of the systems, and both assessment and intervention extend to include the identification of how these resources may best be mobilized.

The Center on Education in the Inner Cities at Temple University, Philadelphia has published valuable research related to the promotion of school success
The Centre applies Bronfenbrenner’s ecological perspective to its research program. Wang (1997) claims that,

No single component or practice can account for improvements - rather the crucial element is the way in which successful practices are combined in an integrated system of delivery that considers the needs of the students and the site-specific strengths and constraints.

The Career Trek Program

Career Trek, Inc., operating at the University of Manitoba, is a not-for-profit organization that provides educational programming for youth with perceived barriers to entering post-secondary education. The student may be considered at-risk for any number of internal or external challenges including: socio-economic status, gender, disability, lifestyle or membership in a marginalized group. Each September, teacher and administrators in participating schools nominate candidates for the Career Trek program. These schools have been previously identified by the program on the basis of their inner city location and the predominance of academically at-risk children. Program participants are nominated based on two criteria. First, that the individual has, in the estimation of teachers and administrators from the sponsoring school, the academic potential for pursuing and completing a post-secondary education. Second, nominated participants and their families must be in a position to attend and commit to completing the program.

Program Structure

Each year, 240 youth from seven school divisions participate in the twenty-week Career Trek program, held on Saturdays, October to April. Participants are divided into four cohorts, and each cohort begins at one of the three participating institutions: Red River College, The University of Winnipeg and The University of Manitoba, which hosts two cohorts each rotation. At each institution, cohorts are further divided into four groups. Each group rotates through four, 45-minute career programming sessions held on campus. These sessions are divided equally between participating departments, programs or faculties. At the conclusion of 5 weeks, each group rotates to a new set of departments/faculties. In the 2003-2004 year participating departments included: Native Studies, Engineering, Building Construction, Graphic Arts, Criminal Justice and Law, Education, Aeronautics, Physical Education and Recreational Studies,
Impact of a Career Education Program on School Engagement

Law, and Political Science. In total, the participants receive 95 hours of programming (80 hours in class).

Activities are designed to be interesting, experiential, innovative and increase participants’ awareness about a particular field, and its associated careers. Each lesson includes a discussion that focuses on the high school requirements and description of university courses associated with the career. For example, participants learn that a degree in Political Science could lead to careers as a diplomat or politician. The high school requirements of English and Math are noted, in addition to suggested electives such as Law and History. They also learn that good reading, writing and oral skills are important. Therefore, if one is interested in being a politician, there is a linkage made to the student’s current language arts programming and their future goals/interests. Similar linkages are made across programs. If students express interest in building construction, there are linkages made to the importance of having good math skills. Information is provided in such a way as to emphasize the importance of current learning in school, and establish a more meaningful relationship to the students’ future aspirations.

The Career Trek Program - Instilling Protective Mechanisms

Career Trek is broadly intended as a poverty prevention program. One means by which it endeavors to accomplish this mandate is through fostering resilience in academically at-risk Winnipeg youth. Career Trek structures its program and develops learning opportunities to mitigate risk and enhance protective factors. For example, within the inner city, lack of supervised and/or structured activities during the weekends and evenings increases children’s risk of engaging in delinquent activities. Given that the Career Trek program occurs on Saturdays, children are provided with the opportunity to engage not only in meaningful activity, but in meaningful activity with positive role models, many of whom are senior peers from Winnipeg schools and graduates of the Career Trek program. Additionally, a protective factor found to contribute toward school retention is peer relationships. The Career Trek program provides ample opportunity for participants to make positive peer associations, specifically with children from other schools and school divisions. Finally, Career Trek focuses on (1) increasing the self-confidence and the social and independent problem-solving skills of the participants, (2) encouraging the active involvement of parents via Family Day and the provision of financial planning information, and (3) fostering greater school-community-business collaborations through career-based decision making. All are considered to be protective factors that contribute to positive life trajectories.
Methodology

Selection of Study Participants

In the 2003-2004 academic year, there were 90 Career Trek participants from twenty-two grade five/six classrooms in the inner city of a large urban school division in central Winnipeg, Manitoba. Historically, teachers recommend students to Career Trek based on the following reasons: low social economic status (65%), single parent family (30%), English as a second language, immigrant, visible minority, or newcomer (20%) and Aboriginal (20%) (Career Trek, 2005). Although there is only one factor identified by teachers, many of the participants have multiple risk factors. From this group of ninety participants, parental permissions were received for thirty-three students to participate in the study.

Teachers were also asked to identify students with similar risk factors as Career Trek participants but who were not participating in the program. These students were identified as the control group. Out of possible 200 controls (estimation), parental permission was obtained for 10 students. Reasons for the low number of control students were primarily a result of the low number of consent forms returned by parents/guardians.

Demographics of Participants

The Career Trek program requests that parents provide information on their child’s age and whether the child is of aboriginal origin (optional). Of the thirty-three participants in the study, 13 were aboriginal (39.9%). This percentage is representative of the general population of Career Trek participants which is self-identified as 40% Aboriginal (Career Trek, Inc. 2004). The students came from 8 different schools located throughout the inner city of Winnipeg.

Selection and Description of the Measures

Four different inventories were used to explore the impact of the Career Trek program on motivation, perception of ability and self-esteem. The inventories are described below:

The Children’s Academic Intrinsic Motivation Inventory (CAIMI)

Mastery motivation is manifest in two ways. The first is instrumental, measured by persistence, and the second is expressive, typically measured by the expression of positive affect toward tasks (Busch-Rosnagel & Morgan,
Impact of a Career Education Program on School Engagement

The Children's Academic Intrinsic Motivation Inventory (CAIMI) was selected for its validity and reliability, and because it addresses both facets of motivation. Additionally, it is the only such instrument that provides motivation scores for specific subject areas.

The CAIMI was developed by Gottfried (1985) and is used to measure student intrinsic motivation. It is comprised of four content scales measuring motivational attitude in (1) reading, (2) mathematics, (3) science and (4) social studies and one scale measuring general motivational orientation. Posey, in reviewing the reliability of the instrument (Conoley & Kramer, 1989), stated:

Reliability of the CAIMI appears to be adequate. Two-month retest coefficients ranged from .66 to .76. Internal consistency coefficients range from .83 to .93. Thus, reliability has been demonstrated, with no differences found as a function of race, sex or IQ. (p.162)

Since the population for this study is culturally diverse, it is important to note a further claim made by Posey namely: “The scales appear to be free of sex and racial bias, and should be fairly resistant to response sets” (Posey, p. 162).

Construct validity is based on modest correlation (.17 to .64) with the Harter (Harter, 1981) Scale of Intrinsic Versus Extrinsic Orientation in the Classroom. In summing up his review of the CAIMI, Posey stated: “The CAIMI appears to be a reliable and unique measure of an attribute labelled academic intrinsic motivation” (Conoley & Kramer, 1989, p.162).

Results can be reported as T scores or percentiles, and the Profile Form allows a visual comparison of motivational strengths across scales. For students with academic difficulties, the CAIMI is an excellent instrument for differentiating motivation from achievement and ability factors.

Perception of Ability Scale for Students (PASS)

To assess improvement in self-concept, the Perception of Ability Scale for Students (PASS), developed by Frederic Boersma and James Chapman (Boersma & Chapman, 1992) was used. The PASS inventory is a self-report designed to assess how students feel about themselves in their school-related lives.

The PASS comprises 70 forced-choice “Yes-No” items relating to perceptions of and attitudes toward school performance. Examples of items included in the scale are: “I am a good reader;” “I make many mistakes in school;” “I like math.” Psychometric data and independent investigations that
provide support for the content, concurrent, convergent, and discriminant validity of the PASS are reported in the manual (Boersma & Chapman, 1992). The inventory is appropriate for students in grades 3 and up. Results of the PASS provide information on a student’s content-specific self-concept relative to other contents, and provide norm-referenced data.

*Rosenberg Self Esteem Scale*

This scale measures the self-acceptance aspect of self-esteem. It was designed specifically with brevity and ease of administration in mind (Robinson & Shaver, 1973). The scale consists of ten items answered on a four-point scale from “strongly agree” to “strongly disagree.” Since inception, its extensive use within studies that focus on students, its high acceptance, and its ease of administration makes The Rosenberg especially useful for this study. Silber and Tippet (Silber & Tippett, 1965) found that the scale correlated from 0.65 to 0.83 with several other self-esteem measures and clinical assessments. The same authors found a test-retest correlation over two weeks of 0.85.

*Family, Friends, and Self (FFS) Assessment Scale*

The Family, Friends and Self (FFS) scale is designed to assess social relationships and the psychological adjustment in youth. Originally the FFS scale was developed using a large and diverse sample size (Hater & Simpson, 1981). The FFS is a Likert-scale questionnaire containing 60 items, separated into 3 parts. The response scale for Part A and B are the same with selections ranging from “none” to “all”. In Part C, the scale changes into “Very Unhappy” to “Very Happy”. The questionnaire measures four different domains. These are familial contact, peer relations, self-esteem and quality of life. Simpson and McBride (1992) conducted reliability measures on a large sample of 1,500 youth. Coefficient alphas for each domain were greater than 0.7 for all composite measures. The focus of the measure on the immediate environment of the students and the knowledge that the scale was developed with a diverse population made this scale an appropriate measure for this study.

*Administration of the Inventories*

Each inventory was administered twice: once at the onset of the Career Trek program (T1) and once after the completion of the Career Trek program (T2). The control group was interviewed during the same time interval as the participants. In order to complete the questionnaires participants were individually
removed from the classroom and given sufficient time to answer all questions and ask questions if necessary.

**Interviews**

In addition to the quantitative measures, two interviews were held with all students from the Career Trek participant and control groups. The first (T1) occurred prior to the start of the 2003/2004 Career Trek program and the second (T2) occurred at the completion of the program. A total of 43 students were interviewed at Time 1 and 36 students at Time 2. The interview questions were designed to elicit information about students' knowledge and experience of career planning and preparation within an ecological framework. The interview guide was designed to be sufficiently detailed to allow for focused discussion of career knowledge and planning, but sufficiently open to allow for examination of emerging themes and constructs. Interviews were also held with the parents and teachers of participants and controls, however the results of these interviews are not included in this analysis. All interviews were audio taped and transcribed. Interviews were then analyzed using the process of content analysis suggested by Creswell (2002). All transcripts were first read with the view towards obtaining a general overview of the information. The second step involved a more detailed analysis, wherein key themes were identified and categorized. The transcripts were subsequently re-read to determine the manner in which these themes appeared, and they were further coded to generate a smaller number of themes or categories.

**Results**

**Intrinsic Motivation and Perceived Ability Measures**

There were two instruments used in this study to explore the impact of the Career Trek program on intrinsic motivation and perceived academic ability and school-related achievement. The CAIMI explores students' intrinsic motivation to learning in separate subject areas. Intrinsic motivation increased in all subject areas in the Career Trek group, although these increases were not significant. In contrast, intrinsic motivation for subject areas with the exception of math decreased in the control group over the same time period. In the case of social studies the decrease in intrinsic motivation was significant (Table 1: t=2.42, p=0.04).
Table 1: Time one and Time two scores in the CAIMI scale for Career trek Participants and Control

<table>
<thead>
<tr>
<th>CAIMI</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>49.43</td>
<td>49.74</td>
<td>-0.126</td>
<td>0.901</td>
</tr>
<tr>
<td>Math</td>
<td>48.57</td>
<td>50.13</td>
<td>-0.550</td>
<td>0.588</td>
</tr>
<tr>
<td>Social Studies</td>
<td>50.22</td>
<td>53.96</td>
<td>-1.606</td>
<td>0.123</td>
</tr>
<tr>
<td>Science</td>
<td>49.26</td>
<td>52.70</td>
<td>-1.557</td>
<td>0.134</td>
</tr>
<tr>
<td>General</td>
<td>50.09</td>
<td>48.17</td>
<td>0.941</td>
<td>0.357</td>
</tr>
</tbody>
</table>

* p<0.05

Interpretation:

Motivation for school increased for the Career Trek students although not significantly. This may suggest that Career Trek does not have a positive affect on school motivation, however, in comparison, the intrinsic motivation of the control group over the same time period decreased. Therefore, it is suggested that participating in Career Trek likely maintains the level of students’ intrinsic interest in school.

The PASS scale provides insight into student perceived academic ability and school-related Achievement. In the case of Career Trek participants, perceived ability in math and reading increased over time, although not significantly (Table 2: Math t=-0.65 p=0.52; Reading t=-0.50 p=0.62). This finding is congruent with the results of the CAIMI scale where intrinsic motivation for math and reading increased, although not significantly, over time. In the control group, the perceived ability in reading dropped over time whereas it increased in math, although these trends were not significant (Table 2: Math t=-0.44 p=0.67; Reading 0.58 p=0.58).

Career Trek participants were significantly less satisfied with school-related tasks at the completion of the school year (Table 2: t=3.34 p=0.003). School satisfaction also decreased in the control group over the same time period, however, this decrease was not significant. (Table 2 T scores). One possible explanation for this is that in comparison to the activities in Career Trek, the learning activities in the school system were less enjoyable for participants.
Impact of a Career Education Program on School Engagement

Table 2: Time one and Time two scores in the PASS scale for Career Trek Participants and Control

<table>
<thead>
<tr>
<th>PASS</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Scale</td>
<td>53.27</td>
<td>51.23</td>
<td>1.651</td>
<td>0.114</td>
</tr>
<tr>
<td>General Ability</td>
<td>54.64</td>
<td>54.32</td>
<td>0.124</td>
<td>0.903</td>
</tr>
<tr>
<td>Math</td>
<td>55.68</td>
<td>57.09</td>
<td>-0.648</td>
<td>0.524</td>
</tr>
<tr>
<td>Reading</td>
<td>55.50</td>
<td>56.77</td>
<td>-0.496</td>
<td>0.625</td>
</tr>
<tr>
<td>Penmanship</td>
<td>50.45</td>
<td>50.55</td>
<td>-0.57</td>
<td>0.955</td>
</tr>
<tr>
<td>School Satisfaction</td>
<td>55.27</td>
<td>48.32</td>
<td>3.343</td>
<td>0.003*</td>
</tr>
<tr>
<td>Confidence</td>
<td>56.23</td>
<td>55.59</td>
<td>0.448</td>
<td>0.659</td>
</tr>
</tbody>
</table>

*p<0.05

Self-esteem and Family, Friends and Self-Assessment Scale

Two scales were used in this study to explore the relationship between Career Trek participation and self-esteem, perception of social relationships, and psychological adjustment. Career Trek participants' self-esteem did not significantly change over time. However, in comparison, control group responses to these items decreased over the same time period, although not significantly.

Interpretation:

These results indicate a similar trend to the results in the CAIMI. The self-esteem of Career Trek participants does not change over time whereas the self-esteem of control group students decreases. Therefore, Career Trek may be a factor that helps to maintain the self-esteem of academically at-risk students.

A second scale to assess the perceived social environment of the child was the FFS assessment scale. In the case of this scale there are no composite items, only individual responses. In the Career Trek group the response to the question "How many of your friends do your parents like?" significantly increased (T1=2.68 T2=3.32, t=-2.85 p=0.01). Career Trek participants also responded significantly more positively to a question related to their residence ("How do you feel about the place where you live?") and their school administration ("How do you feel about your school principal?") (t=2.13 p=0.05 and t=-2.4 p=0.03
Table 3: Time one and Time two scores in the Rosenberg Self-esteem Scale for Career trek Participants and Control.

<table>
<thead>
<tr>
<th>RSE</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.62</td>
<td>1.52</td>
<td>.698</td>
<td>.493</td>
</tr>
<tr>
<td>2</td>
<td>2.05</td>
<td>2.24</td>
<td>-.81</td>
<td>.428</td>
</tr>
<tr>
<td>3</td>
<td>1.67</td>
<td>1.62</td>
<td>.370</td>
<td>.715</td>
</tr>
<tr>
<td>4</td>
<td>1.52</td>
<td>1.71</td>
<td>-1.451</td>
<td>.162</td>
</tr>
<tr>
<td>5</td>
<td>1.81</td>
<td>1.86</td>
<td>-.204</td>
<td>.841</td>
</tr>
<tr>
<td>6</td>
<td>2.10</td>
<td>2.25</td>
<td>-.448</td>
<td>.659</td>
</tr>
<tr>
<td>7</td>
<td>1.75</td>
<td>1.70</td>
<td>.326</td>
<td>.748</td>
</tr>
<tr>
<td>8</td>
<td>2.95</td>
<td>2.57</td>
<td>1.191</td>
<td>.248</td>
</tr>
<tr>
<td>9</td>
<td>1.48</td>
<td>1.81</td>
<td>-1.276</td>
<td>.217</td>
</tr>
<tr>
<td>10</td>
<td>1.57</td>
<td>1.62</td>
<td>-.370</td>
<td>.715</td>
</tr>
<tr>
<td>11</td>
<td>18.64</td>
<td>17.23</td>
<td>.962</td>
<td>.347</td>
</tr>
</tbody>
</table>

rime 1 1.63 2.13 1.50 1.50

Time 2 1.50 1.75 1.63 1.50

-.81 1.88 1.38 2.646 .033*

-.204 1.63 1.50 .552 .598

-.448 2.00 1.50 1.528 .170

.370 1.38 1.38 .000 1.000

1.191 2.75 2.13 2.376 .049*

-.126 1.25 1.38 -.552 .598

-.370 1.88 1.63 .552 .598

.962 18.00 15.75 1.204 .268

*p<0.05

respectively). Both control and Career Trek participants responded significantly more negatively to the question related to their school (“How do you feel about your school?” Career Trek: T1=3.12, T2=2.82, t=2.13 p=0.05 Control: t1=3.67, T2=2.89, t=2.80 p=0.02). In the case of the Career Trek participants this reflects the findings of the PASS where school satisfaction decreased over time.

In the case of control students, some questions that provided significant change over time were “Are you proud of how you act and the things you do?” (t=3.63, p=0.008). In this question students were more proud of how they acted at the beginning of the school year (t1=3.13) than at the end of the year (T2=1.25). A second question that elicited significant change over time was “How do you feel about the courses you are taking at school?” (t=2.29, p=0.05). Students in the control group felt more positive about their courses at the beginning of the school year (T1=3.56) than at the end of the year (T2=3.00).
Impact of a Career Education Program on School Engagement

Interpretation

The results of the FFS suggest that the Career Trek participant’s perceptions of their social environment positively increase after completing the program. In comparison, control group perceptions of their school environment decrease over time.

Interviews

Through the analysis of the interviews, the following themes emerged at Time 1: school perceptions; relationships with teachers; individual, family, peer, and community-level risk and protective factors; future orientation towards career; awareness of strengths and barriers to achieve success; and knowledge of career preparation. Based on these themes, comparisons were then made between the participant and control groups at two levels. The first level is a comparative analysis of the content and detail of information provided by each group with respect to the identified themes. The second level is a comparative analysis of the data from each group with respect to factors related to school motivation.

Results: Time 1 Analysis

Prior to the start of the Career Trek program, both participant and control groups expressed similar perceptions regarding their current school experiences, academic performance, relationships with teachers, family environment, and career aspirations. The majority of students described school as “fun”, and as a place where they had opportunities to learn and to socialize with friends. Both groups expressed similar perceptions regarding their academic performance, with the majority describing themselves as “doing good”. Narratives regarding the family environment were also similar and with one exception, students identified parents (predominantly mothers), siblings and grandparents as encouraging, supportive and emotionally available at times of distress. One student in the control group identified her friends as being more encouraging than her parents. Students from each group were involved in a variety of extra-curricular activities ranging from after-school sports to dance and swimming lessons. With respect to career orientation, many students were unable to identify a specific career goal, whereas some students identified career goals as professional athletes (football, basketball and soccer players) or doctors. The majority of students in each group were unable to identify any strengths that would assist them in achieving their career goal, and students from both groups further described a narrow range of barriers to achieving their career...
goals. One student indicated that she may not know all the necessary ingredients to achieve her goal of chef, while another suggested that his spelling ability may prevent him from achieving his career goal.

Two distinct differences were noted between participant and control groups. In comparison to the controls, Career Trek participants described their relationships with teachers, both positive and negative, in much greater detail. The students in the control group did not identify their teachers in any relational capacity. This may be a result of the CT participants having greater contact with the classroom teacher as a function of CT, which the control group did not have.

*CT participants:*

"Sometimes they challenge us but not too hard."

"I get along well with my teacher, except for some moments. tense moments."

"My teacher gives me hidden signs, sometimes I can't understand them . . . gives me signs that he's encouraging me."

A second difference was found in student’s responsibility towards others. The CT participants described a significantly stronger degree of commitment towards helping others, with many of the CT participants engaged in peer tutoring or other forms of helping within the school environment.

*CT Participants:*

"I’m a helper (in the breakfast program). I like to help. We have to cut bananas and pour cereal, pour milk."

"I am a student leader. We help the school form different activities, like clean up and do things for school."

"Everyone in my class likes helping each other. Like no one leaves each other out and everyone just helps each other."
Impact of a Career Education Program on School Engagement

**Time 2 Analysis**

At T2, there were notable differences between the participant and control groups in the following areas: knowledge of post-secondary institutions; knowledge regarding the linkage between careers and post-secondary education; career preparation activities, specificity of career goals, interest in peer’s career orientations, awareness of barriers that may impede success; and student identity.

**Knowledge of post-secondary institutions**

One of the most noticeable differences between the participant and control groups was the CT students’ knowledge of the three post-secondary institutions in Winnipeg, and the different programs that each institution offered. For example, a child that was interested in engineering knew that he needed to go to “university” rather than technical college. Furthermore, whereas some of the CT participants were able to name the institutions with reference to size and preference, none of the control students were able to identify any institution by name.

**CT Participants:**

“We both want to go to the University of Winnipeg. I’ve been there and it’s not as big as University of Manitoba.”

“(At the) University of Manitoba you have to walk around lots to get to each classroom.”

“I liked Red River College.”

**Completion of school**

Career Trek participants demonstrated greater knowledge with respect to the importance of education and the relationship to being successful compared to the control group. CT participants placed much greater emphasis on the concept of “finishing” high school and “finishing” university in order to be successful. Although both groups identified the importance of achieving good grades, the control students did not reference the concept of completing high school as a means of undertaking the transition to post-secondary education and/or achieving career goals.
CT Participants:

"Go to high school, get a high school degree, go to university or college and get into drama and finish it."

"Well, like you have to finish school first. Get you degree and stuff like that."

"Finish school and go to university."

A second linkage between achieving career goals and post-secondary education was noted in terms of the specific criteria necessary for particular careers. The majority of students from both the control and CT participant groups were able to name career goals for themselves. In both groups, the identified careers ranged from being a furniture salesman, construction worker, or mechanic to becoming a professional athlete to being a lawyer or doctor. However, there were noted differences between groups in terms of the relationship between their current or future curriculum requirements and the knowledge that is critical to pursue a particular career. For example, the girl who thought about becoming a chef understood that knowing math would be important "because of the measures and stuff." A student who wished to become a doctor recognized the necessity of "learning more in science." A CT participant who wanted to be mechanic knew he needed to "take the right classes." The boy who was planning on becoming a police officer was able to establish a connection between doing well in gym, and the demanding physical requirements of his chosen career. Although control students acknowledged the importance of good grades, and the need for some college or university in order to pursue their career goal, none were able to articulate the linkages between the specific subjects they were currently studying and the potential influence upon their future careers.

Awareness of potential barriers

A critical difference between the two groups was in the area of potential barriers to achievement of career goals. Students in the control group could not identify any substantive roadblocks or barriers that would prevent them from achieving their career goals. In contrast, the CT participants were far more thoughtful in their responses, and were able to identify a number of potential barriers. Constantine et al. (1998) note that it is critical for urban racial and minority youth to acknowledge and address potential barriers to career
development including financial and socio-cultural conflicts. One boy expressed that family problems and parental commitment may impede his pursuit of post-secondary education. Others focused upon the academic component. The overarching theme was one of persistence as demonstrated by the following three students.

“Probably, like failing something, I’ll probably try again.”

“School, I guess, it may be too hard.”

“If I failed something, I would try it over again.”

Knowledge of peers’ career interests

Several CT participants were able to describe some of their peers’ career goals. Although often these goals were often similar to their own, CT participants distinguished between being aware of their friends’ aspirations’ and recognizing that many of them may not have considered their options at this point. This suggests that CT participants engaged in some discussion with peers regarding future careers.

CT Participants:

“I know two of my friends want to be in the military, the other wants to be a teacher. Some of them don’t know.”

In contrast, it does not appear that any discussion of jobs or careers occurred between the control group and their peers. This was succinctly stated by one boy in the following response:

“I have no idea what my friends want to be when they grow up. We don’t talk about that.”

Student identity

CT participant and control groups were distinct in their descriptions of “self-as- student.” At T2, in contrast to describing themselves as “good” students, the CT participants communicated feeling positive about their student identity. This suggests that while their academic abilities may not have increased, their
perceptions of themselves as students were strengthened and enhanced. In view of research that suggests students who are invested in academic success and believe it to be within their control exhibit fewer stress-related problems with school transitions (Rudolph, Lambert, Clark, & Kurlakowsky, 2001), reinforcing student’s beliefs about themselves as students may contribute to future academic success.

“I feel really good about myself as a student.”

“It (CT) made me feel smarter.”

Problem-solving and social skills

The protective nature of formal and informal social support is a critical moderator for academically at-risk children (Richman et al., 1998). To this end, Career Trek participants identified the relationships with peers and instructors as important aspects of the program.

“It helps me with relationships. I got real friends, and I kept up with the friends that I made at Career Trek.”

“The instructors were great. They work hard.”

Through their experience in the program, Career Trek participants were also able to identify problem-solving skills as an important aspect of their learning.

“I think Career Trek as a really good thing because it helped me know if I want to become a pediatrician or if I want to help animals.”

“Sometime I don’t ask my teacher for help. I just think about it and I understand.”

“I work it through myself.”

With respect to academic retention, data regarding the educational self-esteem and academic motivation of Career Trek participants as they undertake the transition to middle school does not form part of this analysis. However, there are indications that Career Trek participants may approach the transition to middle school in a more positive manner than the control group. This is indicated by participant comments that noted differences in their school
experience from the previous year, to the Career Trek year. Several participants indicated that “this year was better than last” and were positively anticipating the transition to their new school. One student summarized the feelings of many participants through the following comment,

“I am kind of scared, but I’ll probably survive.”

Discussion

Preliminary observations of the quantitative results would suggest that there are no significant changes in academic motivation for Career Trek participants. However, there are indications that one positive outcome of participation is motivational retention. Several researchers have reported general developmental declines in many of the important motivational attributes such as: interest in school (Epstein and McPharland, 1976), intrinsic motivation (Harter, 1981), self concepts of ability (Eccles et al., 1983; Marsh, 1989) and self-esteem (Simmons & Blyth, 1987; Simmons, Blyth, Cleave, & Bush, 1979). Simmons and her colleagues examined the possible effects of school transition on motivation. Studies by this group compared students moving from sixth to seventh grade in a K-8 system to students making a similar transition in a pyramid program system (K-6, 7-9, 10-12). These researchers found clear evidence of school transition effects but the exact nature of these effects, and the groups of students most affected varied somewhat across studies (Simmons & Blyth, 1987).

In another study on motivational changes of 6th graders moving to 7th grade, researchers found that general self-esteem was lowest in the first two months of seventh grade year (Eccles et al., 1989; Wigfield, Eccles, MacIver, Reuman, & Midgley, 1991). In addition, students’ perceptions of their abilities in language arts and social activities showed the largest decreases between the spring of the sixth grade year and the first two months of the seventh grade year. Findings from this study suggest the CT participants did not demonstrate the motivational declines, and therefore may contribute to circumventing the traditional motivational decline around academic achievement that typically occurs around pre-adolescence.

We find evidence to support this observation in both the quantitative and qualitative data analysis. Generally, in the intrinsic motivation and perceived ability scales, T1 Career Trek participants scored lower in subject-domain scales (eg. reading) compared to the control group students. However, at T2, Career Trek participants increased scores on motivation and perception of abilities, whereas the control group decreased to below the Career Trek T1 level. In view of findings that suggest children experience an increase in stress levels and psycho-social adjustment with school transitions (Lohaus,
Ev-Elban, Ball, & Klein-Hessling, 2004), it is suggested that participation in the Career Trek program may mitigate some of the negative impact of school transition on children.

Further evidence to support this conclusion is found within the qualitative data. Career Trek participants reported themes of persistence, increased self-esteem, and increase in their ability to positively identify themselves as students. These factors are noted to be significantly associated with school retention and academic engagement (Evans & Burke, 1992). If career education increases motivation, than it may have greater impact on school performance if it is included at an earlier grade. Through the creation of an educational context wherein clear linkages are established between current education and future career goals, academically at-risk students who have limited exposure to career information and post-secondary education may increase their academic self-efficacy, and confidence in their abilities to succeed in career-related activities.

Perception of ability, specifically related to school tasks decreased in both the Career Trek participant and control groups, however in Career Trek this change was significant. Some possible explanations for this finding are:

1. An informal career education program does not impact perceived satisfaction with school tasks for this specific age group. Currently, there are few linkages between the formal education system and Career Trek. Therefore, it is not surprising that participants do not perceive the transferability of academic skills and tasks between both systems. In order to explore this further, creating a career education program that is directly connected with classroom tasks may result in greater perceived school satisfaction. This supports literature on community based cooperative learning programs where there are tangible connections between schools and vocational placements. These type of programs are noted to result in improved self esteem, increased academic achievement and greater retention of at-risk children and youth (Constantine et al., 1998).

2. Career Trek impacts students’ perceptions of their abilities in such a way that students’ develop more accurate or realistic ideas about their academic abilities. This explanation is supported by the interview data, wherein Career Trek participants, compared to the control group, were able to thoughtfully identify realistic barriers to achieving their career goals, which may be internalized as perception of abilities. The current data set does not allow for a clear determination as to which explanation holds greater validity. This could be an avenue of future exploration.
Impact of a Career Education Program on School Engagement

Clearly, there are a number of limitations to this study. The first is the relatively small sample size. Given that there were few control students, it cannot be assumed that they are representative of students who are equally at risk, but did not participate in the Career Trek program. A second limitation concerns the issue of motivation retention. Although there are indications that this may be an effect of Career Trek participation, confirmation of this would require follow up analysis when students transitioned into middle school.

Conclusion: Career Trek and Academic Resilience

An ecological framework of resilience examines the interaction of protective factors at the individual, family, school and community levels. The Career Trek program is located at the interface between family, school and community. It promotes the positive development of children and acts as a protective factor by providing career development information and experiential learning in an atmosphere of caring and support, high expectations, and opportunities for participation. These are key determinants of competent schools and communities (Bernard, 1992). As a community based program that partners with both the elementary and post-secondary educational systems, Career Trek, extends the capacities of schools to foster academic resilience in children. Results of the interviews with Career Trek participants are congruent with previous findings that school-based initiatives that are directed towards academically at-risk children within their homes, schools and communities are more likely to foster successful academic outcomes (Borman & Overman, 2004). Consequently, informal career education may positively contribute to academically “at-risk” students’ perceptions of their own abilities, self-esteem and school motivation compared to students in the general population.

Educational Policy: Implications

Career exploration outcomes are scattered throughout the Manitoba curriculum documents in early and middle years. In general, career related outcomes are associated with a particular discipline (e.g. space-astronaut). Therefore, there are no clear opportunities for Manitoba students to investigate possible career options during these formative years. The results of this study suggest that exposure to meaningful career exploration activities may mitigate risk associated with the transition from elementary to middle school for inner city students. This challenges existing curriculum that introduces formal career exploration towards the beginning of senior years. At the point of transition from Senior 1 to Senior 2 youth who are not engaged at that point are less likely to do so. Beginning career education earlier may be especially critical for inner
city schools, as living in poverty can create undue stress that contributes towards early school leaving. Poor and minority youth and their families deserve equal opportunity to experience connections between education, careers, meaningful employment and not living in poverty.

This study highlighted the continuing divisions between post-secondary institutions, the inner city students and their families and community schools. This is apparent in the interviews conducted with the students where they describe the separation between the Career Trek program and school. Inner-city youth and their families continue to encounter barriers to including post-secondary education and career development as future goals. This may be a function of lowered expectations for success, a history of negative relationships with educational systems, or a lack of meaningful policy changes that would result in substantive school/university/community collaborations. Findings from this study seem to suggest that a more holistic model that develops boundary fluidity between and amongst the various stakeholders may have a more powerful impact on inner city students’ career aspirations.

Acknowledgement

This research was financially supported by the Winnipeg Inner city Research Alliance (WIRA), which is funded by the Social Sciences and Humanities Research Council (SSHRC) and Canada Mortgage and Housing Corporation (CMHC). The Institute of Urban Studies provides administrative support for WIRA. The opinions of the authors found herein do not necessarily reflect those of WIRA, the funders or the Institute of Urban Studies.

References


Impact of a Career Education Program on School Engagement


Impact of a Career Education Program on School Engagement


