The Canadian Journal of Career Development/Revue canadienne de développement de carrière

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Editorial

Welcome to the second digital edition of The Canadian Journal of Career Development. You are in for a treat as this edition is the longest in the history of the journal. The articles within contain a vast array of topics that are gaining increasing attention in the career development world.

Three articles within focus on career decision making, employment, and post-retirement. In the first article *The relationship between vocational self-concept, ego-identity development, and vocational decision-making* the reader is introduced to the concept of how vocational identity impacts students developmental and career decision-making processes.

Transitioning into the work world, Martha Reavley and Denise Ghanam examine how labour market information training impacts workers perceptions of their job self-efficacy. Being unemployed or laid off is stressful enough but looking for a new job can be worse for some individuals. There are plenty of helpful tips and career counselling programs for those looking for help, yet how effective are they in isolation and in relation to individual personality characteristics? Reavley and Ghanam explore the relationship between a person's competence and confidence in looking for employment and how labour market information is presented to them. Could this new information lead to new methods of counselling?

Moving to retirement, how does one decide to go back to being employed after retiring? What factors are at play to make people choose to re-enter the workforce? In *Determinants of post-retirement employment: Canadian evidence* Robert D. Hiscott looks at these questions. Knowing what factors could lead to 'bridge' employment is very beneficial to not only counsellors but also to the retirees who could be affected and Hiscott explains the benefits to both employers and employees of this increasing trend.

Youth today are requiring more information about careers and looking for assistance to find employment that matches their skills and competencies. At the same time employers are continually having problems finding workers with the skills to fill available positions. Lorraine Godden examines how two notation career education policies and curriculum documents work to achieve a better match between skills that young people acquire in school and those that are actually needed in the labour market.

In relation to youth, Dr. Peter Dietsche continues his research on career planning of Ontario grade 10 students and provides a look at this topic from the students' perspective. Just how important is career planning to students? Do they see it as beneficial? What kinds of information are they looking for are just a few of the questions Dietsche answers for us in his article. His conclusion also provides additional support as to why experiential learning should be incorporated into more schools.

The need for skilled immigrant workers has been all over the news this year. In the article *The experiences of mainland Chinese immigrant professionals who believe they have made a successful transition: strategies that help or hinder* we are shown the structural and personal barriers that Chinese immigrant professionals face when working in Canada. In order to keep these professional immigrants here and to continue to attract new people, learning from those who made a successful transition is just as important as learning from those who didn't.

Cultural, social, and community identity can closely impact on how individuals find and keep employment. Our Canadian indigenous people are no exception and can often have unique experiences when it comes to finding employment. In *Intersections of career development and post secondary education for indigenous students: exploring the integrity of social and cultural issues* Stewart and Reeves examine the complicated relationship of career development and post-secondary education for indigenous students. A number of questions are addressed - What are the main issues at play? What are the implications for career develop-

ment for this group? What guidelines need to be changed to service the career needs of indigenous students in Canadian universities is addressed.

Our final article is a continuation from the research in motion section of Vol 12 (1). In part II of *Creating hope, opportunity, and results for disadvantaged youth* Acker and Rowen recount the development process of the Pathways to Education program and tantalize you with what it has achieved, their results to date, student achievements, and provide us with the voices of young people who have gone through the program. This article will be of interest to anyone who counsels students, youth, or has a vested interest with youth.

As we end 2013 with this edition, I would like to extend my gratitude and appreciation to all of our peer-reviewers & the authors who have submitted work to The Canadian Journal of Career Development. Without you and our peer-reviewers this journal would not be able to continue and grow as it has over the last 13 years. My associate editor and I look forward to the coming years and to continuing to provide articles of interest to career development professionals and Canadian workers.

Finally a call to the profession, as the journal continues to grow we are looking for additional peer-reviewers to provide feedback and guidance on submitted work. With the vast array of topics submitted to the journal, we are looking to broaden our reviewer database so to better match our peer-reviewers to article topics. If you are interested in becoming a peer-reviewer for the journal please contact associate editor Diana Leadbeater for additional details.

Robert Shea
Founding Editor

The Canadian Journal
of Career Development

Revue canadienne de
développement de carrière

Etta St. John Wileman Award
for Lifetime Achievement in Career Development

Why develop this award?

This award is designed to recognize and celebrate individuals who have devoted their lives to furthering the profession of career development.

To celebrate individuals who have established themselves as leaders within our profession.

Leaders who combine the role of researcher, educator, author, practitioner and career leader.

To encourage individuals in Canada and around the world to celebrate those around us who have contributed so much to our identity as career development professionals.

To establish a significant and uniquely Canadian award that recognizes those individuals who have devoted their lives to the enhancement of career development practice, administration, research and education.

Who can be nominated?

Individuals who have demonstrated significant and long term commitment to the principles and experience outlined above.

When is the award presented?

The award is presented at the annual Cannexus Conference in Canada. The award is presented on a less than annual basis as is determined by the selection committee.

Who will comprise the selection committee?

The selection committee is comprised of the Founding Editor of The Canadian Journal of Career Development; a previous award winner; a career practioner; and the Board Cchair of the Canadian Education and Research Institute for Counselling.

What is awarded?

The award recipient will be presented with a hand made Innukshuk by an Inuit artisan from Newfoundland & Labrador, Canada. The Innukshuk is made from a precious stone called Labradorite native to the coast of Labrador. Each award will be presented at the annual Cannexus Conference.

Submissions

To ensure confidentiality and to minimize disappointment it is requested that the nominee not know about the nomination in advance.

Submissions should attest to each of the principles outlined above in the section - Why develop this award? This is an award for significant and lifetime commitment to career development. Unsuccessful nominations will be considered for a period of two further years.

Nominations

Nomination packages should be sent to:

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The Relationship Between Vocational Self-Concept, Ego-Identity Development, and Vocational Decision-Making

Jeffrey R. Landine
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Abstract

Occupational decision-making is an ongoing concern with university students and knowing what developmental tasks facilitate the process can make this particular problem-solving task easier. The present study explored the connection between vocational self-concepts, ego-identity and career indecision. Participants (N=202) were university students enrolled in an Introductory Psychology class. Correlational and regression analyses revealed a strong negative relationship between vocational self-concept crystallization and occupational indecision and a more moderate negative relationship between advanced identity status and career indecision. These results make a case for the importance of a vocational identity in the developmental and career decision-making process. Limitations and implications for future research and practice are discussed.

Résumé

Travail de prise de décision est une préoccupation permanente avec les étudiants universitaires et de savoir quelles sont les tâches de développement de faciliter le processus peut faire ce notamment à résoudre les problèmes tâche plus facile. La présente étude a exploré la relation entre formation professionnelle des auto-concepts, l'ego-identité et l'indécision de carrière. Les participants (n = 202) étaient des étudiants universitaires inscrits dans une classe introduction à la psychologie. Les analyses de corrélation et de régression a révélé une forte relation négative entre la formation professionnelle du concept de soi de cristallisation et de l'indécision professionnelle et une relation plus modérée négative entre le statut des identités avancée et l'indécision de carrière. Ces résultats plaident en faveur de l'importance d'une identité professionnelle dans le développement et la carrière du processus décisionnel. Limitations et les implications pour la recherche future et de la pratique sont discutées.

Occupational decision-making can be seen as a problem-solving task that, even under the best of circumstances, can be daunting and difficult. Students as early as Grade 6, but in particular grade 12 and through the years immediately following graduation, are typically required to make decisions regarding education and training that will impact their occupational path. In making these decisions they are, by necessity, compelled to use whatever self-knowledge they have available at the time, regardless of developmental status, along with whatever occupational information they have been given or with which they are familiar. Jarvis (2002) points out that it is "testimony to their personal resourcefulness that most students eventually find their way to acceptable, if not optimal, employment and lifestyles" (p. 41). The common belief during much of the twentieth century was that, given access to sufficient occupational information and guidance, students would make appropriate career decisions (Jarvis, 2002). Studies of school-to-work transitions have raised doubts about whether simply providing information and guidance is sufficient (Krumboltz & Worthington, 1999; Savickas, 1999), however, and in contrast, the present world-of-work environment necessitates an attitude of continuing self-appraisal and attunement to occupational information, within the context of self-knowledge, starting at an early age. This is something Savickas (1999) referred to as the need for students to "look ahead" and "look around".

In order to be able to engage in occupational decision making, Savickas (1999) suggested that students leaving school need to have developed competence and skill in five domains: (a) self-knowledge, (b)

occupational information, (c) decision making, (d) planning, and (e) problem solving. When any one of these requisite factors is lacking the task of making occupational decisions can move from daunting to insurmountable. While the provision of information that facilitates the development of the last four of these competencies and skills may potentially be quite uniform in content, the acquisition of information about self is both personal and idiosyncratic.

The research described here was motivated by the desire to better understand how the development of self-knowledge impacts occupational decision-making, within a cognitive information-processing model.

Growth at University

The university experience provides the opportunity to explore and develop a more clear and well-differentiated sense of self and the period of time students spend in university offers an environment structured primarily around facilitating student cognitive development. The developmental needs of university students, however, are not limited to cognitive development but include growth in the areas of personal and vocational identity (Chickering & Reisser, 1993; Morgan & Ness, 2003). University students frequently change their occupational plans and majors while in college. In addition, or possibly as contributing factors, they often experience a lack of confidence in the occupational

exploration process, self-knowledge that is unclear and uncertain, limited occupational knowledge, and the anxiety of vocational indecision (Johnson, Nichols, Buboltz, & Riedesel, 2002). Vocational indecision among university students and their high school counterparts has been a significant and widespread concern for career professionals across North America (Symes & Stewart, 1999).

Developmentally speaking, university students are typically moving from a recent "decision point" (Patton & Creed, 2001), senior year of high school, into a period that allows for further growth and exploration, but with another decision point on the horizon. It is during this period of late adolescence/early adulthood that they develop a realistic self-concept (Super, Savickas, & Super, 1996). Late adolescence is also viewed as the period in life when childhood identifications are synthesized (Marcia, 1966) and as a time of growing occupational and ideological commitment (Erikson, 1956) as ego-identity moves towards an achieved status. Identity formation involves a significant amount of personal exploration and Cote and Levine (1988) point out that the social contact typical of the university experience is likely to pressure students into exploring their identity, even when they may appear to have already made firm identity commitments. Developmentally speaking, there is an expectation in North American society that at this stage in life students should be able to "crys-

tallize" or specify, and implement an occupational choice (Savickas, 1984).

Vocational Decision-Making and Career Indecision

While "few if any students are ideal career planners…some appear to have less career indecision and seemingly find it easier to decide on a career path than others do" (Morgan & Ness, 2003, p. 33). Indecision refers to a broadly accepted term that encompasses both undecidedness and the more complex, indecisive decision maker. A majority of individuals appear to experience undecidedness, a normal developmental state, and in most cases the undecidedness is due to information deficits or a lack of developmental readiness (McAuliffe, Pickering, & Calliotte, 1991). While undecided individuals will typically make a decision when the appropriate circumstances arise, career indecisiveness is seen as more trait-like in its characteristics and often extends to other decision-making situations in their lives (Vondracek, Hostetler, Schulenberg, & Shimizu, 1990). Individuals who are indecisive tend to possess a more pervasive pattern of psychological difficulties than the undecided, with psychological type (DiRusso, Carney, & Bryan, 1995), anxiety (Healey, 1991), and a number of personality dimensions (Newman, Gray, & Fuqua, 1999) found to be related to vocational indecision.

Periods of vocational indecision may come and go over

the life span and these periods can be viewed as a necessary state through which individuals pass on their way to reaching a decision (Osipow, 1999). For adolescents and young adults, however, on-going indecision can result in missed opportunities, inappropriate decisions, and anxiety. Osipow et al. (Osipow, Carney, Winer, Yanico, & Koschier, 1976) suggested that there are four reasons for occupational indecision, the first of which, a lack of self-knowledge, may be related to deficits in encoding, processing, or being able to access relevant information about self stored in memory. Insufficient episodes or ineffective integration and/or differentiation of information could result in a lack of knowledge or insight into the aspects of self that are related to vocations (Tokar, Hall, & Moradi, 2003).

Development of Self Knowledge

Every new experience adds to our network of concepts and contributes to the overall organization of knowledge in memory and repeated experiences lead to generalizations that can enhance memory (Siegler, 1998). Thinking about and talking about memories helps to consolidate them in long-term memory and in the schema network (Schacter, 1996; Savickas, 2011). Pre-existing knowledge influences memory and the way one remembers an event will depend on the purposes and goals at the time of the event and when the event is recalled (Schacter, 1996). As people get older they have access to a greater store of content knowledge to bring to bear on understanding new situations, and this greater store of knowledge helps in making decisions about what subsequent information to focus on. Existing knowledge also provides a framework for organizing new information and serves as a point of comparison against which to check the plausibility of recalled sequences.

What we believe about ourselves then, is largely determined by our past experiences and the episodes they create in memory. Schacter (1996) stated that our sense of self or identity is highly dependent on explicit memory for past episodes. The self is represented in memory at different levels (Hart & Fegley, 1997). At the highest level the self-concept is a theory with a set of assumptions about the nature of self in relation to the world. At a lower level the self is made up of many interrelated schemas. And at the most specific level the self is derived from personal episodes in memory. There are a number of factors related to an episode that make it likely that it will be reflected upon in determining a self-trait (Hart & Fegley, 1997). The episode's uniqueness and consequentiality, or relevance to personal goals, tend to make it more memorable. Unexpected events or episodes that evoke emotion are better remembered and actions are better remembered than thoughts.

Exploratory experiences are critical to vocational decision-making and occupational development because they modify and shape the way students see themselves and the world of work. Taylor (1988) suggested that college work experiences like internships may aid in the transition from school to work because they contribute to a greater crystallization of vocational self-concept and work values. Clarification of vocationally related self-concepts can occur while reflecting on these past paid and unpaid work experiences (Sampson, Lenz, Reardon, & Peterson, 1999). The concepts that arise out of experience become the material for the development of a more broad system of self-concepts as described by Super (Super, Starishevsky, Matlin, & Jordaan, 1963) in the literature.

Vocational Self-concept

Super (Super, Starishevsky, Matlin, & Jordaan, 1963; Super, Savickas, & Super, 1996) advanced a model of vocational development that identified a series of age-related stages of development across the life span, leading to a constellation of personal constructs, or self-concepts, that individuals have about self and the world. Some of our self-concepts have relevance to occupations and their attributes. Vocational self-concepts have relevance to occupations and their attributes, and as one part of our self-concept system, overlap with other self-concepts within the system. For example, one's academic self-concept likely has a great deal of overlap with one's vocational self-concept. At the same time, the self-concepts considered to be part of the vocational self-concept do not have to be related to one's occupational

preferences (Landine, 2004). For instance, traits such as landscaping skills could be part of the vocational self-concept but may not be relevant to one's vocational preference. For some people, this system of self-concepts is well organized and for others it isn't.

Vocational self-concept crystallization is the term applied to the extent to which an individual has a clear sense of their own vocationally relevant interests, abilities, traits, and attitudes (Tokar, Hall & Moradi, 2003). The lack of a crystallized vocational self-concept as described here has been clearly linked with occupational indecision (McAuliffe, Pickering, & Calliotte, 1991; Tokar, Withrow, Hall, & Moradi, 2003).

Experience, in the form of practical work experiences such as domestic and overseas term work, has been shown to increase vocational self-concept crystallization (Hannigan, 2001), presumably because it provides students with the opportunity to test the "fit" between their abilities, interests, values and satisfaction with the chosen work environment. Hargrove, Creagh and Burgess (2002) suggested that greater exposure to a diversity of experiences in the form of different cultures, types of people, work environments, and leisure activities fosters greater self-awareness and knowledge of the world-of-work.

With a confident and clear understanding of self, based on developmental experiences, individuals are able to integrate additional information into vocational planning with some confi-

dence (McAuliffe, Pickering, & Calliotte, 1991). In contrast, for individuals whose understanding of self is less clear and whose expectations and cognitive schema are negative about their place in the world-of-work, the provision of self- and occupational information may not be useful and vocational planning may be impeded. For example, a study by Cabral and Salomone (1990) found that well-developed self-concepts enabled individuals to process information that had been unforeseen. This same information was confusing to persons with negative schemata about their own occupational potential.

It appears, not unexpectedly, that vocational concept crystallization increases with age. Older students and students in higher grades have been shown to score higher on crystallization (Barrett & Tinsley, 1977) and lower on indecision (Osipow, 1987). Poe (1991) found that students in later years of their undergraduate program reported more stable vocational identities and less need for occupational information. According to Chickering and Reisser (1993), autonomy is one of the major areas of development necessary to the formation of one's identity. As individuals grow up and experience more of the world they become more autonomous and their level of vocational maturity increases. Vondracek, Silbereisen, Reitzle, and Wiesner (1999) saw the timing of being able to state a vocational preference corresponded to more advanced levels of identity development.

Identity and Vocational Identity

The period of adolescence to young adulthood is one of synthesizing childhood identifications into something Marcia (1966) referred to as ego-identity status. Recognizing that not everyone achieves identity status the same way or at the same time, Marcia used empirical studies to identify four possible statuses of ego development: identity achievement, moratorium, foreclosure, and identity diffusion. The four identity statuses vary along two dimensions: the extent to which individuals have (or have not) experienced an identity crisis, and the extent to which individuals have committed to an ideological and interpersonal possible self. This analysis yields four identity status categories: at the extremes lie the identity-achieved status (people who have experienced a crisis and have made commitments) and identity diffused status (no crisis, no commitment). Between these extremes lie the foreclosed (no crisis, high degree of commitment) and the moratorium (currently experiencing a crisis, but have not yet made commitments) statuses. Research findings have left little doubt regarding the importance of these statuses. For instance, adolescents in the achieved and moratorium identity statuses, the extremes in status, tend to be more cognitively developed (Boyes & Chandler, 1992) and score higher on measures of occupational planning and exploration (Wallace-Broscious, Serafica, & Osipow, 1994). By contrast, youths identified as hav-

ing foreclosed and diffused identity statuses tend to hold more traditional masculine/feminine attitudes, experience more social anxiety (Adams, Ryan, Hoffman, Dobson, & Nielson, 1985), and display fewer prosocial behaviors and cognitions than moratorium and achieved adolescents (Adams, Bennion, & Huh, 1989). Subsequent studies (Vondracek, Silbereisen, Reitzle, & Wiesner, 1999) examined how ego-identity status relates to vocational preference and found that early formation of vocational preferences was associated with more advanced levels of identity development. Marcia's (1980) final status, Achievement, would represent an individual with a clear commitment to a vocational choice and the research has shown this status to be characterized by significantly less career indecision than the other three statuses (Vondracek, Schulenberg, Skorikov, Gillespie, & Walheim, 1995) and fewer occupational decision-making difficulties (Morgan & Ness, 2003). Marcia's theory suggests that those who are further along in the identity development process (Moratorium and Achievement) should experience fewer difficulties with vocational tasks than those at an earlier status of development because their sense of self is more developed.

Generally speaking, identity is the process of deciding "who one is with knowledge about oneself in the present and aspirations for the future" (Conroy, 1997, p.13) and forms from family background, education, and socialization experiences. Identity development occurs in a variety of domains, one of which is vocation. Vondracek et al.(1999) suggested that vocational identity may actually lead all other domains in terms of advancement in development. The growing body of research literature in this area has formed a strong connection between the development of identity and vocational self-concept (Adamson, Hartman, & Lyxell, 1999; Blustein, Devenis, & Kidney, 1989; Grotevant & Thorbecke, 1982; Skorikov & Vondracek, 1998; Wallace-Broscious, Serafica, & Osipow, 1994). Vocational self-concept refers to the occupationally relevant traits the individual attributes to him or herself and identity refers to the level of differentiation and integration of the self-concept (Harren, 1979). The highly differentiated self-concept is aware of a wide range of traits that are held with clarity and confidence. A highly integrated self-concept is one in which the traits are unified and consistent. The result is a clear and stable sense of "who one is" or identity (Harren, 1979). A more recent study (Adamson, Hartman, & Lyxell, 1998) reversed the roles of self-concept and identity, conceptualizing identity as the broad theoretical construct of which the self-concept is but one component.

Saunders, Peterson, Sampson, and Reardon (2000) suggested that a strong vocational identity may serve as a cognitive structure or schema on which the tasks of assimilation and integration of occupational knowledge and self-knowledge can be based. In terms of making an occupational choice, young people may be viewed as forming an identity template prior to their entrance into the world-of-work (Conroy, 1997). The template is composed of a compilation of identities including ideal and expected work roles, similar to Super's (1980) occupational self-concepts. These identities or occupational self-concepts result from gathering and processing conceptual information of a number of occupations, including those of parents, neighbors, and people read about in books or seen on television. These concepts are related to concepts of self and over time they evolve into considerations of vocational opportunities.

In the studies of vocational self-concept and identity development the uniform effect of age was similar to that found in the research literature for occupational decision-making. Generally speaking, vocational self-concept crystallization and ego-identity status achievement increase with age (Grotevant & Thorbecke, 1982; Skorikov & Vondracek, 1998; Wallace-Broscious, Serafica, & Osipow, 1994). Gender differences were found in some studies and differences were attributed to acceptance of challenging tasks and lack of concern for the negative evaluations of others for men, and an orientation toward working hard and avoiding competition for women (Grotevant & Thorbecke, 1982), men's tendency to establish identity and women's to intimacy (Skorikov & Vondracek, 1998), and men's orientation toward autonomy and women's toward connectedness (Lucas, 1997). Finally, and most

importantly in the context of this research, identity achievement and vocational self-concept crystallization have both been positively associated with career decidedness (Cohen, Chartrand, & Jowdy, 1995; Kelly & Lee, 2002; Nauta & Kahn, 2007; Wallace-Broscious, Serafica, & Osipow, 1994). The message emanating from this line of research is that when individuals lack crystallized self-concepts, identity development is less than optimal or lagging and the ability to articulate occupational choices is curtailed, resulting in indecision, or as in one study (Cohen, Chartrand, & Jowdy, 1995), a state of chronic indecision.

Based on these key factors identified in the literature as related to the decision-making task, the research hypotheses stated that:
1)   Individuals who experience high degrees of occupational indecision will indicate a decreased clarity of vocational self-concept crystallization.
2)   Individuals who experience high degrees of occupational indecision will indicate the less advanced identity statuses (diffused and foreclosed statuses) and those individuals who experience low degrees of occupational indecision will indicate more advanced identity statuses (achieved and moratorium statuses).

Method

Participants in the research were all members of Introductory Psychology classes offered at a university in Atlantic Canada between March and May 2005. Two hundred and two students volunteered to participate. A cross-sectional research design was employed and participants were asked to complete a questionnaire package that consisted of a demographic questionnaire, a measure of career indecision and measures of vocational self-concept and identity.

Measures

Career decision scale.

The Career Decision Scale (CDS, Osipow, Carney, & Barak, 1976) consists of 18 items measuring the degree of an individual's career indecision. Agreement with each item is indicated on a Likert scale of 1 (Not at all like me) to 4 (Exactly like me). Items 1 and 2 indicate certainty of choice of career and/or major, while items 3 to 18 indicate indecision. The indecision score is the sum of items 3-18, with higher scores indicating higher levels of indecision.

The CDS manual (Osipow, 1987) reports indecision test-retest reliability coefficients ranging from .90 and .82 for two weeks to .70 for 6 weeks. A more recent study (Marco, Hartung, Newman, & Parr, 2003) reported an estimate of internal consistency for the Indecision scale of .89 (Cronbach's alpha). A Cronbach alpha of .89 was obtained when internal-consistency reliability was assessed in the present study. Discriminant validity of the Decided scale of the CDS has been demonstrated by its ability to differentiate career decided and undecided groups (Osipow, 1987).

Crystallization of vocational self-concept.

Crystallization of vocational self-concept was assessed with the Vocational Rating Scale (VRS; Barrett & Tinsley, 1977). The VRS was developed as a global measure to assess the clarity and certainty of self-perceived patterns in vocational abilities and interests. An individual's degree of vocational self-concept crystallization was defined as "the degree of clarity and certainty of separate vocationally relevant self-concepts and the structure of the self-concepts as a whole" (Tinsley, Bowman, & York, 1989). It consists of 40 self-descriptive statements regarding the individual's awareness of vocationally relevant attributes and characteristics. Each item is rated on a five-point Likert scale (1 = completely false; 5 = completely true) indicating how true the respondent feels the statement is about him or herself at the time of testing. High total scores (range is 40-200) indicate a high degree of vocational self-concept crystallization.

The VRS was validated on selected groups of university undergraduate and graduate students by examining the relationship between scores on the VRS and the Distribution Scale on the Tennessee Self-Concept Scale (TSCS). The VRS has shown high internal-consistency reliability (Cronbach's alpha coefficient of .94) in previous research and

has been significantly related to students' level of confidence in their vocational decisions (Taylor, 1985). A test-retest reliability of .76 was obtained in the original study after a two-week interview. A Cronbach alpha of .95 was obtained when internal-consistency reliability was assessed in the present study.

Identity status.

The instrument used to assess adolescent identity status was the Extended Objective Measure of Ego Identity Status-II (EOMEIS-II, Adams, Bennion & Huh, 1989). The EOMEIS-II is a 64-item self-report scale designed to assess both ideological and interpersonal identity. Ideological identity includes occupational, religious, political and philosophical life-style values, goals, and standards, while interpersonal identity incorporates aspects of friendship, dating, sex roles, and recreational choices. Items were designed to determine the extent of crisis, exploration, experimentation, and commitment in which adolescents had engaged in each of these domains. The total scale is broken down into eight subscales (each containing eight items), with examinees receiving four scores in the ideological domain and four scores in the interpersonal domain. Items target each of the four identity statuses in four ideological domains (politics, religion, occupation, lifestyle) and four interpersonal domains (friendships, dating, gender roles, recreation) (Schwartz, 2004). Responses to each item are on a 6-point scale, ranging from

strongly agree to strongly disagree. Thus, scores on each subscale can range from 8 to 48.

Adams et al. (1985) reported status classification agreements between the original EOMEIS and Marcia's Ego Identity Interview that ranged from 70% and 100% working with a population of undergraduate students (late adolescence). For the eight EOMEIS-II subscales, Adams et al., (1989) reported internal consistency alphas ranging from .37 to .77, four-week test-retest reliabilities ranging from .59 to .82, and moderate correlations between the ideological and interpersonal subscales, suggesting that these identity domains, although related, are generally independent. Klaczynski, Fauth, and Swanger (1998) collected six-week test-retest reliabilities in the ideological domain (achievement .33, moratorium .36, foreclosed .54, diffused .60) and in the interpersonal domain (achievement .27, moratorium .38, foreclosed .67, diffused .74). With the exception of the interpersonal-achievement subscale (p = .07) each of these correlations was significant. A more recent study by Klaczynski (Klaczynski & Lavallee, 2005) reported Cronbach's alphas of .66, .72, .80, and .7 for the achieved, moratorium, foreclosed, and diffused statuses. A Cronbach alpha of .76 was obtained for the overall instrument when internal-consistency reliability was assessed in the present study.

Results

Males represented 28 % (56) of the sample and females

72 % (146). The average age of the participants was 20.92, ranging from 17 to 54 years. The majority came from the Faculty of Arts (40.1 %), with the Faculty of Science (20.8 %) as the next highest faculty represented. As participants were drawn from an Introductory Psychology class, it was not surprising to find that the majority of participants were in their first year (75.1 %) and the percentages grew smaller the further away from first year participants got. When asked to indicate a chosen major, over half (51.5 %) answered none/unknown. Over one quarter of the sample (26.7 %) had seen a career counsellor or participated in career counselling before. Participants were also asked to assess their level of self-knowledge on a 10 point Likert scale in three different areas: interests, abilities, and personality (A score of 10 was described as High and a score of 1 Low). The mean score for self-knowledge of interests was 7.8. For self-knowledge of abilities the mean was 7.4 and for personality 8.1. Participants were also asked to rate their level of information about the occupations they had considered (using the same scale as above) and the mean score for this rating was 7.1. The final two demographic questions asked participants to indicate whether or not they had made a career choice and then were asked to name, if possible, two occupations, in addition to their first choice, that they had thought about. More than three quarters of the sample (86.5%) indicated some present career choice and 72.3% named another two occupations that they had

considered.

Mean scores and ranges were calculated for all variables and then correlation analyses were done on the variables in groups according to their function in the study. To answer the question of how much of the variability in indecision could be determined by vocational self-concept crystallization a standard multiple regression analysis was calculated using the Statistical Package for the Social Sciences (SPSS).

Vocational self-concept, identity and occupational decision-making

Vocational self-concept crystallization scores represent the sum of all items endorsed on the Vocational Rating Scale. The mean score for vocational self-concept crystallization was 144.60. The scores for this sample ranged from a low of 85 to a high of 194 (possible range 40 to 200), meaning that although the sample represented a normal curve, the curve was situated at the high end of the range of possible scores. Ideological Identity and Interpersonal Identity Statuses were calculated using the SPSS computer syntax provided by the authors (Adams, Bennion & Huh, 1989). All participants were grouped into one of four status groups (1 = diffusion, 2 = foreclosure, 3 = moratorium, 4 = achieved) for the Ideological side of identity status and then again for the Interpersonal identity status construct. For the Ideological aspect of identity, the part containing vocational identity, the majority of participants were placed in two of the status groups: diffused (41.6 %) and moratorium (43.6 %). The other two groups, foreclosed and achieved accounted for 5.4 % and 9.4 % of the sample respectively. For the Interpersonal aspect of identity the majority continued to fall into the diffused (19.8 %) and moratorium (58.9 %) and the foreclosed and achieved groups accounted for 7.9 % and 11.6 % of the sample respectively.

Correlational analysis of the variables with age and gender indicated a low but significant correlation between age and vocational self-concept (.17, p<.05). The first research hypothesis proposed that vocational self-concept crystallization and ego-identity status were related to each other and related to career indecision. The Pearson product-moment correlation was used to determine the relationships between these variables. The first two hypotheses stated that vocational indecision scores would be higher for those participants with lower vocational self-concept crystallization, and that vocational indecision scores would be lower (a negative correlation) for more advanced identity status (achieved and moratorium statuses) and higher for the less advanced identity statuses (diffused and foreclosed statuses). Correlation coefficients (Table 1) indicate that a significant inverse correlation between vocational self-concept crystallization and career indecision was present (r = -.72, p<.01) as well as smaller but significant inverse correlations between both Identity status domains and indecision: Ideological (r = -.32, p<.01) and Interpersonal (r = -.17, p<.05). The two domains were also significantly correlated (r = .24, p<.01) and vocational self-concept was significantly correlated with both Ideological (r = .39, p<.01) and Interpersonal (r = .18, p<.01).

Table 1

Means, Ranges and Inter-correlations of Age, Gender, Vocational Self-Concept Crystallization, Identity Status and Career Indecision

| | Variable | M | Range | Correlations | | | | | |
				1	2	3	4	5	6
1.	Age	20.91	17 – 54	--	-.05	.17*	.10	-.01	-.13
2.	Gender				--	-.04	-.09	.22**	-.07
3.	VSC	144.60	85 – 194			--	.39**	.18**	-.72**
4.	Ideological Id.	2.21	1 – 4				--	.24**	-.32**
5.	Interpersonal Id.	2.64	1 - 4					--	-.17*
6.	Indecision	30.80	16 – 57						--

N = 189
* p < .05
** p < .01

Standard regressions were performed on both variables independently with career indecision as the dependent variable in an effort to determine the amount of variance each variable contributed separately to career indecision. Vocational self-concept crystallization [$F (1, 192) = 201.84$, $p<.001$], contributed 51% ($R2 = 0.513$) of the variability in predicting career indecision. The Ideological identity status domain [$F (1, 192) = 21.53$, $p<.001$], contributed 10% ($R2 = 0.101$) and the Interpersonal identity status domain [$F (1, 192) = 5.51$, $p<.001$], contributed 3% ($R2 = 0.028$). When taken together the vocational self-concept crystallization variable contributed almost all of the variance accounted for by the two variables in predicting career indecision, suggesting that the two variables are measuring things that are quite consistent and that ego-identity status is only a significant contributor to the variance when paired with vocational self-concept crystallization. Statistically speaking, while the simple correlations between the two identity scales, ideological identity and interpersonal identity, and indecision were -.32 and -.17 respectively, the partial correlations were much closer to zero (-.03 and -.05), indicating redundancy between the vocational self-concept scale and the ego-identity status scales. Altogether, 55% (51% adjusted) of the variability on career indecision was predicted by knowing the level of participants' vocational self-concept crystallization and ego-identity status in the two domains.

Discussion

The results of this study indicated a number of significant statistical relationships that serve to support the importance of self-knowledge to the occupational decision-making process. The sample population was relatively young (average age 20.92) and predominantly enrolled in the Faculty of Arts, traditionally a haven for the occupational undecided. Half of the students had not chosen a major but 86% indicated a career choice. This would suggest the possibility of a lack of realism or commitment to the indicated career choice (Super, 1980). The three self-knowledge areas (interests, abilities, and personality) were all scored on the high end of the Likert scale, indicating that these students believe that they have a high level of self-knowledge in these areas.

The first of two research questions asked if a relationship existed between vocational self-concept crystallization and the incidence of occupational indecision. The second considered the relationship between ego-identity status and the incidence of occupational indecision. A third question, considered in the regression analysis, asked which of the two (vocational self-concept crystallization and ego-identity status) is the stronger predictor of occupational indecision (and would hence warrant more attention in the decision-making process).

The results would suggest, as predicted, that there is a strong negative relationship between vocational self-concept

crystallization and occupational indecision. This is not surprising as the literature is filled with research that supports the positive impact that a clear and certain vocational self-concept has on career indecision (Barrett & Tinsley, 1977; McAuliffe, Pickering, Calliotte, 1991; Tokar et al., 2003). Mean and range scores for the vocational self-concept variable, suggest that this group of largely first year Psychology students have self-concepts that are well crystallized.

The literature was less clear about the relationship between the development of ego identity and career indecision (Vondracek, Silbrereisen, Reitzle, & Weisner, 1999; Zagora & Cramer, 1994), but the results here indicate that the more established the identity, the less the likelihood of occupational indecision. The majority of students were in the diffused or moratorium groups in both identity domains. This would suggest that the majority of students in this study were neither initiating exploration into possible selves nor committing to possible (diffusion) selves or they were in the process of self-exploration, moving towards achieving an identity, but had not committed to future selves (moratorium). While the second group could be seen as figuring themselves out, the first group isn't trying yet. What was surprising was the finding that identity status scores for the Interpersonal domain saw more people in the more established status groups (moratorium and achieved made up 72.3 % of the participants in this domain) than for the Ideological identity do-

main (moratorium and achieved groups made up only 53% of the total sample) and fewer still were in the less established groups (Interpersonal diffused and foreclosed 27.7 % and Ideological diffused and foreclosed 47.0 %). This is surprising because vocational identity is measured as part of the Ideological domain, along with politics and religion, and in the literature frequently develops before the Interpersonal domain. This finding may be a result of the large gender imbalance and the tendency for females to develop in the interpersonal domain earlier than males (Lucas, 1997).

The significant correlations between the two domains of identity and vocational self-concept were expected, and suggest that they are measuring the same thing, with vocational self-concept being the better formulated of the two constructs for this group. The two constructs together accounted for over half of the variability in indecision scores, providing clear support for the importance of vocational self-concept and identity to the occupational decision-making process (Wallace-Broscious, Serafica & Osipow, 1994).

Conclusion, Limitations and Further Research

As with most studies of this nature, the fact that the sample is quite homogenous (all university students, majority first year student, majority in Arts) limits the extent which results can be extended to the larger community or to a comparable group that differed in age for example. Super (1980) would sug-gest, however, that the majority of these students are still in the exploration stage (albeit, with some commitment) of vocational development and so should be engaged in the tasks of crystalliz-ing a sense of self and specifying and implementing an occupa-tional choice. The potential lack of generalizability becomes less significant when the study is done with the group most firmly entrenched in the tasks being as-sessed.

The close relationship be-tween vocational self-concept and ego-identity, in particular the ideological domain including vo-cational identity, was also sup-ported. As Marcia (1966) and Erikson (1968) both contended, the vocational identity is one of the first to develop. Given that identity is conceptualized in the literature as the level of differen-tiation and integration of the self-concept (Harren, 1979) and that self-concept refers to the occupa-tionally relevant traits the indi-vidual attributes to him or herself, it would seem that the crystallization of vocational self-concept may precede and facili-tate the formation of the vocational identity. The question of how, specifically, vocational self-concept and ego-identity sta-tus are related represents an area of research that would contribute to researchers' and practitioners' understanding of how vocational and mainstream psychology con-structs are related.

The literature review has identified a number of possible reasons why students flounder when it comes to the school-to-work transition including: anxi-ety (Healey, 1991), a lack of readiness (Peterson, Sampson, & Reardon, 1991), individual per-sonality and cognitive differences (Newman, Gray, & Fuqua, 1999). The results here would suggest that a poorly developed system of vocational self-concepts or cer-tain identity statuses also con-tribute to these difficulties. The results indicating strong effects for age were encouraging as they support the contention that while not all students are at the same place developmentally, they will likely, in their own time, reach the place of maturity where they will be able to effectively make occupational decisions.

Possibly the most impor-tant result to come out of this study is the rationale it provides for continued integration of ca-reer development theory into the mainstream of developmental psychology (Blustein, Devenis, & Kidney, 1989). Erikson (1968) clearly set vocational identity as the developmental precursor to the formation of other identities. The strong empirical ties evi-denced in the present study be-tween identity development through Marcia's stages and the development of self-concept, more specifically vocational self-concept, are encouraging. Blus-tein et al. (1989) suggest that adolescents and young adults will be able to engage in a process of self-discovery that need not be compartmentalized ("It's time you started focusing on what you're going to be when you grow up"). The connection of identity and vocational self-as-sessment offers the opportunity for broader exploration with the knowledge that ultimately the

vocational self-concept is being crystallized also.

These results serve to stimulate a number of practical implications for working with university students and late adolescents on career development issues. Firstly, Poe (1991) suggested that a choice of major by freshman and sophomore students should possibly be "regarded more as career exploration than as a reflection of a mature vocational choice" (p.251). Given the tremendous variability in the development of vocational self-concept and identity, and the potential for premature, and possibly unrealistic, foreclosure on aspects of self-concept and identity, it may be best to treat the first years of university as a period of exploration. It is possible that the results presented here describe a group of largely first year students who believe that they have formed a clear sense of who they are vocationally speaking, but are accepting that picture prematurely. Students who foreclose too early do not learn to expand their experiences and develop skills commensurate with the struggle (Greene, 2006).

The importance of vocational identity in the developmental process can't be understated. Cohen, Chartrand, and Jowdy (1995) found that differences in ego identity development are related to the kinds of career decision difficulties that individuals experience and Zagora and Cramer (1994) suggested, based on their research, that students who have not yet reached desired levels of self-awareness may not yet have a clear and stable picture of their goals, interests, personality, and talents, while high vocational identity students may still be uncertain, albeit temporarily, merely waiting for the appropriate time and context to acknowledge an already well thought through decision. Gordon and Meyer (2002) recommend differential counseling, including the development of specific skills, for different types of undecided client and undecided students may well benefit from interventions that enable them to explore and crystallize identities as they acquire career info (Kelly & Lee, 2002). If a well-articulated identity and crystallized vocational self-concept contribute to less problematic occupational decision-making, as the results here would suggest, it might be in practitioners best interest to assess individual student readiness (Sampson, Peterson, Reardon, & Lenz, 2000) and ensure that the identity and vocational self-concept are developed before further vocational development work is done.

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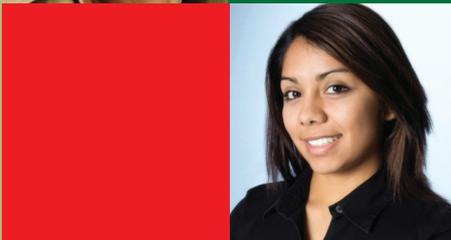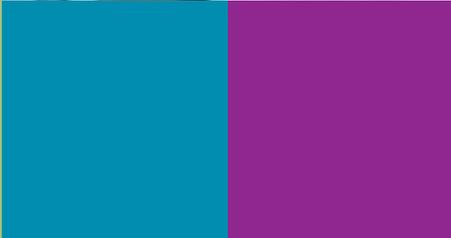
The Impact of Providing Labour Market Information Training on Trainees' Perceptions of Job Related Self-Efficacy: A Comparison of the Influence of Two Delivery Methods on Expressions of Competence and Confidence

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Abstract

The results of interviews conducted with displaced automotive workers who participated in a field experiment testing the impact of labour market information interventions on job related self-efficacy are reported. Self-efficacy, expressed through competence and confidence impacts labour market behaviour. Career decision making assistance may be better suited to one-on-one counseling sessions in order to tailor the training to individual interests. Job search LMI interventions are perceived as more effective when delivered in group sessions. Social support enhances job related self-efficacy by building competence and confidence.

Resumé

Les résultats des entrevues menées auprès de travailleurs de l'automobile déplacées qui ont participé à une expérience de terrain de tester l'impact des interventions du travail d'information du marché liées à l'emploi auto-efficacité sont rapportés. L'auto-efficacité, exprimée à travers la compétence et la confiance des impacts comportement du marché du travail. Choix de carrière aide peut être mieux adapté à des séances de counseling en tête-à-un afin d'adapter la formation aux intérêts individuels. Recherche d'emploi IMT interventions sont perçues comme plus efficace lorsqu'elle est fournie à des séances de groupe. Le soutien social améliore l'auto-efficacité liée à l'emploi par renforcer les compétences et la confiance.

Self-efficacy (SE) influences feelings, thinking, motivation, and behaviour and is a person's belief in his or her ability to produce outcomes (Bandura, 1994). High SE influences motivation to set goals and to persist in their attainment. When SE is high, a person's perception of coping skills is positive. People with high SE believe that they can overcome challenges and have higher commitment to their goals. They are also more resilient in the face of setbacks.

Self-efficacy has been defined as "an individual's judgment of his or her capability to organize and execute a course of action required to attain a designated type of performance" (Sadri, 1996, p. 51). This definition includes aspects of both competence and confidence. Motivated action is the result of effective behaviour that is rooted in both competence and confidence. Motivated action is goal directed and focused and involves considerable persistence (Sadri, 1996). Where self-efficacy is at play, one will observe a willingness to reflect on performance and a willingness to change and adjust behaviours to achieve the desired outcomes. One must perceive that one has an appropriate type and level of skill (competence) and that one can use these skills effectively to bring about a favourable outcome (confidence).

In the self-efficacy literature, the terms competence and confidence are sometimes used interchangeably (Paulsen & Betz, 2004). There is a danger in this thinking. It is quite possible for people who, on any objective measure, have the skills and abilities to search the web for job leads to underperform in that task, if they lack confidence in their abilities. Confidence is related to the expectation of success and is intimately tied to self-efficacy through the ability of confidence to provide the energy to motivate action. Paulsen and Betz (2004), in their work on

career decision making self-efficacy, showed that even where competence is controlled for, expectations of success are critical to the actual achievement of success.

Competence has been referred to as a "universal drive" (Bandura, 1977, p. 164). It relates to a skill or a set of skills (Sadri, 1996). Competency in the use of web-based Labour Market Information (LMI) resources would suggest an understanding of the basic skills involved in using relevant hardware and software as well as the ability to access and understand websites and search through levels of information in websites. Competency implies knowing what to look for, how to look for it, and how to use the information once it has been located.

Confidence often implies calculation of the probability of an outcome occurring given a level of competence at a task and given that the behaviour has to occur in a specified environment. Perceived barriers reduce confidence and perceptions of self-efficacy. They can play a particularly important role in career decision- making. "Perceived barriers may lead individuals to approach career decisions with a general lack of confidence" or "to avoid aspects of the careers decision making process" (Quinby, 2004, p. 324). Formal training can build confidence (Orpen, 1999).

High SE has been associated with more intense job search efforts and positive perceptions of the likelihood of job searches resulting in landing a job (Joseph, 1999). Job Related Self-Efficacy

(JRSE) involves a belief in one's ability to use his or her existing skills to find a new position in his or her previous field of employment (Job Search Self-Efficacy – JSSE) or to be able to transfer their skills to secure employment in a different field (Career Decision-Making Self-Efficacy – CDMSE). JSSE concerns the level of motivation, effort, and persistence that a person must emit in the actual search for a job. CDMSE refers to the activities undertaken to identify one's skills, consider skill transferability and to take action to build ladders of jobs that would reflect career progression and success. JRSE is the sum of CDMSE and JSSE.

LMI assists the employed, the unemployed, and new labour market entrants with making decisions about careers, education, and training. Effective provision of LMI would result in improved JRSE. LMI is often provided by computer. LMI value is increased when a counselor is involved (Magnusson, Bezanson & Savard, 2004). The effectiveness of LMI in terms of labour outcomes is contingent on information timeliness and ease of access (Sharp, 2009)

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The Research Study

This research project was part of a broader Human Resources and Skills Development Canada (HRSDC) initiative to develop the capacity to respond to regional unemployment crises as the Canadian economy underwent fundamental structural change. These changes were particularly apparent in automotive

manufacturing regions of Southwestern Ontario. When this study was initiated, employment levels in the Windsor-Sarnia economic region had declined by 18,500 jobs from October 2008 to October 2009 (Service Canada, 2009, p.1). The unemployment rate rose from 7.8% to 10.9%, the highest rate among all economic regions in Ontario with job losses coming mostly from full-time employment (Service Canada, 2009, p.1)

One key HRSDC policy objective is to assist individuals in making career choices and human capital investments. The present research contributed to the development of the knowledge base in that area. In the process, it provided valuable training on LMI to a number of displaced automotive workers in geographic locations where they will benefit greatly from this knowledge.

The goal of this research was to analyze the relationship between the provision of LMI and JRSE.

Method

The larger research project from which this present report is drawn involved the random assignment of participants to a control group or one of two experimental groups. In total, there were 188 participants (control = 69; group treatment = 64; one-on-one treatment = 55). One experimental group received the LMI training in a group setting and the other received the training in a one-on-one setting. Self-efficacy measures were taken via a questionnaire as the study

began and after the one month, four month and 12 month period. CDMSE was measured via an assessment tool developed specifically to measure a person's confidence and competence around career decision-making (Taylor & Betz, 1983). The assessment tool for JSSE, was developed specifically to measure that variable (job search self-efficacy). The tool included a scale comprised of 11 items related to aspects of job search including perceived proficiency in planning job search activities, locating job openings, and interviewing skills. Both scales have been tested for factor validity and were used concurrently in another HRSDC study on LMI (Currie, Downie, Nicholson, Oreopoulos & Voyer, 2009).

Medium sized groups (8-10) were deemed the most appropriate learning environment to maximize participation and minimize distraction(Loeb, Penrod & Hupcey, 2006; Helde, Brodtkorb, Brathen & Bovin, 2003; Lohman & Finkelstein, 2000; Gladding, 1994; Hwang & Guynes, 1994) Whiston, Brecheisen & Stephens (2003) found that regardless of group size "counselor free interventions are less effective than those with counselor involvement" (p. 406). Therefore, this research employed trained teachers and career counsellors to facilitate the group-based and individual one-on-one LMI interventions.

A package of customized LMI was prepared and delivered to participants who were randomly assigned to one of the treatment groups. The control

group received no customized LMI.

The treatment was composed of internet based LMI sources delivered by a trained facilitator. The materials and the discussion were designed to provide information on skills identification,matching, and development opportunities, as well as detailed occupational, educational, and industry information. Information on recent announcements about jobs in the local vicinity was also provided.

Training sessions were approximately one hour in length. Training material consisted of a PowerPoint presentation of LMI (with a handout of the slides). Subject matter focused on building trainee knowledge around the nature of LMI, sources of information, and its various uses. The treatment group information was customized in that it was built around the skill sets and experiences of workers who had been displaced from manufacturing enterprises – especially automotive workers. Macro and micro level LMI was presented so that participants could gain competency at searching from the broad levels of occupation or industry, for example, or narrow searches where the training focused on identifying their level of skills and creating skill matches. As well, information was presented on searches oriented to matching interests and strengths to training and education opportunities. Additional sources directed participants to timely information on job vacancies. Control group participants received only general information in the form of a two-

page handout containing some general guidelines for effective job search (which was given to all participants). No effort was made to direct control group members to any websites that focused primarily on their particular skills sets. The control group did not receive any form of training or assistance from the research team.

Results

Reported in the following section are the results from 27 interviews held at the one-month follow-up period. Nine participants had received the one-to-one treatment, 12 participants had undergone the group intervention and six were from the control group.

Self-Efficacy and LMI

Given that the interview was semi-structured, with mostly open ended questions, it provided the participants with the opportunity to elaborate on their answers and to express perceptions of self-efficacy in their own words. Efficacy is defined as the "conviction that one can effectively execute behaviour required to produce an outcome" (Bandura, 1977, p. 79). High perceived self-efficacy leads to better coping. It was anticipated that those with high self-efficacy would be more optimistic and resilient and would be expected to "keep trying." In this analysis, confidence and competence are viewed as related, but separate and distinct attributes of self-efficacy.

It was hypothesized that when compared to the control

group members, those who received the customized LMI treatment would report higher high self-efficacy and that this would be associated with a more active job search. We expected that those with high perceived self-efficacy would exhibit greater competence in their job search and would articulate greater levels of confidence in their search skills and strategies. Participants would verbalize competence and confidence with words that illustrated perceived mastery and motivation, as well as optimism and resilience. The participants with higher self-efficacy would articulate more competence with the use of LMI. They would also perceive themselves as having more mastery over the various tools and would articulate a higher level of skill in their use. Additionally, high self-efficacy would also be articulated as greater confidence in the use of the tools and in overall success or the probability of success, once the tools were employed. Participants were expected to express a level of certainty in achieving favourable labour market outcomes and would convey a belief that they were in control of these outcomes. As a general rule, the greater the confidence and competence, the higher the self-efficacy and the more proficient and effective would be the subject's use of LMI.

Confidence and Competence were Enhanced by the Treatment

The treated participants reported being engaged in active job searches using a wide range of the internet resources introduced through the training. Additionally, compared to the control group, the treatment group reported accessing their social networks on a more regular basis to identify job leads and other employment-related resources. Their tone was optimistic and open. Their confidence was illustrated by their willingness to share ideas and approaches with others. One participant exemplified this strategy, describing his behaviour and the impact of the LMI intervention as follows:

"[I] am still actively searching on a daily basis….The information was helpful [providing] new sites and sources for job leads. [I] ask people… [I] go on site."

In reflecting on the use of the LMI intervention training resources, another subject said the training "gave me a lot of new websites and tools to use – especially to look for a new job in a new field." Another subject described how the LMI training was used; "I use as many pages as I can find in the computer. I use several pages and I try to find a job."

The treated participants appeared energized and self-assured. They were excited to report their progress. They attributed their renewed energy, confidence, and greater competence to the LMI training. Even the participants who had returned to school continued to actively job search using the LMI tools provided in the treatment.

The treated participants reported feeling confident. They were secure and self-assured.

They were active and motivated, continually trying, and optimistic. They exhibited competency in the use of the LMI that was contained in the treatments. They appeared better able to target their job search. They expressed the belief that their job search activities were now better, easier, faster, and more accurate and appropriately customized. Overall, the subjects communicated a high degree of self-efficacy. They communicated pride – both verbally and non-verbally. They communicated self assurance and motivation. They were actively setting and tracking job search activity goals, targets and timelines. In particular, competence-related aspects of self-efficacy appeared to be enhanced by the treatment, especially as this related to job search activities.

The control group expressed lower competence and confidence. Many of their responses reflected a very high level of frustration. Their job searches appeared to be more "scatter-shot" with one member of this group describing his behaviour as follows:

"Once a week I go through a session. I look for hours and apply to hundreds of jobs." Echoing this approach another control group member reported that he had "sent out 150 resumés and up after 20 cold calls."

Another control participant reported daily searches but was not confident in the methods he was using stating that "it is hard to know your impact."

In the case of a majority of the control group members,

job search activities depended mostly on traditional methods of resumé writing, visits to job sites, and attempts to make face-to-face contact with decision makers. They expressed less competence and confidence in web-based searches and tools, overall. As one control group member put it "it's not like the old days."

Self-Efficacy and Career Decision-Making

Expressed motivations related to career decision-making indicate that the treatment positively impacted the confidence aspects of self-efficacy. This supports the findings of previous research (Paulsen & Betz, 2004). A total of nine treated participants (42%) were either engaged in education or training programs, or were seriously considering their options. Only one of the control group members (16%) had returned to school. None of the other control group members were considering further education or training.

Among the treated subjects who were engaged in education or training, all were acquiring skills that are currently or will be shortly in high demand in the local labour market, including aerospace and supply chain logistics. The program choices related well to the information presented in the LMI treatments and indicated that this information was being used in decision-making around re-skilling for the new economy. One subject specifically cited the LMI training as an impetus to seek education and training: "[The LMI training] helped [me]

think about [it]. I researched it after the one-on-one counseling." Another participant stated that "[The LMI training] got my wheels turning. [It] made me think a bit about other options."

For another participant, the LMI "helped me think about it and research it." The one-to-one training may have been most helpful in prompting participants to think more about education and training, because it may have promoted more discussion of specific individual training needs. In that approach, the training can be both customized and personalized.

One subject related that the LMI training "got me looking again for something with more growth and how to transfer skills." This person communicated a very high level of self-efficacy, confidence and job-search competency in stating "[I] did a skills inventory [and am] looking at how I can find work using things I am good at [like] sales, people skills, creativity."

Regardless of the delivery method, the LMI training encouraged participants to view education as a viable option, suggesting a degree of self-efficacy. Confidence related to career decision-making appeared to be particularly enhanced by the LMI intervention.

One participant responded to the question of whether the training had impacted his or her self-confidence this way: "Absolutely. The training made me realize I'm stuck in a dead end job. I can find full time work in a better field. [The training] also got me motivated." For another

participant, the training "reassured me that I was on the right path." Still another replied "For sure, all in all I was happy with everything." Again, these findings support those of Paulsen and Betz (2004).

Self-Efficacy and Job Search Intensity

Subjects were probed more deeply on job search activity to assess the level of effort expended. Compared to the control group, all of those who had received the LMI intervention expressed optimism and a relatively high level of self-efficacy. They reported a more intense use of a broader range of resources. They were more active in both online and face-to-face searches. They reported checking and re-checking sites, making regular phone calls to prospective employers, and making active use of their social networks.

Eight participants from the treated groups could be described as high intensity job searchers. They were engaged in at least one type of search activity on a daily basis. Most of these high intensity searchers used multiple search techniques - computers, cold calls, news media, job banks, networking, or job clubs - at least four or five days per week. One high intensity searcher described the activities as "like a full time job" involving six to eight hours per day. The high intensity searchers appeared to be well organized. They had combined and categorized resources and research and typically kept records of their activities. These subjects could

be described as highly motivated – a hallmark of perceived high self-efficacy. One participant reported an innovative use of social networks wherein a group of friends met regularly to review each other's job search activities and exchange contacts and resumés. They had formed their own job club and displayed great self-assurance in the willingness to share information openly. This creativity is indicative of aspects of both the competence and confidence aspects of self-efficacy.

The moderate to low job search intensity group appeared to express low motivation and self-efficacy. Most expressed this in terms of competence. Moderate to low intensity job searchers used fewer means and spent less time engaged in these re-employment activities. This group described focusing on job search activities for 1 to 2 hours per day and utilizing fewer and less varied sources.

Low intensity job search and low self-efficacy were both apparent in discouraged workers and were mostly found among the control group. It may be that some of the genesis of this discouragement may lead to discomfort and low self-efficacy related to the training platform as well as other factors. They expressed lower levels of competence and confidence. One low intensity job searcher found the internet "frustrating" while another was not using the computer at all, preferring to make phone calls and face-to-face contacts. Still another was using the computer only on a weekly basis.

Self-Efficacy and Job Search Activity

When the treatment groups were asked about the role of the customized LMI training in their job search activity, they reported a positive impact.

One participant reported that the training had a positive impact on attitude, making him patient and helping him to not get discouraged. Still another subject reported that the LMI intervention motivated him to make phone calls for jobs. Information on skills transferability was cited by three of the participants as particularly motivating and energizing. It appeared that the LMI interventions opened the participants up to new fields and opportunities and brought a new source of hope and optimism to their job search activities. They reported accessing new resources and leveraging old resources differently as a result of the interventions.

One group training recipient reported that the training "made me more aware of what's really going on in the city." For another member of this training intervention group, the LMI was "lots of help" and he was "now using the internet and checking recommended websites." Another group training participant used the information to learn more about companies and felt that the training helped them "know better where to go." This was repeated by a fourth group trainee who felt that he was "now looking in the right places" and that he had "more confidence."

These responses are indicative of very high levels of self-efficacy. The openness, energy, and optimism displayed by the treatment group in describing their job search activity and approach were very evident. The same cannot be said for those in the control group.

The control group expressed "frustration," "confusion," and feelings that workers such as themselves were "falling through the cracks." They felt isolated, angry, and resentful. When asked whether he had found any new sources of LMI on his own, one control group member responded that "If I had, I wouldn't tell anyone. I would keep it to myself."

Perceptions of the Training Methods

Those with more advanced computer and internet skills did not find the intervention as impactful as those who had not previously been introduced to the range of internet tools used in this training. Some participants who had received significant employment training through other sources appeared confused about what training they had been given through this research (e.g. - help with resumé preparation was deemed as not useful with this type of training but also was not included in our LMI intervention). These data suggest that LMI customization should consider participants' interests and experience, and their competency and familiarity with general LMI and the training platform and leverage all of the re-employment training they have previously undergone. To truly have an impact on self-effi-

cacy and motivation, training must account for individual differences in knowledge, skills, and abilities.

The majority of the one-to-one treatment group liked the format. Only one interviewee in this group said he would have preferred the group-based training. That participant cited the potential of the group format for more information sharing as the reason. All but one of the group-based participants liked the training format. They appreciated learning from each other's questions, and enjoyed the opportunity to share experiences.

One subject who received the group training but did not find it useful stated "It may have helped someone who was ignorant in the technique… however for me, I have been looking at jobs for 20 years so I know how to write a cover letter and a resumé."

Interestingly, the customized LMI training used in this study did not specifically address the preparation of cover letters and resumés. That this participant assumed it had, may indicate the presence of perceptual errors related to some type of job search training overload. The research participant was unable to differentiate the content of the customized LMI training in this study from that of previous training he had received from other providers. This may also point to a problem in the training itself if the customized LMI is not being perceived as distinctly different. It could also indicate that displaced workers seeking help begin to confuse the services that they have received. This could

mean that they will repeatedly seek out and receive the same service and may miss receiving other useful services altogether. This cycle of "over service – under service" could directly and negatively impact both confidence and competence and result in lower self-efficacy. More data are required on the perceptions and experiences of those participants who received the group-based LMI intervention. A means of tracking service needs and acquisition to avoid service overlap is described in the discussion section of this paper that might address the issue of service confusion and conflation.

Participants who received the one-to-one training reported favourable reactions to the intervention. One stated that the method was "…right for me. [The material] was explained and tailored to what you needed. [It was] personal, warm. I liked to be able to be talked through it."

Another subject found the one-to-one method to be "…a good way to get questions answered. [There were] no distractions. [The] one-on-one was more personalized. [It was] easier to focus."

Still another participant stated that the training was "…pretty good. I've always liked one-on-one format better. I'm usually well-prepared so one-on-one is more tailored to my needs."

The personalized and targeted nature of the one-to-one format allowed for deeper investigation of information that was specific to each respondent. One subject reported that "[I received] information on how to start a

business. The one-on-one was helpful. I liked the straight forward approach."

Those who assessed the training experience as poor to average reported that they "already knew the information" and that the information "would be more useful to someone newly unemployed…a lot of it was repeated, if you had had [other] training." These responses may suggest the need for more screening procedures and perhaps even greater customization of the training materials. If the purpose of customized LMI training is to target the specific needs, abilities, and past experiences of the job seeker it is critical to know the profile of these individuals and those who will benefit most from this type of training.

There is danger in not fully understanding existing competence when initiating training. Not only does skills under-estimation waste scarce resources but subjecting trainees to repeated interventions in already-developed knowledge and skills areas may diminish confidence and thereby reduce overall self-efficacy.

The majority of subjects who received the one-to-one training assessed the quality of the experience as good to great. They described the training as "useful," "in-depth," "informative," "detailed," and "helpful." As one interviewee reported "(the training) helped me focus, was the right duration, and detailed what I am looking for." Some commented on the ability of the one-to-one approach to effectively match their needs and learning style. As one respondent

reported "The one-to-one has value for visual learners. I need to do hands-on to really learn." In the one-to-one format, individual differences in competency and confidence can be addressed more effectively.

Another participant stated that "They made sure you really understood." Others remarked on the quality of the materials presented finding them "useful" and that they helped "focus" the job search. The training materials were also described as "in depth" and "good reference materials." Still, those with advanced computer and internet knowledge were not as satisfied with the training. As one subject said "the training was OK. My level of knowledge is more than most."

Overall, most of the one-to-one treated participants were satisfied with the quantity of the information referring to it as "good", "pretty good", "lots," "adequate" and "just enough". One subject who received the one-on-one training felt that the session was lengthy, stating that "For me, it was too long but for most people it is probably OK." Competence was improved for this person.

Group-based recipients were almost unanimous in assessing the training quality as good to very good. They found the training "very informative" and of "good quality." They reported that the training introduced them to "useful tools," was "easy to follow," and that they "learned a lot." They cited the effectiveness and experience of the trainer stating that she "really knows her stuff" and that she was well prepared. They felt that the training

was retained and "stuck with me." They expressed that they had learned a "great deal" and especially "learned from others." In this study, it would appear that the group setting had an impact on both perceived competence and confidence-related self-efficacy.

For most of the group treatment participants, the quantity of training was perceived as good. They felt the hand-out was useful and that they had been offered adequate support. One respondent described receiving "a lot more information than I first had." For another participant, the information was "adequate for what you were trying to do – not too much – not too little." Yet another reported that the quantity of the training was "pretty good – we went through the whole book, so I was impressed with how much we covered in such a short time." Another respondent described wanting more hands-on training. Still another would have preferred a longer training session. One person in this treatment group expressed a desire for more training on job titles and for more information on resumé writing and strategies to focus on better presentation of skills.

The control group received no training but the invitation to attend the event did make some feel more optimistic. They felt that "someone was doing something" and that "someone cared." The event itself did offer an opportunity for informal social interaction and the social support offered through the gathering may have had a positive psychosocial impact, at least in the short term, for control group members.

It did not appear to impact JRSE for the control group members, however.

Self-Efficacy and Autonomous Learning

One question probed independent new learning subsequent to the training interventions. It was oriented to provide feedback on whether participants could leverage the training for more and deeper learning on LMI in the future. Had they become independent learners? Had they identified new sources of LMI that were specific to their individual needs? Were they putting new tools to creative uses? Half of the subjects reported that they had done so. One reported "feeling confident that I can try something different." Another related making more face-to-face contact with college administrators to research retraining. Still another respondent was researching means of online "self-advertising" while another was considering making use of alternate job posting sites (Kijiji). For those who had not discovered new sources or uses of the tools, they reported being confident with the tools that were provided through the training. Some had become acutely aware of the care that must be taken when using "unqualified" online resources. As one respondent stated:

"The internet is both positive and negative, the information you get is only as good as the site. They could be just harvesting your information."

Overall, those who had received one of the LMI treatments displayed a high degree of confidence in their ability to use these tools to further their job search. They remained open to new ideas and new approaches. They presented themselves as optimistic. They had told others of their experiences and the new resources that they had learned. They were willing to teach others what they had learned. They had become autonomous learners.

For the majority of the treatment group members, who perceived the LMI training as propelling and motivating their self-directed searches for LMI, the treatment appeared to have a positive impact on confidence, competence and self-efficacy. Agreeing that the intervention did influence self-directed LMI search behaviour, one respondent stated "The training highlighted what I knew. It made me feel more confident that I am on right track."

Commenting on his improved job search skills competency, one respondent described the more targeted use of tools after the intervention as follows: "Before [the training] I was looking but I couldn't exactly find [what I wanted/needed]. The websites [from the training] were the right ones with useful information. [I now] spend my time more effectively." Improved confidence and self-efficacy were evident in the respondent who reported that "[Before] I doubted my research skills. Part of it was desperation, but the more tools you have, the better you can do."

The influence of the training on networking activity was cited by several treated respondents. One participant in the one-to-one training stated:

"I heard the counselor tell a story about networking. Then I met a guy and overheard him talking about a job. I had my resumé in the car. He called me to follow-up. The training helped me to be more prepared."

Perceptions of Support

Participants were asked to identify the aspects of their job search in which LMI training had offered the most and the least support. The treatment participants reported that the training made them feel supported and more confident. They valued the targeted nature of the LMI tools and felt that these internet-based tools significantly improved their job search competence. Several respondents found the tools matching personal skills to job and career options to be particularly useful and motivating. One respondent reported that skills-match sites taught him to not underestimate his own skills.

The introduction of the new tools and the targeted nature of the LMI interventions were perceived as most useful. None of the respondents identified a component of the training which was not useful. None of those having received one of the interventions felt that they had not been offered support.

Those in the one-to-one treatment groups specifically cited the "Working in Canada" website as a practical and useful tool to help identify and classify skills. Skills transfer was partic-

ularly valued. One participant related that he learned "[not to] underestimate your own skills." Another subject who received one-to-one counseling emphasized the value of the targeted nature of the LMI stating that "this information was local and specific to the area. [I appreciated] the knowledge base of the counselor. She could really direct me based on what I needed."

The group-based participants agreed that tools included in the treatment for the identification of personal strengths and skills were invaluable. In fact, one of the group based treatment subjects emphasized that those tools offered him the most support and built his confidence and job search and career decision-making self-efficacy. Other group-based treatment subjects also identified tools for specific company searches as providing great support

The group-based treatment subjects repeatedly mentioned the benefits they received from learning with others. They felt that the group learning environment was enriched by the sharing of experiences and knowledge. They expressed the belief that greater learning occurred within these sessions. They cited "learning new things and short cuts" from the group. They learned from others' questions. They liked sharing information. As one respondent reported, "[in the group] sometimes you pick up more information." Another group-based subject agreed, stating, "I thought it was really good…I loved the group. I get along in any situation. There is no embarrassment

in asking questions." The social support offered by the group was reflected when group-based subject observed that, "At least in the group you know you have people with you and you are not on your own."

Potential Additions to the Customized LMI Training

Participants were asked for their input on what else could be added to the training. One respondent from the one-to-one intervention group would have liked more in depth career counseling. Another from this same treatment group would have liked assistance with the interview process, particularly as that relates to reducing stress and interviewing successfully. One respondent would have liked enriched information on existing local job vacancies, above what was provided. The researchers did attempt to provide timely information on vacancies and also included sites within the training for independent research.

Some participants would have liked more information on job fairs, while others desired more information on resumé preparation, interviews, and career counseling.

With the group-based treatment participants, some expressed the desire for follow-up sessions. This may be suggestive of the desire for some type of support group where strategies could be reviewed and feedback could be sought. Unemployment can be isolating and the social aspect of the group-based training offers many psycho-social benefits beyond those actually related

to LMI training itself. These factors play a role in enhancing self-efficacy and should not be overlooked when planning training interventions.

Implications/Discussion

Self Determination Theory argues that motivation includes three essential factors: autonomy, competence, and relatedness (Guay et al. 2006). As evidenced in this research, effective training can encourage and enhance autonomous learning. Autonomy is best served through building confidence to act and must be based on the realization of competence. This realization emerges from the provision of timely and accurate feedback and is a critical role that the trainer must play in order to positively impact the learner's self-efficacy. The role of the service provider, trainer, or teacher has to be to build competence through the effective transfer of knowledge and skills and to provide feedback on the trainees' skills in such a manner that confidence is built. Formal feedback through the use of follow-up sessions and the implementation of performance tools will increase learning and influence both competence and confidence.

Relatedness is best addressed through group learning and social support. Service providers should design programs that use group-based learning and provide ample opportunities for group interaction. Truly, there can be few more alienating events than job loss and the best designed programs will begin by comprehending and

addressing the psycho-social needs of the unemployed worker. Program goals must be structured to build and enhanced both all aspects of self-efficacy.

The researchers expected that high self-efficacy would be expressed as greater competence and confidence in the use of LMI and in such direct expressions of self-efficacy as renewed motivation, pride, feeling better informed, and being engaged in goal setting behaviours. The researchers found evidence to support the proposition that the customized LMI training intervention did have a positive impact on workers' JRSE. Treated respondents reported feelings of mastery and proficiency, indicating more job search competence. They reported feeling happier, more secure, and more self-assured than the control group. They indicated a high level of confidence in their abilities to effectively use the customized LMI tools presented in the intervention to achieve favourable labour market outcomes. They were optimistic.

The provision of LMI was found to increase JRSE and to encourage job search behaviours. In this study, the customized LMI and training positively impacted both the component parts of JRSE – JSSE and CDMSE. Increased use of online tools, especially those to identify transferable skills and to find education and training opportunities, was enhanced by the provision of the customized LMI treatment. The benefit of customized LMI and training on the use of this information rests in the ability of the displaced work-

ers to better understand the sources and uses of computer-based LMI and thereby become more competent in the new technology and new information. Trainees were able to target their job searches and to engage in more highly motivated and energetic process with greater confidence as well as greater perceived competence. The tools provided in the training allowed respondents to build more robust personal skills inventories and to make more accurate matches between their skills and job/career opportunities within both the old and new economies.

At least in this research, customized LMI did not necessarily result in more favourable labour market outcomes as they relate to procuring full time employment. Other economic and labour market factors were likely at play and had a major impact on securing employment. In both geographic areas under study, the unemployment rate remained high during the time period of the project, with more limited opportunities for employment than in other locations. These barriers can be viewed as "confidence busters" that reduce labour market activity and self-efficacy.

The provision of LMI and the training sessions appeared to favourably influence career decision-making self-efficacy as expressed by a desire to seek further education and training or to actually enrollment in a program. Many of the people interviewed reported using the tools presented in the training to compare and create skills profiles for new sector employers. They found the training particularly

useful in researching the companies themselves, creating targeted application packages that highlighted skills and experiences matched to employer requirements. A number of the interviewees also reported coupling these online activities with traditional face-to-face visits to the companies. They reported that the training and the research they were able to do on their own made them more confident in making personal contact with prospective employers. The training built confidence and motivated thinking related to career change as well as prompting independent learning.

Participants had very favourable responses to group-based LMI training, particularly as this relates to the competency and confidence aspects of job search self-efficacy. They felt they learned from the experiences and questions posed by other group members. They found interaction with others to be a key source for building self-efficacy and sustaining motivation. The group experience reinforced labour market activities (job search intensity). Implementing formalized opportunities for group interactions may assist in delaying worker discouragement.

Programs that include psycho-social support and development through group based training methods may be more beneficial in building JSSE. Group sessions should have very clear goals and focus on labour market tools mastery. Prior to beginning any training, skills assessments must be done to ensure that self-efficacy is not diminished by continually teaching al-

ready acquired skills. In group sessions, clear ground rules must be implemented that keep groups motivated and on task. Each member must take a role in the mutual development of impactful learning environment that builds competence and confidence across the group and thereby promotes future autonomous learning. This will place the learner in control of the learning process and build self-efficacy.

In this study, one-on-one training seemed to be perceived as especially useful for career decision making behaviours (CDMSE). This may be a consequence of the highly individual nature of career desires and the ability of personalized training to become more of a "coaching conversation" tailored to the specific needs of the individual and to provide fast and specific feedback on the learning.

It is essential that trainers and service providers understand the important role they play assisting in the development, maintenance, and growth of workers' self-efficacy and labour market activity. Feedback from trainers must highlight and reinforce where and how displaced workers' actions are having an impact in labour market outcomes. Trainers and service providers should act in a coaching capacity in order to sustain and build self-efficacy.

A problem solving approach to training is recommended. Experiential learning builds self-efficacy. Group-based intervention respondents, in particular, suggested that cases and more examples would have enhanced their training experience.

Respondents enjoy and benefit from learning from one another and case-based training increases the opportunities for this to occur.

Policy Recommendations

Creation of a Web-based Service Passport

Displaced workers will, quite naturally, seek any and all resources that they believe may assist them in successfully gaining employment. Consequently, they often confuse and conflate the services they have accessed into one package. They do not distinguish between who provides what type of service. This can mean that they can potentially receive the same or almost identical training on a number of occasions or that they totally miss one or more types of crucial training. For example, we found that a number of participants would benefit from basic computer training. In another case, the training content benefits were discounted by one participant who had more advanced computer knowledge. Unifying service access through the use of a web-based "passport" approach could streamline and individualize service provision and remove potential sources of demotivation.

The purpose of the passport would not be to deny anyone access to service but rather to ensure that displaced workers have access to all the services and information that will assist them in making career and training decisions and finding employment. A passport could speed up the receipt of services, limit duplica-

tion, reduce costs, and tailor programming to the specific needs of the unemployed individual. The process would begin with a knowledge, skills, and abilities assessment. A service plan would be developed from this information. There would be a clear understanding of what is needed for success in the prevailing labour market, what the worker needs to do, and in what order things need to be done.

From the perspective of the worker, the passport could also serve to document their progress and success – key aspects in building self-efficacy and motivation. Displaced workers would be confident in having all the tools required to successfully execute a job search or plan their career. An online version of the passport could potentially become a searchable data base to link service providers and employers to clients and to identify service gaps in the community. The use of the "passport" can be an effective means for feedback and follow-up. Service providers could participate with clients in establishing specific, meaningful, and challenging goals in relation to certain job or career decision activities. This would contribute to increased motivation and enhanced both the competence and confidence aspects of self-efficacy. It could trigger autonomous learning. Care should be taken to use a mix of virtual and face to face formats to ensure effective autonomous learning and competence are present and that needs for relatedness are addressed (Guay et al. 2006). A "hybrid" training platform" is recommended. There is a still a

place for face to face interaction in this world of computer facilitated employment and training service provision.

Greater Engagement of Employers – Maintenance of Skills and Contribution Inventories

The professionalization of human resources departments has meant that employers are better able to maintain data base information that details the knowledge, skills, abilities and strategic contributions of individual and groups of employees. This information should be shared with employees. Feedback on "what I can do" and "how what I do contributes to the goals and objectives of the company" is very useful in building an empowered, focused workforce with high levels of self-efficacy. Once compiled, in the event of a reduction of force, employees would benefit from having this information to structure their approach to the job search and career decision-making processes. These data could be uploaded to the service passport site.

Emphasis on Group Counselling

Our research results suggest that participants benefit from group counselling. In this format, trainees' relatedness needs were addressed and psycho-social support was offered. Both of these benefits are closely associated with more favourable perceptions of competence and confidence. Therefore, well-run group based LMI training offers

critical components for building self-efficacy and self determination (Guay et al. 2006). Trainers must ensure that they develop and maintain the appropriate training environment to make group sessions productive, informative, and rewarding for participants. In the case of training similar to that delivered in this research, it is essential to ensure that all participants in the group have equivalent knowledge and comfort levels with computer technology. Further, group size should be kept relatively small (Loeb, Penrod & Hupcey, 2006; Helde, Brodtkorb, Brathen & Bovin, 2003; Lohman & Finkelstein, 2000; Gladding, 1994; Hwang & Guynes, 1994).

Increase Availability of Computer Literacy Training

This recommendation may be most relevant for training those in the older age demographic. The job search process has changed dramatically and is highly dependent on relatively advanced computer knowledge and skills. Because of the algorithms used on job application platforms, prospective applicants need to aware of and careful with the terms they use to describe their knowledge, skills and abilities, and work experience. This knowledge is not widespread and, particularly for those who have not faced the "new job market," application procedures can be very frustrating and a source of anxiety. It could very well lead to worker discouragement, reduced self-efficacy, and demotivation.

Limitations of the Research

The small sample size in the research limits the reliability of the findings. While all effort was made to broaden recruitment, the fact remains that participation was relatively low. Caution must be taken when making conclusions about the population of displaced autoworkers or of displaced workers, in general, based on these research findings.

Attrition rates need to be considered when assessing these research findings. Due to attrition, interviewees may have particular characteristics that lead to the findings on self-efficacy described here. For example, willingness to stay in the research project and to be interviewed may indicate relatively high self-efficacy and a motivation to report to the researchers on how well the respondent was performing.

The sample population and the interview respondents had very specific demographic characteristics – they were primarily male, had been continuously employed in the automotive sector for a relatively long period of time, were relatively old (46-55 years), and were mostly union members. Each of these characteristics could independently or in combination impact the results. For example, much previous research has reported gender differences in confidence. Males report greater confidence and have a greater tendency to ascribe success to personal factors (Deaves, Luders & Guo, 2009). The geographic location of this research has implications for

findings. More than most areas in Canada, the labour market in Southwestern Ontario was severely impacted by recent global economic shocks. These uncontrollable economic barriers may negatively impact self-efficacy measures, as well as job search intensity, as participants view, quite legitimately, that re-employment prospects are rather dismal. It may be that treatment effects are dampened due to prevailing economic conditions beyond the control of the researchers.

The researchers had no control over participants' access to and use of alternative sources of LMI, counselling, and support services. It could be that self-efficacy, particularly competence-related self-efficacy, is related to these other services and sources of information and not to the specific LMI used in this research. Indeed, because participants actively search out multiple sources and appear to continue to search until they achieve either a successful labour outcome or become discouraged, they often conflate the services they have accessed into one total package. They do not distinguish between who provides what type of service. This makes isolating the impact of the LMI delivered in this research challenging. This may suggest that unifying services is called for as a potential solution.

This research is qualitative. The results of interviews are reported. While the researchers are trained in qualitative research methods, the techniques for these data may be open to alternate interpretations.

Future Research

Clearly, exploration of job-related self-efficacy and the psycho-social aspects of career and job search decision-making present a rich and worthwhile area for future scientific investigation. More research needs to be performed to define and distinguish the individual effects of the competency and confidence aspects of self-efficacy and to specify the importance of competence and confidence in labour market outcomes. Other research has shown links between confidence and career decision-making among students (Paulsen & Betz, 2004). In this study, we have applied these ideas to displaced workers. The current research could be expanded to larger samples, using alternate populations of displaced workers (outside the automotive sector). Future research should also focus more directly on the impact of ambient job announcements (public statements about new employers locating or expanding operations in a community) on job seeker behaviour and self-efficacy – particularly as it relates to job search intensity. This research could answer questions as to whether there is an ideal time at which to offer employer job fairs, for example, in order to ensure that the best qualified and most motivated job seekers are in attendance. Additionally, the issue of the timing of an LMI intervention bears additional research, to see if an optimal time frame can be established.

Research should be pursued on the nature of and relationship between social support and the competency and confidence aspects of self-efficacy. As well, the idea of formal and informal group support, virtual versus face to face group support could also benefit from further study.

The efficacy of the policy recommendation to include skills and contribution information with other severance materials should be examined to discern the impact of this information on job search intensity, CDMSE, JSSE and labour market outcomes. More research needs to be done on older workers – identifying their job search strategies, the unique barriers they face, and how government and employers can work together to ensure that this talent pool is not underutilized, given the projected labour market shortages Canada will experience in the coming decades.

The role of the trainer in building self-efficacy needs further exploration. The nature and timing of feedback to directly improve competence and confidence warrants investigation. Related to the role of the trainer, the most effective platform for delivering training and feedback to increase and sustain high levels of self-efficacy should also be explored (virtual versus face to face to hybrid).

Summary

Job-Related Self-Efficacy is multidimensional. It includes perceptions of both competence and confidence. Intervention strategies to enhance the labour market outcomes of displaced workers must be designed to account for and enhance both these component parts. In designing training, service providers must account for individual differences. They must build course content and delivery strategies keeping in mind the three component of self determination – autonomy, competence, and relatedness. Keeping these principles in mind, training can have a positive impact on Job Related Self-Efficacy.

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Supporting Youth with Matching Their Skills to Current Labour Market Needs Using The Ontario Compulsory Career Studies Program: A Review of Curriculum Documents

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Abstract

The Organisation for Economic Cooperation and Development (OECD) proposed that policies to address high youth unemployment should include better matching between the skills acquired at school and those needed in the labour market (OECD, 2011). This analysis, utilizing Cohen's (2001) conceptual sense-making model, examined two guidance and career education documents to determine whether their expectations aligned with OECD policy priorities. One document contained a range of strategies for the meeting of program expectations. The other document provided more flexibility to align program expectations to meet OECD policies. A significant implication was the reliance on information technology (IT) to facilitate students to access current labour market information.

The 2011 Economic Outlook produced by the Organisation for Economic Cooperation and Development (OECD) referred to continuing high youth unemployment in OECD nations as the "elephant in the room" (2011, p. 1) and suggested that high unemployment is the "human face" (p. 1) of the global economic crisis. The Economic Outlook highlighted two worrying aspects for OECD nations to consider: a) the serious threat of unemployment becoming entrenched, and b) the disproportionate impact of the global economic crisis on youth unemployment.

Identifying that youth (age 15 to 25) unemployment was 17.4% compared with 7% unemployment rate for adults for the first quarter of 2011, the OECD identified key policy priorities to secure job creation in a context of tight fiscal conditions. The OECD suggested that promoting better job opportunities for youth is a challenge that cuts across all countries, and is of significant importance given the established high risk of labour market and social exclusion for youth not in education, employment or training (NEETs).

In the first quarter for 2011, NEETs accounted for 12.2% of all youth aged 15-24 in the 30 OECD countries for which data are available, up from 10.7% in the first quarter of 2008. This represents 22.3 million young people, 14.2 million of whom were inactive and not studying, 8.1 million of whom were unemployed (OECD, 2011). Amidst a context of weak jobs recovery, an important and increasing population of youth remain at risk of protracted unemployment or inactivity, with many negative potential consequences. The OECD identified these "scarring effects" as persistent difficulty in finding employment and lower salary than their peers (2011, p. 2).

Building upon the report of 2010 Off to a Good Start: Jobs for Youth [which summarized the key lessons from 16 country reviews], the OECD highlighted a wealth of good practices that can support youth with employment and argued for key policy priorities across the OECD area. The OECD acknowledged that there is no "quick-fix" for ensuring all youth get a good start in the labour market, but nevertheless suggested that one of the key policy priorities should be to focus upon greater alignment between the skills young people acquire in school and those needed in the labour market. The OECD has called for educational systems to be more responsive to changing skills needs, stating that the global economic downturn has highlighted that.

One of the main underlying structural problems in the youth labour market is related to education and training. Some youth are leaving the education system and entering the labour market without a recognized

qualification and/or with skills not relevant for labour market needs. (2010, p. 71)

The Role of Compulsory Career Studies in Ontario

The Ontario Ministry of Education described how the goal of secondary schools in Ontario was "to support high quality learning while giving individual students the opportunity to choose programs that suit their skills and interest" (2006, p. 3). The curriculum for guidance and career education provides a central role in focussing students towards developing learning and employability skills that can be applied to their secondary and post-secondary studies, and the workplace. The guidance and career education program for secondary schools consists of courses that are intended to "help students develop learning and interpersonal skills and to enable them to explore careers and the pathways that lead to them" (2006, p. 7). The Ontario Ministry of Education outlined:

As the pace of change in the labour market accelerates, it is increasingly important for schools to help students develop basic and transferrable skills and connect their learning in school to conditions in the wider world, including the world or work. (1998, p. 3)

Highlighting the place that guidance and career education had in the curriculum, the Ontario Ministry of Education

stated that students would be able to "relate what they are learning in various subjects in their secondary school program to their personal aspirations and interests and to possible work and life roles" (2006, p. 4). In addition, as students learned about the career planning process, they would be able to "set goals for post-secondary education and work and develop the knowledge and skills they need to achieve those goals" (2006, p. 4). At the centre of the guidance and career education program is the compulsory half credit course in career studies for Grade 10 students (GLC20). The GLC20 course intends to provide students with an introduction to "self-assessment, development of personal and interpersonal skills, and a general understanding of career planning" (2006, p.7).

It is the author's contention that the rationale outlined in current guidance and career education for Ontario documentation, and the language used to describe the expected outcomes suggest that achieving a better match between the skills youth acquire at school and those needed in the labour market seems to be a policy priority for the OECD and a curriculum policy priority for the Ontario Ministry of Education. Accordingly, making sense of how guidance and career education expectations (written well before the economic downturn) might be interpreted by teachers and applied to meet the policy priorities stated by the OECD can help to establish the continued relevance of a 2006 career studies curriculum in supporting students to match their skills learned in school to skills

needed in the world of work.

Purpose

This study seeks to determine whether the expectations of the Choices into Action: Guidance and Career Education Policy Grades 1-12 (1998) Detailed Discussion Document and the Ontario Curriculum Grades 9 and 10: Guidance and Career Education (Revised 2006) align with the policy priorities described in the OECD's Economic Outlook 2011. Additionally, this study seeks to detail which aspects of the two documents characterize and determine how teachers might make sense of the curriculum, in particular with regard to implementation of curriculum expectations [last revised in 2006] in alignment with the current policy priorities determined by the OECD.

Background to the Analysis of Documents

Over the past decade or so, academics and policy makers have argued that evidence demonstrating the effectiveness of career education is slight and that new research examining the efficacy of career development services is required (Slomp, Bernes, & Magnusson, 2011). Slomp et al. articulated that this concern had been expressed through national and international career development symposiums (Bezanson & O'Reilly, 2002; Magnusson & Roest, 2004) and by academics (Dagley & Salter, 2004; Lalande & Magnusson, 2007). However, Slomp et al. concluded that, although eval-

uation of career education is undertaken through symposia and research, it is not consistently undertaken at agency manager and program administrator levels despite being valued by all levels of stakeholders. Accordingly, given that teachers who implement secondary school career education utilise the curriculum documents analysed in this study, this research proposes to begin to build a picture of how teachers might contribute to the efficacy of career development services.

In a review of international and national factors affecting school to work transition, Versnel, DeLuca, Hutchinson, Hill, and Chin (2011) suggested that matching educational programs with students skills, aptitudes, and what was needed in the labour market appeared to be intrinsically linked with successful school-to-work transition. However, the authors found that often schools seemed unaware of "the mismatch between these academic outcomes and the skills needed to succeed in the workplace" (2011, p. 27). Versnel et al. added that further research could begin by studying successful work-based education programs from which we could learn more about designing programs and interventions better able to meet the needs of youth in these challenging times.

This paper posits that, in addition to any evaluation of career education programs, the degree which career education curricula support youth with the current challenging school-to-work transition should also be investigated. How curriculum is written and presented in docu-

ments determines the intended curriculum (Hutchinson, Munby, Chin, Edwards, Steiner-Bell, Chapman, Ho, & Mills de España, 2001) from which teachers mould (interpret, translate, and adapt) into the curriculum that students will experience in the classroom. Therefore examination of career education curriculum documents can indicate specific characteristics that might provide insight into how teachers are able to use current career education policy to align with the OECD policy priority.

Implementation of Career Studies as a Form of Policy

For some time, empirical research had acknowledged that, although many lessons have been learned from studying policy implementation, through generations of analysis, an overarching conclusion of policy implementation was that it is incredibly hard to make it happen (McLaughlin, 1987). Studies of policy implementation have shown that at each point of the implementation process, policy is transformed in some way as individuals decode, understand, and react to the policy (McLaughlin). Attempting to establish what could be learned from the experience of policy implementation, McLaughlin argued that learning for experience, "requires moving away from a positivistic model to a model of social learning and policy analysis that stresses reflection and assistance to on-going decision making" (p. 175).

McLaughlin contended that a number of guidelines for analysts followed from this per-

spective; therefore the relevant frame of analysis for the career studies program would be the implementation system of the program, not just the program itself. McLaughlin argued that, "taking the implementation system as the analytical frame was essential in order to sort out the effects of policy qua policy from policy as transformed through various individual interpretations and choices" (p. 176). Consequently, analysis of the career studies program should reflect the multi-staged developmental character of the implementation process, focussing on the institutional and broader contexts that may also impact upon the implementation process of the program.

Some of the early literature on policy implementation discussed themes within the literature that can help understand implementation, one of which was learning as a possible process by which policy was enacted. The idea of learning as a process of implementation was explored by Sabatier through his development of the Advocacy Coalition Framework theory (Sabatier, 1993). Sabatier claimed that for learning to occur, there must be a modification of behavioural intentions as a result of the experience gained from trying to obtain the policy goals. According to Sabatier, for learning to occur there would be a policy loop within career studies, where future policy formulation would need to be informed by policy experience (Schofield, 2001).

A further theme used within the literature to understand the policy implementation

process was to view implementation through a procedural lens. Thus, aspects such as decision-making, communication, bargaining, negotiation, and even conflict are considered (Schofield, 2001). The challenge with taking this perspective is that the research can become diffused, and though some scholars have sought to overcome this by focussing on particular points in the implementation continuum, for example, detailed studies on the processes of micro-implementation (Scheirer & Griffith, 1990), communication as a key process (Nixon, 1980); Yin, 1982) bargaining and negotiation (Barrett & Hill, 1984) and conflict (Matland, 1995).

Schofield (2001) recognized the importance of actors and groups of actors as part of the policy implementation process. In the period since her acknowledgement, many scholars have sought to clarify actors and groups of actors' specific roles and influences. In an effort to comprehend how school leaders understood and implemented policy, Dunbar and Villarruel (2002) adapted Downey's (1998) stages of policy analysis to create a four-stage policy analysis framework. Stage one was concerned with the specific guidelines and knowledge of the policy, stage two with determining the need for the policy, stage three explored how the policy is understood, and stage four involved whether the policy has been implemented according to the legislative intent. At all stages actors were involved to some extents, however, stage three was where actors were likely to become

most concerned with what the policy means and with what the parameters of implementation were (Dunbar & Villarruel, 2002).

Since the late 1990's and early 2000's, scholars have sought to understand the role of policy implementers' sense-making in the implementation process (Spillane, 2000). Weick (1995) a founder of this approach, undertook research that sought to understand sense-making in organizations and outlined how sense-making was about "authoring as well as interpretation, creation as well as discovery" (p. 8). Building upon the work of Weick, Spillane, Diamond, Burch, Hallet, Jita, and Zoltners (2002) suggested that "implementation involves interpretation because implementers must figure out what a policy means and whether and how it applies to their school to decide whether and how to ignore, adapt, or adopt policy locally" (p. 733).

Further work seeking to understand how teachers' co-construct understandings of policy messages were undertaken by Coburn (2001). She acknowledged that earlier work to understand how teachers "interpret, adapt, and even transform" (Coburn, 2001, p. 145) policy as they take place had helped increase an understanding of individual teacher's construction of policy messages. However, Coburn also recognized that studies had begun to move beyond this individual interpretation to examine how individuals made sense of policy messages from their conversations with colleagues and from ways that were

"deeply situated in broader social, professional, and organizational contexts" (p. 145). In her study, Coburn (2001) focussed on the way those teachers "collectively negotiated pressures and interpreted and adapted messages from the environment" (p. 145). To inform her study, Coburn (2001) drew on both theoretical and empirical research of institutional and sense-making theory to construct a model of collective sense-making that focussed on the ways that teachers co-constructed understandings of policy messages, made decisions about which policy messages to pursue in their classrooms, and negotiated any practical and technical details.

This focussed literature review has demonstrated that, since the 1990's, studies of policy implementation have increasingly seen teacher learning as the issue of educational policy implementation (Coburn & Stein, 2006). How teachers implement educational policy is therefore dependent upon their pre-existing knowledge, beliefs, experiences, and the mechanisms that connect them to educational policy. Teachers' knowledge consistently undergoes a process of translation, interpretation, and finding pathways to either engage or disengage with educational policy. Hence, by understanding these pathways we gain insight into the complex and dynamic relationship between policy and classroom practice (Coburn, 2005).

Theoretical Framework

In her study of how teachers interacted in both formal and

informal groups with messages from the environment, Coburn (2001) noted that the teachers' interaction followed a pattern similar to what she had observed in the sense-making literature. In particular, drawing from her conceptual sense-making model, Coburn identified three sub-processes that characterized and facilitated collective sense-making: (1) constructing understanding through interpersonal interaction, (2) gatekeeping, and (3) negotiating technical and practical details. Coburn noted that each of these three sub-processes was influenced by the teachers' worldviews, pre-existing practices, and shared worldviews. Coburn concluded that by influencing the sub-processes, teachers' worldviews, pre-existing practices, and shared understandings "shaped and influenced what teachers selected, emphasized, interpreted, and ultimately brought into their classrooms" (p. 152). This study uses Coburn's (2001) three sub-processes of sense-making to take a "step back" to the policy and curriculum documentation to determine how guidance and career education guidelines might be interpreted by teachers and be applied to the career studies programs to meet the policy priories outlined by the OECD (2011).

Method

Document collection, selection, and analysis were conducted to examine the key documents associated with the Ontario Ministry of Education's guidance and career education curriculum. An initial electronic search of the Ontario Ministry of Education website using the search term "guidance and career education" revealed 12256 results. All duplicate results were removed and the resulting list was examined to identify the original policy document and the most current curriculum documents for the compulsory half credit career studies course GLC20.

Two documents were ultimately selected for analysis, Choices into Action: Guidance and Career Education Policy Grades 1-12 (1998) Detailed Discussion Document (ranked number four in the results list) and the Ontario Curriculum Grades 9 and 10: Guidance and Career Education (Revised 2006) (ranked number one in the results list). Choices into Action: Guidance and Career Education Policy Grades 1-12 (1998) Detailed Discussion Document was chosen for analysis for two reasons. First, it was the original policy document for the current guidance and career education curriculum in Ontario. Second it remains a current policy document. The Ontario Curriculum Grades 9 and 10: Guidance and Career Education (Revised 2006) was selected for analysis as it represents the most current curriculum document for guidance and career education in Ontario. Both documents were available electronically so could be easily accessed by any Ontario teacher of career studies.

Different methods of document analyses can be observed within published research. For example, some studies adopt a deductive approach, using classi-fications based upon previously undertaken document analyses (e.g., Robitaille, Schmidt, Raizen, McKnight, Briton, & Nicol, 1993). Others use inductive methods, allowing coding categories to emerge from the content of the examined documents (e.g. Hutchinson et al., 2001). In this study, a combination of deductive and inductive methods was used. First, a framework was developed for the analysis of the two documents. The framework began with the theoretical lens of Coburn's conceptual model of the sense-making process, and consisted of the three clear sub-processes of:

- Conducting understanding through interpersonal interaction [where teachers are asked to collaborate];
- Gatekeeping [where teachers are given specific choices and/or options]; and,
- Negotiating technical and practical details [resources and incorporation of information technology into the career studies program].

Documents were read and re-read to identify representation of the three sub-processes in each document. I then used a deductive approach to create a chart for each document outlining the findings within the three sub-processes. A total of three charts were produced from the two documents examined. Subsequently, I used a further deductive method to analyze each of the charts based upon three inductive themes of skills, skills matching, and labour market needs. These were inductively construed from the OECD policy priority "achieving a better match be-

tween the skills youth acquire at school and those needed in the labour market" (2011, p. 2).

I reviewed all documents a second time to ensure consistency in the data across both documents. The resulting clusters of themes are presented in clusters of the three inductive themes of skills, skills matching, and labour market needs, under each of the three sub-processes of interpersonal interactions, gatekeeping, and technical and practical de-

10: Guidance and Career Education (Revised 2006) to determine whether the expectations contained in these documents aligned with the policy priorities described in the OECD's Economic Outlook 2011. In addition, I sought to describe which aspects of the two documents characterized and determined how teachers might make sense of any curriculum expectations relevant to this alignment. The data are presented for each of the induc-

Choices into Action: Guidance and Career Education Policy Grades 1-12 (1998) Detailed Discussion Document (hereafter referred to as CiADDD) these included work experience, community based learning, and community experience. The community experience was detailed in CiADDD as including field trips, work-site tours, job shadowing, career mentoring, community service, work experience, co-operative education, youth apprenticeships, internships, and school-to-work transition programs.

The focus on skills in the Ontario Curriculum Grades 9 and 10: Guidance and Career Education (Revised 2006) (hereafter referred to as OCG2006) included worksite visits, job shadowing, community involvement, work experience, apprenticeships, interaction with employers and employees, connections with community service agencies, connections with post-secondary agencies, and connections with broader community outside of school.

Table 1

Themes from document analysis

Interpersonal interactions	Gatekeeping	Technical and practical details
Skills	Skills	Skills
Work experience	Workshops and small groups	Experiential learning
Community-based learning	Lifelong learning	Computer-assisted learning modules
Work placements	Broad range of work-related options	CD ROM technology
		Internet websites
		ICT applications to support enquiry
Skills matching	Skills matching	Skills matching
School-to-work programs	Up-to-date information	Annual Education Plan
Portfolio reviews	Application of learning	Portfolios
Individuals with wide range of knowledge from community	Insights into challenges and opportunities	Options for exploring work and learning
	Post-secondary goals	Post-secondary options
		Entrepreneurship opportunities
		Making connections between community experience and program of study
Labour market needs	Labour market needs	Labour market needs
Global community in the classroom	Trends affecting workplace	Current labour market information
Business partnerships	Modern economy	Statistics and trends
	Prepare for changing world	Occupational data
	Learning about world of work	Community agency information
		Career opportunities – local, national, and international

tails. The themes are shown in Table 1.

What the Documents Revealed

I drew on Coburn's conceptual sense-making model (2001) to frame the analysis of Choices into Action: Guidance and Career Education Policy Grades 1-12 (1998) Detailed Discussion Document and the Ontario Curriculum Grades 9 and

tive themes of skills, skills matching, and labour market needs under the three sub-processes headings of interpersonal interactions, gatekeeping, and technical and practical details.

Interpersonal Interactions

skills. The focus on skills was on what could be obtained from practical experience gained outside of the classroom. In the

skills matching.
CiADDD detailed opportunities that could be used by students to gain experience of matching their skills gained in school to what was needed in the labour market in the form of school-to-work programs, the reviewing of students individual portfolios with students and their parents/guardians, and students being able to access individuals in the community that possess a "wide range of knowledge within the broader community" (p. 18). The CiADDD identifies that

planned career education experiences are an important resource for exposing teachers and students "to up to date workplace practices" (p. 11).

Data from analysis of OCG2006 did not fall into the theme of skills matching as part of interpersonal interactions.

l   **labour market needs.** Document CiADDD presented community partnerships, in particular with employers, community agencies, business partnerships, and the private sector as opportunities for teachers to have interpersonal interactions that might lead to information about current labour market needs for their students. In document OCG2006, teachers were encouraged to have interpersonal interactions with employers and employees and to form connections with community agencies, post-secondary institutions, and other broader communities outside of school, all of which could be potential sources of information about labour market needs for students in their programs.

        gatekeeping skills. The aspects of CiADDD that could provide students with the opportunity to develop skills were expressed in ideas for workshops, which were outlined as job search strategies, resume writing, interview skills, conflict resolution skills, assertiveness training, study skills, time management skills, life skills, and leadership opportunities. In OCG2006, the areas within the program where students could gain skills were described as actively involving students in inquiry, problem solv-

ing, decision making processes, developing learning skills, developing employability skills, and students being provided with knowledge and skills to benefit them throughout their lives. OCG2006 relied on more generic explanations of how students could acquire skills, leaving the interpretation open to the teacher. This was in contrast to CiADDD where specific ideas for workshops were described recommending their use by teachers in their career studies programs.

        skills matching. CiADDD outlined the need for students to access a wide range of information on careers and educational requirements and listed potential sources as being community partners including employers and social and counselling agencies. OCG2006 outlined the necessity for students to be informed of post-secondary choices, to be able to recognize their diverse abilities and strengths, and to have aspirations. In addition, OCG2006 proposed that students would be able to use career planning to formulate and pursue educational and career goals and be able to apply their learning to their lives and work, in school, and in the community. Teachers would be responsible for offering students the opportunity to participate in a variety of school and experiential learning opportunities, and for ensuring that the concepts, content, and skills identified in different strands of each course are integrated into instruction wherever appropriate in order to meet diverse student needs.

        Labour market needs. CiADDD instructed teachers that students must be provided with many opportunities to explore links between the classroom and the world beyond school, and the students should have access to local labour market information. OCG2006 offered teachers more explicit choices about providing students with opportunities to access labour market needs through the career studies program. Teachers were directed to provide students with a broad range of options related to work, stating that students should be aware of the changing nature of work, trends affecting the workplace, the modern economy, preparing for the changing world, lifelong learning, and learning about the world of work.

Technical and practical details

        skills. Document CiADDD outlined extensive technical and practical details teachers should consider with regard to developing students skills that they will need, to include assisting students with employment acquisition skills, resume writing, interviewing, self-marketing, occupational research, job searching, using new and emerging technology, accessing information, and health and safety information. In addition, CiADDD specified that students will need information about paid work, apprenticeships, international studies, training programs, work experience, and cooperative education.

        OCG2006 specified that career studies courses should encourage students to explore skills

development through experiential learning opportunities, job shadowing, community involvement, work experience, cooperative education, Ontario Youth Apprenticeship Program, and specialist High Skills Major programs. In addition teachers should integrate computer-assisted learning modules, internet websites, and CD ROM technology.

skills matching. The theme of skills matching was featured heavily in technical and practical details. CiADDD presented a variety of opportunities for teachers to encourage students to skills match including using the students' annual education plan, assisting students with post-secondary options, directing students to relevant support services and entrepreneur opportunities, helping students to make connections between community experience and their program of study, and supporting transitions to work/post-secondary training or study.

OCG2006 described the technological and practical details of skills matching as use of students' annual education plan, developing students' portfolios, recognizing pathways to apprenticeships or workplace destinations, and offering students the opportunity to explore the world of work and options for learning.

labour market needs. CiADDD outlines how technology could be used to support students with accessing information about changes to the nature of work and the workplace, to help prepare them for the workplace, and included use of the Ontario

Ministry of Education sponsored Gateways to Opportunities website. OCG2006 offers more detailed information to teachers about use of technology to support students accessing information on labour market needs, and outlined pathways to apprenticeship or workplace destinations and career exploration programs. OCG2006 asserted that students need access to current labour market information, statistics and trends, occupational data, community agency information, apprenticeship information, and information about career opportunities at local, national, and international levels.

Discussion

Read individually, the Choices into Action: Guidance and Career Education Policy Grades 1-12 (1998) Detailed Discussion Document and the Ontario Curriculum Grades 9 and 10: Guidance and Career Education (Revised 2006) offer an unsurprising account of the aspects of the documents that teachers must consider and respond to as they implement the curriculum for career studies. However when read together, consistencies and inconsistencies are revealed between the documents that may influence the implementation process.

Consistencies and Inconsistencies

interpersonal interactions. Making use of employers, community agencies, work experience, worksite visits, job shadowing, and apprenticeships could

all be construed as interpersonal interactions outlined for teachers to offer students in both documents. Similarly, both documents did not distinguish between generic vs. specific skills students might need for entering the workplace vs. specific skills for specific workplaces. CiADDD outlined specific kinds of practical experience both inside and outside of school that could be accessed by teachers for their students for example, community-based learning, career mentoring, co-operative education, and school-to-work transition programs. In contrast, OCG2006 uses generic terms to describe potential interpersonal interactions, for example, connections with community service agencies, post-secondary agencies, and the broader community outside of school. The choice of generic language may be deliberate, as it offers greater flexibility for teachers in application of the document expectations to the dynamic fluid context of the macro environment.

gatekeeping. Some consistencies were apparent between the two documents, as for example the need for students to access information (including current labour market information) and be informed of post-secondary options, and that teachers had a role in facilitating this. With regard to skills, CiADDD was very specific, outlining workshops that could be used to provide students with the opportunities to enhance their skills. OCG2006 was broader in its descriptions of how students could acquire skills, leaving the

interpretations to the individual teacher. OCG2006 also placed a greater emphasis on students matching their skills to what was needed in the labour market and workplace. This may have been an acknowledgement of the increasing desirability of students being able to understand that this may have value when they were planning their careers. OCG2006 also uses terms like changing nature of work, trends affecting the workplace, the modern economy, and learning about the world of work, making direct links between these terms and students understanding labour market needs. However in CiADDD, terms like changing nature of the world of work were expressed as a rationale for guidance and career education rather than specific learning outcomes for students.

technical and practical details. Extensive technological and practical details for teachers to consider with regard to developing students skills were provided in CiADDD. Whereas in OCG2006 the document talked broadly about what skills students might need. OCG2006 appeared to offer teachers more room to adapt the curriculum to suit their particular cohort of students with regard to developing their skills. CiADDD and OCG2006 outlined opportunities teachers could use to encourage skills matching by students, for example a student's annual education plan, student portfolios, and directing students to relevant support and guidance.

CiADDD described how teachers' could use technology to enhance the career studies program, but OCG2006 described the potential use of technology in far greater detail and provides explicit examples of the types of data that students need to access for information about current labour market needs. This may be a reflection of the advances that have been made in technology in the time period (of six years) between the two documents.

In neither document was any obvious consideration given as to the expertise and skills that a teacher would need in order to be able to implement the career studies program.

Conclusion

This study sought to establish how career education expectations contained in policy and curriculum documents dated 1998 and 2006 aligned with an OECD priority policy of "achieving a better match between the skills youth acquire at school and those needed in the labour market" (OECD, 2011, p. 2). Specifically, this study uses Coburn's (2001) three sub-processes of sense-making of, (1) constructing understanding through interpersonal interaction, (2) gatekeeping, and (3) negotiating technical and practical details, to take a "step back" to the policy and curriculum documentation to determine how guidance and career education guidelines might be interpreted by teachers and be applied to the career studies programs to meet the policy priories outlined by the OECD (2011). The data showed that the policy document CiADDD mostly contained a greater range of specific options and strategies that could be used by the teacher to use the career studies program expectations to achieve the priority policy outlined by the OECD. However, the broader descriptions contained within OCG2006 suggested that teachers might have greater flexibility within those descriptions to align career studies program expectations to meet the OECD policy priority.

The consistencies observed between the two documents suggested that during the period of 1998 to 2006 specific career studies expectations had remained largely unchanged. For example, both documents emphasized the importance of involvement of the broader school community in the career studies program. In addition, the point that students needed to be able to access a wide range of information about post-secondary planning from differing sources was mentioned in both documents, as was the point that students had to have access to labour market information. This latter point was mentioned as local context information in CiADDD.

Discussion of the inconsistencies highlighted that in specific areas of the documents, there was a shift from the detailed methods by which teachers were able to facilitate students with skills, skills matching, and access to labour market needs information contained in the 1998 document (CiADDD) to a broader set of guidelines contained in the revised curriculum document of 2006 (OCG2006). The exception to this was in the use of information technology. In CiADDD, the potential applica-

tion of technology was outlined in some detail; in OCG2006, the use of technology within the career studies program was described in broader detail. This may have been a planned response to the advances in technology during the period between 1998 and 2006, the use of increasingly non-specific descriptions giving teachers the flexibility to respond appropriately in their career studies programs.

Implications

The requirement detailed in both CiADDD and OCG2006 for teachers to integrate the broader school community in career studies necessitates teachers to collaborate and build relationships with community partners. This has implications for teachers being able to spend time not only on relationship building but also in subsequent information brokering to ensure the most appropriate information and resources are reaching their students (Larsson, Segersteen, & Svensson, 2011). In addition, the global economic downturn had added complexity to the labour market context of career studies. The policy priority determined by the OECD suggests that these environments cannot be separated from the teaching of career studies; therefore the onus is on the teacher to find ways to keep updated on such issues.

Possible variances in teacher interpretation of the curriculum could contribute to Taylor's (2007) argument that institutional and policy structures affect the ability of high school

students to find learning and career pathways that lead to success in the labour market. The open level structure of the career studies program produces mixed cohorts of students with differentiated academic abilities, and differing goals for post-secondary destinations. How well the career studies teacher interprets the career studies policy and curriculum expectations may impact upon how demographics, the distribution of occupations in the economy, and current labour market status are used to facilitate the connections between skills and labour market needs for the students.

The implications for incorporating information technology into the career studies program are perhaps the most significant implications found in this study. Data from the document analysis of document OCG2006 demonstrate that the a significant reliance on students accessing current labour market needs is proposed through students accessing current information via the application and use of information technology within the career studies program. To successfully achieve this expectation, the availability and capability of technology in schools, support and infrastructure of information technology, and skills for using information technology of teachers and their students becomes crucial (Taylor, 2007). The reliance on technology suggests a significant potential impact upon any program that could be offered in career studies.

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The Experiences of Mainland Chinese Immigrant Professionals Who Believe They Have Made a Successful Transition: Strategies That Help or Hinder

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Abstract

The focus of this qualitative and exploratory research study (using the Enhanced Critical Incident Technique) is on the experiences of Chinese immigrant professionals who feel that they are doing well with change. In the 11 interviews that were conducted 191 incidents were identified and these were categorized into seven helping, hindering and wish list categories. The results of the study highlight the structural and personal barriers faced by Chinese immigrant professionals.

The need for skilled immigrants is essential for Canada's competitive position in the global economy (Blair, 2005). Since 1998, Mainland China has contributed the largest number of skilled immigrant professionals to Canada (Citizenship and Immigration Canada, 2007).

Current Chinese immigrant professionals consider moving to Canada as a means to advance in their professions. With the knowledge and skills learned at home, they anticipate being able to transfer their skills and contribute to the economy of the host country, expecting their professional experience and education will fit into the structure in Canada (Bai, 2007; Salaff, Greve & Xu, 2002). Unlike many of those who immigrated earlier, they are not coming to Canada to escape starvation, disease, or war. They are looking for more than mere survival, they are hoping to boost their careers in the new country. In fact, many wish to explore their own values, pursue self-realization and make a contribution (Zhu, 2005).

Despite strong educational and professional qualifications and a relatively welcoming Canadian immigration policy that takes their qualifications into account as part of the immigration process, studies demonstrate that many immigrant professionals face unemployment or underemployment after landing in Canada (Basran & Zong, 1998; Bauder, 2003; Boyd, 1985; Boyd, 1992; Brouwer, 1999; Calleja & Alnwick, 2000; Depass, 1989; Mata, 1999; McDade, 1988; Wu, 2001; Zhu, 2005; Zong, 2004). These researchers have examined immigrant professionals' adjustment and transition, mostly focusing on the barriers and challenges to integration and re-entering their professional fields. These barriers include both individual barriers, such as poor English skills or lack of Canadian work experience, and structural barriers, such as non-recognition of foreign professional experience, devaluation of foreign-earned credentials and subtle discrimination existing in the Canadian work place. Salaff et al. (2002) state that Canada's "programs lack mechanisms to integrate professional and technical employees into good jobs" (p.3).

There is a small but growing body of research on immigrant professionals from Mainland China (Basran & Zong, 1998; Li, 1999; Liu, 1995; Salaff, et al., 2002; Salaff & Greve, 2003a; 2003b; 2005; Wu, 2001; Zong, 2004; Zhu, 2005). This body of research has emphasized the incongruity between Chinese immigrant professionals' educational and professional levels and their current employment status in Canada. Most of this research is quantitative in nature and focuses on the barriers faced by the immigrant professionals from Mainland China, primarily non-recognition of credentials, lack of Canadian experience and lack of competency in the English language.

Despite the problems, there is also some literature indicating that some immigrant professionals do remain positive and seem to do well with the changes that affect their work when moving to a new country (Zheng & Berry, 1991; Bai, 2007; Amundson, Yeung, Sun, Chan & Cheng, 2011). For example, based on the data from the Longitudinal Survey of Immigrants to Canada (LSIC) conducted by Statistics Canada (2005), six months and four years after landing, 73% of the respondents (60% immigrant professionals, the rest belonging to other immigration categories such as family class or refugees) reported being satisfied with their life in Canada.

The current research study was designed to emphasize this more positive direction using a more qualitative research approach. The focus was on explor-

ing what we can learn through the success stories of Chinese immigrant professionals. The specific research questions are: What helps immigrants from Mainland China to do well with changes affecting their work and what hinders them in that process? We also asked for a "wish list" regarding what they would have found helpful.

Method

In choosing a research method for this investigation the enhanced critical incident technique (ECIT) (Butterfield, Borgen, Amundson & Maglio, 2005; Butterfield, Borgen, Maglio & Amundson, 2009) seemed to be well suited to what we were trying to achieve. The enhanced critical incident approach starts with contextual open-ended questions followed by the traditional critical incident technique (CIT) questions set forward by Flanagan (1954). The open-ended questions were asked to give the participants an opportunity to describe their work situations and the types of changes they have experienced as well as the impact of these changes on their lives. Next, the traditional critical incident technique was employed to elicit the helping or hindering factors that immigrant professionals experienced in their transition to living and working in Canada (Woolsey, 1986). In addition, we also asked a question that elicited a "wish list" from participants with regard to what would have been helpful if they had access to it. According to Alfonso (1997), the CIT questions are "designed to generate descriptive and qualitative data of an experience that is still mostly uncharted in the literature" (p.49).

Participants

We adopted purposive sampling to recruit participants for the current study. Postings and advertisements were placed at local community colleges or immigrant services agencies and the researchers' phone numbers were provided. Other recruiting methods included word of mouth and "snowballing" - in which participants recommended other individuals who might be interested in the study.

Eleven Mainland China immigrant professionals volunteered to participate in the current study. All believed that they were doing well with changes that affected their work and also that they were successfully adapting. The criteria and specifications of the participants for the current study were as follows: (1) immigrated from Mainland China; (2) came to Canada within the last three years and were working within the last six months; (3) had skills/vocational training in their home country; (4) experienced changes that affected their work since immigrating to Canada; (5) felt they were doing well with the changes; (6) were able to communicate in English, and (7) were willing to talk about their experience of changes that affected their work within a confidential interview.

The participants included six women and five men. Their ages ranged from 26 to 42, with an average age of 36. All were married except one participant who was divorced. However, six were alone in Canada while their spouses were still working in China. The participants' length of time in Canada ranged from six months to two and half years, with an average of approximately one year. All received higher education in China before coming to Canada. Three had master's degrees and the rest bachelor de-

grees. All worked in their professions before coming to Canada except for one participant, who quit her job more than a year before immigrating to Canada. All of them now work in Canada. Among the seven who are working in their fields after immigrating to Canada, the average length of time in their profession in China ranged from 5 to 22 years with an average of 10 years. All held senior positions in China but after coming to Canada, they all started in entry level positions.

Data Analysis

Flanagan (1954) and Woolsey (1986) recommended the following three steps to analyze the data: (1) select an appropriate frame of reference; (2) formulate the categories of different themes; and (3) establish the proper level of specificity-generality in reporting the data and the findings. This framework was utilized to analyze the data for the current study. We chose the critical incidents that had a description of the incident, the context, why it was helping or hindering and the outcome of the incident. Wish list items were also coded in the same fashion. Applying an inductive approach (Woolsey, 1986), we grouped the incidents into categories in a progressive manner and made modifications, as needed, when new incidents were added.

Butterfield et al. (2005) outlined nine credibility checks to be used with an ECIT study. The current study followed these steps in the following manner: (1) An independent extraction of 30% of the incidents was completed by another graduate student familiar with the CIT method. There was 90% agreement. 2) The results of the data analysis were sent to the participants for cross-checking. All of the participants were reached for

a second interview. One participant requested that one incident be deleted and all the other participants agreed with the data analysis that had been conducted. 3) A UBC doctoral student served as an independent judge, she was given a randomly sample of 25% of the total extracted critical incidents and was asked to place those incidents into the tentatively formed categories. For the helping incidents, the initial matching rate was 90%, the matching rate for the hindering incidents was 85%, and for the wish list items it was 90%. According to Andersson and Nilsson's (1964) suggestions that an agreement of 75% or higher is sufficient, the level of agreement between the researchers and the independent judge was deemed satisfactory. 4) While categorizing the data, the point at which exhaustiveness was achieved was tracked. Exhaustiveness was achieved after the fifth interview, since no new categories were needed to accommodate incidents from the remaining six interviews. . 5) Two experts working in the field were sought to review the categories based on their

working experiences and both of them found all the categories appropriate and reflective of their experience. 6) Participation rates were calculated for each category. Borgen and Amundson (1984) suggested a participation rate of 25% for the categories to be considered viable. 7) Theoretical agreement was achieved by comparing the established categories to the current literature (Maxwell, 1992; McCormick, 1994). 8) To ensure adequate descriptive data, all the interviews were tape-recorded and transcribed. Field notes were taken while conducting the interview. 9) A UBC professor listened to the third, seventh and tenth interviews to ensure the fidelity of the process.

Results

The 11 interviews yielded a total of 116 helping incidents, 43 hindering incidents and 33 wish list items. These items were grouped into 7 categories.

Category 1:Personality/Traits/Attitude

This was the largest category with mostly helping incidents. The helping incidents focused on personality traits and attitudes that helped participants do well with change. Participants commented on being optimistic and positive, having self-confidence, being persistent, setting realistic goals, self-motivation, preparedness, honesty and ambition. One participant remarked that he would shine wherever he was, showing confidence in himself and his future. The positive impacts of possessing these personality traits and attitudes included helping participants continually learn new skills and stay on top of their professions, becoming more tolerant of other cultures, being willing to accept entry level jobs to pursue a longer-term goal, being able to reach out for help, having the ability to see past challenges and difficulties, and having faith and hope in their future. One participant expressed his determination and said: "I give myself half a year to find a professional job and I did it in three months." (HR generalist). The wish list category indicted that the participants

Table 1

Critical Incidents and Wish list Categories

	Helping Critical Incidents (N= 116)			Hindering Critical Incidents (N= 43)			Wish list items (N=32)		
	Participants (N=11)		Incidents	Participants (N=11)		Incidents	Participants (N=11)		Incidents
Category	n	%	N	n	%	N	n	%	N
Personality/ Traits/Attitude	11	100	62	1	9	1	4	36	7
Support from Family/Friends	8	72	9	3	27	6	3	27	3
Taking Action	6	55	15	1	9	1	4	36	6
Education/Credential/Work Experience	5	46	9	10	91	21	4	36	5
Government/Community/Professional Organization Resources	4	36	7	3	27	9	4	36	7
Work Environment	4	36	7	4	36	5	4	36	4
Self-care	4	36	7	0	0	0	0	0	0

wished for additional personality traits to help them deal with changes. Specifically, these included being more ambitious, having self-confidence, being more communicative and being more adaptive to changes. The main outcome of possessing these personality traits would have been a greater ability to deal with challenges at the beginning of moving to a new country, as illustrated by one participant's comment: "Say for example, (if better prepared), maybe I have a friend to help me rent or find a daycare so that I feel well prepared at the beginning after I get settled first". (Computer software engineer)

Category 2: Support from Family/Friends

The helping incidents in this category included incidents where participants spoke of their family and friends providing support and encouragement to help them to do well with change, having someone to listen to their stories, and getting advice and practical support. The positive impact of the relationships were creating positive influences in their lives, decreasing feelings of loneliness and isolation, relieving stress due to transition and going through changes, and expanding their networks to increase employment opportunities. One example of positive outcomes from a participant was that:
"You've got to take it easy, yes, you can meet some difficulties but you have to take it easy. Family support is always safe, always there" (Business administration staff).
The hindering critical incidents were frustrations due to lack of support from family and friends, for example, being all alone in the new country, lacking a support network and not getting help from spouses in taking care

of young children. The negative impacts of these instances were loneliness, depression and emotional ups and downs which negatively affected their work lives and the transition process, as illustrated by a participant: "I have to support myself all the time so that's very difficult, sometimes I feel very lonely to making friends, ... and have no relatives, no family members here, that's very, very hard". (Computer programmer). The wish list items were incidents where participants expressed desires such as wanting more babies to expand their families.

Category 3: Taking Action

As with the first category, the majority of incidents in this category fell into the helping section. This includes trying to adapt to Canadian culture, obtaining local credentials, volunteering at local community agencies, conducting market research for job prospects, enrolling in courses for training and networking with people working in the same field. It was evident that participants initiated activities consciously with an intention to enhance their professional profiles and increase their chances of employment. As one participant put it, "By taking up a volunteer job, we can do something to express ourselves and communicate with other people." (Sales associate) The positive result of taking action and taking initiative included feeling a sense of greater control, learning how to situate themselves in the new country, building self-confidence, acquiring a better understanding of the work culture of the new country, and setting realistic goals. The wish list items were those in which participants pointed out actions they could have taken to help them do well with change. These included actions to improve their English,

to actively communicate with people working in their fields to develop professional connections, to earn a degree, to undertake re-training and establish close contacts with their communities. Participants believed that taking these actions would result in becoming more involved with the community and also increase their employment opportunities. One participant stated that "I can use the networking skills learned while in China to expend my social network here and look for opportunities." (Computer software engineer)

Category 4: Education/ Credential/Work Experience

Hindering critical incidents made up the majority of incidents in this category. Many participants expressed frustration and disappointment when their education and work experience were not recognized in Canada. The impact of this included feelings of being disabled, incompetent and mistreated. Further, participants experienced feelings of loss, a sense of being outsiders, and even anger and resentment. Since employers did not recognize their education and professional experience, participants had to accept entry level positions. One participant told the researchers, "most employers only need you to have a local experience and, my experience in China was considered nothing, that is something bad and really bad." (Computer programmer)
The helping incidents in this category focused on experiences such as, having many years of work experience, being able to use transferrable skills and knowledge, and having multicultural company experience. The impact of having educational background and work experience included having increased confidence in dealing with change and

adapting quickly to the work role in Canada. Also, most importantly, many participants cited the experience of working in international companies in China as helping them in many aspects in their work lives, primarily in securing employment soon after landing in Canada. One participant reported that "my background working in a multicultural company in China helped me find the current job in Canada."(HR generalist) Participants felt confident, less fearful, hopeful and optimistic and proud.

The wish list items in this category included incidents in which participants articulated a desire to have access to more training either in their professional fields, the English language or job search skills. Not surprisingly, participants also spoke of their wishes to have education and professional experience recognized, especially by employers. One participant mentioned that he would prefer more on-the-job training which would reduce pressure at work. Another participant wished the cost for re-evaluation of international credentials would be borne by the government to lessen a job seeker's financial burdens. The anticipated outcome of having education and experiences recognized (as well as pursuing further education) in Canada included: being able to return to their fields faster, facing fewer financial challenges for their families, having the opportunity to advance in their careers, and also, being able to utilize their skills more fully within the Canadian economy.

Category 5: Government/ Community/Professional Organization Resources

The helping critical incidents in this category were those in which support and encouragement offered by government, community and professional organizations helped participants do well with change. This included items such as building networks with professionals working in the same field, attending network meetings organized by professional associations, and receiving assistance from immigrant service agencies, government agencies and society at large. One participant felt "supported and encouraged by the local immigrant service agencies". (Sales associate) The positive outcome of utilizing the resources from professionals, communities and governments were an informed and sound career decision-making process, learning job search skills and strategy, securing employment, receiving acknowledgement and encouragement, learning professional jargon, feeling welcomed and connected, and feeling increased energy to deal with their transitions.

The wish list items were those incidents in which participants expressed a desire to have had access to resources from professional associations, community groups and government agencies. Examples of these wish list items were professional mentor programs, opportunities to meet potential employers, more communication with people working in their fields and closer contact with local communities and government that serve as a bridge between new immigrants and the employers. The expected positive outcome would be increased prospects to enter their fields, an opportunity to prove their competency at work and a sense of belonging.

Category 6: Work Environment

Helping incidents in this category were those in which participants expressed appreciation for having supportive work environments that enabled them to do well with change. In particular, supportive environments referred to friendly colleagues who were always willing to help, a relaxed boss who allowed employees to have flexibility in terms of schedule, holiday time and on-the-job training. A helpful working environment was crucial for the participants to develop a sense of trust, foster the spirit of team work and deliver high job performances. One participant believed that "my colleagues helped me a lot after I found my job. I do a great job in my field, but actually there are a lot of difference between China and Canada." (Construction estimator)

The hindering incidents within this category were those related to work that made it difficult for them to do well. More specifically, participants cited more pressure from management than in their home country, a very different work environment with people from different cultures and a lack of job training. The negative impacts arising from lack of a supportive work environment included frustration, exhaustion, self-doubt and being less productive.

The wish list items were those where participants expressed a desire for a better working environment to assist them in dealing with change such as friendlier colleagues at work, more help from management, better communication between employees and management, and more company-provided training opportunities. In this environment, participants expected to be happier, feel less lonely, have a sense of inclusion, and be more productive.

Category 7: Self-care

Not surprisingly, the focus of this category was on helping. The participants cited how self-care actions helped them do well with changes that affected work. The incidents involved going to see movies, having dinner with friends, cheering themselves up continually, and exercising outdoors. The anticipated outcomes arising from these activities included creating a diversion from thinking too much about work, maintaining a more balanced work and life style, keeping their spirits high, and having a safe refuge whenever they needed emotional and practical support. One participant explained that a regular physical work out "helped to distract me from thinking about work all the time and take a break". (Logistics specialist)

Discussion

Present-day Mainland Chinese immigrant professionals are selected for immigration because of their education and experience. All participants in the current study received a college/university education and had worked in their trained professions before coming to Canada. The participants clearly stated that they were coming to Canada hoping to advance their careers in their professions. For this group of people doing well meant feeling happy, confident and competent to work in their trained professions. They also believed in the value of ongoing learning as a means for attaining happiness. This perspective is consistent with Zhu (2005), who stated that new Chinese immigrants did not emigrate because of hunger, ailments or avoiding war. In truth, both immigrant professionals and Canada as a country have expectations for the immigrants to utilize their skills and education immediately upon their arrival in Canada (Alboim, 2002; Brower 1999).

In considering the categories of what helped and hindered them in doing well with changes affecting their work, the participants indicated that their attitude and the support they received from family and friends were very important.

In spite of these challenges and hardships, the immigrant professionals in the current study reported themselves as doing well with changes. Woo (1989) drew the conclusion in his research that a world view and "adaptive mentality" helped his participants to deal with the challenges of moving to a new country. An "adaptive mentality" includes being prepared for change, being ready to tolerate hardships, and being able to focus on long-term goals. Shih (2005) also underscored the importance of a helpful attitude as a strategy. Consistent with Woo's and Shih's findings, participants in the current study stressed positive attitude and self confidence as important factors that help them deal with challenges. Within the "Personality/Traits/Attitude" category, all of the participants mentioned being positive, being prepared for changes, and having a long term goal that helped them to do well.

Research has stressed the importance of accessing resources and receiving support from family and friends to enable immigrant professionals to deal with challenges (Ngo, 2001; Shih, 2005; Zhu, 2005). Similarly, participants in the current study cited the use of community resources to help them get started. Within the "Government/Community/Professional Associations Resources" category, 36% of participants believed it was important to have access to these resources. Within the "Taking Actions" category, participants mentioned networking and a proactive approach. Within the "Support from Family/Friends" category, participants emphasized supportive relationships with family members and friends.

Within the "Taking Action" category, participants spoke of initiatives such as re-training, taking courses, working at volunteer jobs and networking, anticipating that they would be able to transfer learned skills and education and contribute to the new society. Their experiences are consistent with Salaff et al., (2002) and Bai (2007) who claim that immigrant professionals from Mainland China are trying everything they can to contribute to the Canadian economy.

Regarding the category Education/Credentials/Work Experience, participants highlighted having joint venture work experience, which is another factor in making current Chinese immigrant professionals different from previous generations of Chinese immigrants. In the current study, 5 of the 11 participants had joint venture experience before coming to Canada. This finding is similar to Salaff & Greve (2003), who reported that 20 of 28 participants working in Mainland Chinese professional or semi-professional jobs already had joint venture experience prior to immigrating to Canada.

The downward job mobility experienced by the Mainland Chinese immigrant professionals is highlighted in the literature (e.g. Salaff, et al., 2002; Zong, 2004) and was also an experience for many of the participants in the current study. Prior to coming to Canada many of them held senior positions, and for those who found jobs related to their fields within two years, all started

from entry level positions. Ngo (2001) and Basran and Zong (1998) highlight the frustration and disappointment for immigrant professionals when they are denied job opportunities because they lack Canadian work experience. The "Education/credential/Work Experience" category provided a snapshot of this challenge. Ninety-one percent of the participants mentioned their disappointment when a lack of Canadian experience was the only factor preventing them from gaining employment. One participant said, "they just do not believe that I can do the job because I do not have local experience, but I have been doing this for years in China. They won't listen".

Within the "Government/Community/Professional Organization resources" category, participants articulated a wish for additional opportunities to gain Canadian work experience. Another significant challenge faced by immigrant professionals is non-recognition of foreign-earned credentials. Within the "Education/Credential/Work Experience" category, participants spoke of feeling a sense of uselessness or loss, even anger and resentment when employers did not recognize their credentials.

The findings in the current study can also be viewed through the lens of Bridges' (1991) transition model. This model asserts that people go through three stages – an ending zone, a neutral zone and new beginning zone. In the ending zone, individuals experience a departure from the old reality, familiar activities or old roles. When discussing changes in their lives, participants in the current study mentioned that they had to give up old assumptions, values and self perceptions. Some participants appeared to be in the neutral zone where they struggled

between old and new realities. Several participants worked in survival jobs not related to their fields and therefore felt confused and uncertain about the future. When entering a new beginning stage, an individual develops a sense of belonging. Even though all the participants claimed they were doing well with change, most did not say they felt settled, a sign of the new beginning stage.

Practical Counselling Implications

The current study provides examples of immigrant professionals handling change well (from their perspective) and therefore offers important practical implications. First, the majority of participants mentioned that being prepared helped them to do well, especially starting their preparations before coming to Canada. In light of this finding, immigrant professionals may benefit from career-oriented counselling services while still in their home country. They could be offered in a field office in their country or even through online courses. They could include labour market information workshops and individual counselling sessions to help them navigate the Canadian labour market or educational/training online information to create an individualized economic integration plan.

The current study's results also may shed light on the existing training programs that help immigrant professionals in their settlement and career exploration. The participants in this study self-identified as successfully dealing with changes, yet in the category of "psychological impact", negative emotions outnumbered positive ones. This suggests a need for counselling support for these individuals. Besides job search skills and career

explorations for immigrant professionals, emotional support should also be part of the curriculum. The categories from the current study could be used as point of discussion in assisting immigrants to consider the importance of attitude, support, taking action, adapting their credentials to the Canadian work situation and environment, effectively utilizing government and other resources, and the importance of self-care, as well as other issues that the discussion may bring to mind. Counsellors could suggest ways to normalize negative feelings such as isolation, homesickness, and depression. Support groups could be formed to foster a sense of community. The participants in the current study mentioned a desire to have more contact with their local communities. Programs in the community could be established to help foster closer interactions. Even initiating a home-stay may be an effective starting point. Also, several participants mentioned they found it very hard to manage their households while working or seeking employment. Practical education and help in such areas as cooking, household management and even shopping would be beneficial.

Lastly, it would be helpful to set up language programs that would not just teach basic English skills but also provide instruction in the professional jargon and effective communication skills for job seeking and work place language competency. These programs would help to ensure immigrant professionals improve their English while boosting their chances of finding work that fits with their fields of interest and skill.

Conclusion

The researchers undertook this research study with a

sense of urgency to give voice to immigrant professionals from Mainland China. We were motivated by stories of successful immigrant professionals who have not only survived in a new land, but also thrived and are embarking on a new and fulfilling chapter in their lives. This study attempted to understand their experiences from a strength-based perspective.

The current study is of value because the Canadian economy is facing a skills shortage and the lack of information that may help immigrant professionals integrate into the Canadian labour market is an issue of key concern. Additionally, the study also responded to a need for further understanding a highly visible minority population's economic integration into Canada (Zong, 2004).

This study highlighted barriers and strategies that immigrant professionals from Mainland China employ to overcome individual and structural challenges, provided information on the personality traits and attitudes that facilitate successful economic integration and underscored the importance of networking and preparation by individuals dealing with change. Similarly, these new immigrant professionals from Mainland China are very different from their predecessors, and may go through a different acculturation process.

Limitations and Future Research

As is always the case, this study has its limitations. First, the researcher is an immigrant professional from Mainland China. She may have assumed an innate understanding of the immigration experience of the study's participants. However, she did her best to acknowledge

this subjectivity and be cognizant of its existence while interviewing the participants as well as when conducting the subsequent data analysis and its reporting.

The current study relied on memories and recollections of participants which is self-reporting instead of observation. Flanagan (1954) pointed out the potential limitation of this method and offered the following advice: "if full and precise details are given, it can be usually assumed that this information is accurate. Vague reports suggest that the incident is not well remembered" (p. 340). In the current study, the participants were asked to provide detailed information such as the importance or an example whenever an incident was cited as a helping or hindering factor. Incidents lacking importance or examples were marked down for re-checking with participants at the second interview. Thus issues of vague reports were appropriately addressed by the researcher and presumably resolved.

This was an exploratory and descriptive study about little-known experiences of a visible group of minority immigrant professionals as they underwent economic integration into Canada; it is intended to raise issues and questions for future researchers. Therefore the results cannot be generalized to other populations. Its purpose was to expand existing knowledge on the economic integration of immigrant professionals from Mainland China, especially to determine which strategies help or hinder the process among those who claim they are doing well with the change.

The last limitation stems from the use of the English language for conducting interviews. English is not the first language for all the participants, and they have been in Canada for a very

short period. Their abilities to describe their experiences in English may preclude them from articulating a full and complete picture of their experiences.

The current study has increased the understanding of factors that help immigrant professionals to succeed and those that hinder success. Notably, some participants were successful in finding jobs directly relevant to their profession in just a few months. It raises a question as to why some people can successfully integrate into the Canadian labour market in a relatively short period of time. What helps or hinders the process? Future research can be done to explore if those categories hold up or new ones arise? The current study's results can be utilized as a starting point for discussion in focus groups to determine if these categories depict a true picture of their experiences, and therefore could be representative of a larger population. A longitudinal study also could more exhaustively examine the factors that help or hinder immigrants to integrate into the economy over time. This information is of crucial importance to assist immigrant professionals who are awaiting immigration to Canada. It can help them have more realistic expectations and to plan accordingly. Also, further study would better inform the development of new programs and services in such areas.

Also, future studies might explore the fact that some immigrant professionals experience little or no change and therefore perceive little or no psychological impact after immigrating. Although this sample is too small to draw any reasonable conclusions, the result could hint that - with increasing globalization, information sharing, and convenient transportation - talented, highly educated professionals may

freely choose to immigrate for better opportunities and self-actualization without going through the significant psychological adjustment faced by virtually all immigrants 50 years ago. Further research is needed to test this hypothesis.

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Determinants of Post-Retirement Employment: Canadian Evidence

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Abstract

Post-retirement or 'bridge' employment is increasingly prevalent, supporting the perspective of a long-term transitional process from primary career employment to full retirement over time. This paper addresses the factors associated with post-retirement employment among recent Canadian retirees. Logistic regression modelling is applied to two cycles of the Canadian General Social Survey (2002 and 2007) to explore the determinants of returning to the paid labour force after retiring. Determinant factors examined include individual socio-demographic attributes (gender, age, education, family status), cited reasons for initial retirement, health status and financial circumstances. Results confirm the increasing incidence of post-retirement employment, the importance of higher education and age and the timing of initial retirement as explanatory factors, and a new dynamic for the interaction between financial status and post-retirement employment, favouring more financially-advantaged retirees. The benefits of post-retirement employment are reviewed, including those for individual workers, employers and work organizations, and society more generally.

The transition from regular work to full retirement has become more complex with evidence of multiple forms of mobility both to and from the paid labour force over the course of time. Initial retirement decisions may be reversed as circumstances and priorities of retirees evolve, often leading to a return to employment in one form or another. This paper examines the post-retirement employment experiences of two recent panels of Canadian retirees, drawing upon data from national General Social Surveys (GSS 2002 and 2007 cycles), and investigates how the factors or determinants associated with bridge employment have changed over time. Determinants explored in this research include individual socio-demographic attributes (gender, age, education, family status), key cited reasons for initial retirement (identifying whether initial retirement was voluntary, and if retirees no longer enjoyed work), health status (ordinally measured with categories from 'poor' to 'excellent') and financial status (including holding RRSPs or other investments, paying off debts before retirement, and receiving a pension through a private registered pension plan).

Recent research on retirement documents the increasing difficulty associated with defining 'retirement' in a modern context, and highlights the need to examine retirement, not as a state, but rather as a transitional process over time (Bowlby, 2007; Deschenes & Stone, 2006; Duchesne, 2004; Giandrea, Cahill & Quinn, 2009; Han & Moen, 1999; Hebert & Luong, 2008; Pyper & Giles, 2002). The traditional state of retirement has become increasingly 'blurred and fuzzy' with the transition to full retirement involving very different career paths such as voluntary and involuntary, complete and incomplete trajectories (Deschenes & Stone, 2006), varying degrees of economic activity or inactivity (Bowlby, 2007), and reflecting the personal peculiarities in the biographical pacing of career trajectories over time (Han & Moen, 1999).

There are a range of objective, empirical definitions of 'retirement' – Statistics Canada provides one objective definition of 'being retired' to encompass those persons aged 55 years and older, not in the labour force and receiving at least half their total income from conventional retirement sources such as pensions or RRSPs (Bowlby, 2007). Objective definitions are generally superior to more subjective individual assessments of retirement status based on personally-defined criteria where people may consciously or inadvertently misclassify themselves (Bowlby, 2007; Ruhm, 1990). Subjectively-defined 'retirement' may

be fleeting or transitory in nature, leading to a re-assessment and re-definition of one's identity over time. There are also important distinctions between individual expressed preferences and actual plans with respect to retirement, relating to the involuntary nature of some retirement transitions where individuals may be unwillingly forced – due to ill health, job displacement or other reasons – to leave the labour force prematurely and effectively retire (Deschenes & Stone, 2006). Although over half of Canadian near-retirees are confident they will be able to retire when planned, there remains an underlying theme of 'uncertainty', especially among those with health issues or with modest financial resources (Schellenberg & Ostrovsky, 2008a).

The likelihood of participating in bridge employment subsequent to initial retirement is impacted by a wide range of socio-demographic attributes (including gender, age, education and family status), the cited reasons or rationales for initial retirement, and is affected by health status and financial circumstances of individuals. With respect to gender, previous Canadian research has found that retired men are more likely to participate in the labour force relative to women (Deschenes & Stone, 2006; Duchesne, 2002; Schellenberg, Turcotte & Ram, 2005; Wannell, 2007a), that women generally have shorter transitions to retirement than men (Deschenes & Stone, 2006), and that women retirees are more likely to work on a part-time basis when they do return to

work (Schellenberg, Turcotte & Ram, 2005). Factors which may lower the re-employment rate of retired women can be linked to the household division of labour, with women generally contributing more time to housework than men, and being more intensively engaged in elder care (Wannell, 2007a). Recent qualitative research by August (2011) highlights some of the gender differences in retirement processes and documents the importance of the Kaleidoscope Career Model (KCM) for understanding women's later life career development and transitions.

With respect to labour force participation and age of retirement for older workers, contradictory trends are evident. While male and female labour force participation rates for seniors (aged 65 years and older) have increased markedly in recent years in Canada (Duchesne, 2002, 2004; Marshall & Ferrae, 2007; Uppal, 2010), 'early retirement' has also become increasingly prevalent, perhaps best symbolized through large-scale marketing campaigns for financial products and services such as 'Freedom 55', promoting and promising a financially safe and sure way to exit the workforce at an early age. Despite increased labour force participation among older workers, there has been a long-term general downward trend in the age of retirement spanning a period of several decades (Schellenberg & Ostrovsky, 2008b), with only a modest upturn in median retirement age in more recent years (Wannell, 2007a). Regarding bridge em-

ployment, previous research has shown that older retirees are less likely to return to the labour force relative to younger retirees (Cahill, Giandrea & Quinn, 2011; Kim & Feldman, 2000; Ruhm, 1990; Schellenberg, Turcotte & Ram, 2005; Wannell, 2007a).

As a key component of individual socio-economic status, the educational attainment of workers has a profound effect upon labour force participation and retirement plans and experiences. Workers with higher education (at least some college or university) are more likely to retire early (Duchesne, 2002, 2004; Yeandle, 2005). As well, more highly educated workers (especially those who have completed university degrees), are more likely to continue working into their retirement, relative to their less educated counterparts (Duchesne, 2002, 2004; Han & Moen, 1999; Hebert & Luong, 2008; Marshall & Ferrae, 2007; Morissette, Schellenberg & Silver, 2004; Schellenberg, Turcotte & Ram, 2005; Uppal, 2010). Factors associated with this education effect include that better educated retirees are given more chances to work (Han & Moen, 1999), that they tend to be concentrated in less physically-demanding occupations (Duchesne, 2004), and that their advanced education "...often translates into higher-quality job opportunities and higher earnings." (Marshall & Ferrae, 2007, p.7).

Retirement and subsequent employment decisions often occur in the context of family dynamics – the presence and employment status of a spouse or partner, adult children living at

home – so family status factors should be taken into account when modelling post-retirement employment outcomes. With respect to marital status, retired married persons are generally more likely to participate in bridge employment, to partially retire and to reverse their retirement status, relative to their non-married counterparts (Ruhm, 1990). In general, a spouse/partner in the labour force increases the likelihood of a retired spouse/partner participating in bridge employment (Hebert & Luong, 2008; Kim & Feldman, 2000). As well, the presence of adult children in the home is positively related to bridge employment among retirees (Kim & Feldman, 2000).

Reasons for retirement cited by workers can have a direct impact upon the likelihood of returning to employment during the course of retirement. Rowe and Nguyen (2003) provide a general typology of reasons for leaving employment, distinguishing involuntary reasons (such as 'laid-off' or 'own illness or disability') from voluntary reasons (including 'retirement', 'personal or family responsibilities', 'dissatisfied with job' or 'other reasons'). Research suggests that most retirement decisions are voluntary in nature (Han & Moen, 1999; Pyper & Giles, 2002), although the voluntary/involuntary retirement distinction may be a false dichotomy since most retirees have at least some degree of choice or latitude with respect to the specific conditions or circumstances of their retirement. Those who find themselves

forced into retirement with inadequate planning and preparation may find it financially necessary to return to paid work in the labour force. Recent research by Pengcharoen and Shultz (2010) reveals the importance of work-related factors of job involvement and schedule flexibility impacting late-career employment statuses including partial retirement. Enjoyment of work is also a key factor associated with leaving career jobs, with job dissatisfaction linked to early retirement among Canadian workers (Park, 2010), with no longer enjoying one's work increasing the likelihood of post-retirement employment (Schellenberg, Turcotte & Ram, 2005).

Individual health status is a key determinant of labour force participation, timing of retirement, and the likelihood of returning to employment after retiring. Generally speaking, objective measures of health status (indicators which reflect specific medical conditions and functional limitations) are regarded as superior over more subjectively-defined self-report assessments of health status. Indeed, recent research by Park (2010, p.7) highlights the potential social desirability bias associated with subjective health status measures (retirees claiming poor health in order to justify reduced labour force involvement), or perceived health status being used as a rationalization in retirement decision-making – "People who enjoy their work are likely to downplay their health problems and work longer, while those who dislike their work may exaggerate health problems and retire

sooner." Recent research has documented that health status is positively associated with labour force participation among older workers more generally (Park, 2010; Uppal, 2010), and with bridge employment in retirement specifically (Cahill, Giandrea & Quinn, 2011; Han & Moen, 1999; Kerr & Armstrong-Stassen, 2011; Kim & Feldman, 2000; Schellenberg, Turcotte & Ram, 2005; Zhan, Wang, Liu & Shultz, 2009).

Financial circumstances of individuals have a profound effect upon the likelihood and age of retirement, as well as prospects for re-employment once retired. Earlier research by Han and Moen (1999) found that those who were financially well-prepared for retirement were less likely to return to paid work, while less-prepared individuals often need to return to work out of necessity. Access to RRSPs or other financial investments can also influence retirement plans and outcomes, with those workers with RRSPs or other accumulated savings being more likely to seek out financial and retirement information and expressing greater certainty regarding their retirement plans (Morissette & Ostrovsky, 2007; Schellenberg & Ostrovsky, 2008a; 2008b). Accumulated debt is also an important consideration, with Canadian seniors paying mortgages or other debts being more likely to continue to participate in the labour force, often because of financial obligation or economic necessity (Uppal, 2010). Perhaps the most significant financial factor associated with retirement and subsequent labour force partici-

pation of retirees is private pension plan coverage. Bridge employment is less common and typically of shorter duration among workers covered by pension plans (Ruhm, 1990), and those workers in private pension plans are more likely to retire early (Hebert & Luong, 2008; Wannell, 2007a, 2007b; Yeandle, 2005). However, the dynamics of retirement transitions and bridge employment will likely change given marked shifts in the definition and structure of private pension plans with a significant decline in defined benefit (DB) plans, and corresponding increase in defined contribution (DC) plans which shift the long-term financial risk of market-based asset investment away from employers and directly on to workers (Cahill, Giandrea & Quinn, 2011; Gougeon, 2009; Morissette & Ostrovsky, 2007).

The review of relevant literature above leads to a set of hypotheses related to post-retirement or bridge employment of Canadians to be tested using data from two General Social Surveys (2002 and 2007 cycles):

H.1. Male retirees are more likely to engage in post-retirement employment relative to female retirees.

H.2. Age will be negatively associated with post-retirement employment. Those retirees who retire early (before 55 years) are more likely to engage in post-retirement employment, while those who retire later (at or beyond 60 years) are less likely to take on employment in their retirement.

H.3. Education will be positively associated with post-retirement employment. Those retirees with some college or university-level education are more likely to engage in post-retirement employment, and those with completed university degrees are much more likely to accept employment in their retirement.

H.4. Married retirees (and those in common-law relationships) are more likely to engage in post-retirement employment relative to all other marital statuses.

H.5. Retirees whose spouse or partner retired within the past year (of the survey) are less likely to engage in post-retirement employment relative to others.

H.6. Retirees with one or more single adult children living at home are more likely to engage in post-retirement employment relative to those without.

H.7. Retirees who voluntarily retired from their last jobs are less likely to engage in post-retirement employment relative to those who retired involuntarily.

H.8. Retirees who reported that they retired because they no longer enjoyed the work they did are more likely to engage in post-retirement employment relative to others.

H.9. Health status will be positively associated with post-retirement employment. Retirees who subjectively report less than 'excellent' health are less likely to en-

gage, and those reporting 'poor' health status are least likely to engage in post-retirement employment.

H.10 Retirees who reported RRSPs or other investments at the time of retirement are less likely to engage in post-retirement employment, and those reporting both RRSPs and other investments are least likely to assume employment in their retirement.

H.11 Retirees who reported paying off debts prior to retirement are less likely to engage in post-retirement employment relative to others.

H.12 Retirees who reported receiving a pension from an employer are less likely to engage in post-retirement employment relative to those without private pension plans.

Method

Patterns of post-retirement or bridge employment among Canadians are explored through secondary analysis of two cross-sectional national surveys. General Social Surveys from 2002 (GSS Cycle 16) and 2007 (Cycle 21) focus on 'family, social support and retirement', are based on national representative samples of Canadians aged 45 years and older, and are designed to investigate both retirement status and plans/intentions of Canadians. These surveys were conducted by the national data collection agency Statistics Canada (2009a, 2009b), collecting data using computer-assisted telephone interviewing (CATI)

methods, employing random digit dialing (RDD) to contact households with land-line telephones to generate geographically-stratified probability samples of Canadians Response rates for these national surveys (responding households as a percentage of eligible households) were in the order of 80 percent, and results based on these two surveys can be generalized to the non-institutionalized population of older Canadians across the ten provinces of the country.

For the present research, a very broad operational definition of 'bridge employment' is used to capture as large a segment of General Social Survey (GSS) respondents as possible. Specifically, all respondents in 2002 and 2007 surveys (aged 45 years and older) were asked if they had 'ever retired' (as subjectively defined by the individual), and also queried about their employment status in the year of the survey. Those respondents who reported that they had indeed previously retired at some point, and were also actively employed at the time of the survey (2002 or 2007, respectively) were then classified as engaged in bridge employment. The focus of this research is to explore and model the determinants of bridge employment over time among Canadian near-retirees aged 45 years and older.

Results

Table 1 presents both planned (columns 1 and 3) and actual (columns 2 and 4) retirement ages of older Canadians in 2002 and 2007. Among survey respondents who reportedly 'ever

retired' over half had retired before the age of 60 years, with just over one in six retiring at 65 years or older. By 2007, nearly three in ten reported retiring before the age of 55 years, compared to about one-third of respondents in 2002. The percentage retiring between the ages of 55 and 59 years increased modestly between the two survey cycles, and overall there is some evidence of ages at first retirement increasing between 2002 and 2007.

A starkly different age distribution is evident for those Canadians who had not yet retired when queried about their planned age of retirement. Fully two in five respondents indicated their intention to retire at age 65 years or older, with another three in ten reporting plans to retire between the ages of 60 and 64 years. Over one in five planned earlier retirements between 55 and 59 years of age, while a

small segment (2-3 percent) planned retiring before the age of 55 years. Similar to the 'ever retired' subset, there is evidence of modest increasing ages for planned retirement between 2002 and 2007 survey dates. In general, planned or anticipated retirement ages are markedly higher for Canadians who have yet to retire, compared to actual first retirement ages of those who reported having retired, with most of the statistical differences found in the top and bottom age categories – non-retirees were much less likely to plan to retire at under 55 years of age, and much more likely to plan to retire at 65 years and beyond. Further, it is probable that these differences between planned and actual retirement ages underestimate the true magnitudes since these data exclude those non-retired Canadians who reported that they 'do not intend to retire' – approximately nine percent of both GSS

Table 1

Planned and Actual Retirement Ages of Canadians 45 Years and Older General Social Surveys, 2002 and 2007

General Social Survey	GSS 2002		GSS 2007[2]	
Retirement Status	Never Retired	Ever Retired	Never Retired	Ever Retired
Planned / Actual Retirement Age Categories[1]	Age Planning to Retire	Age when First Retired	Age Planning to Retire	Age when First Retired
Under 55 Years	3.7%	33.8%	2.6%	29.5%
55 to 59 Years	25.6	23.9	22.7	26.8
60 to 64 Years	30.6	25.0	31.6	25.4
65 Years and Over	40.1	17.2	43.0	18.3
Sample Size	7,591	7,960	9,296	8,711

1   Excludes non-retired survey respondents who indicated that they do not intend to retire.
2   Bootstrap weights applied to GSS 2007 to correct variance estimates for survey design following methods outlined in Gagne, Roberts and Keown. (2010).

samples and hence did not provide a planned or anticipated retirement age.

Given the increasing age profiles for both retirement plans and experiences of Canadians, it is useful to explore the extent to which the state of retirement is definitive or transitory in nature, by addressing post-retirement or bridge employment experiences of retirees. Table 2 provides descriptive statistics for the subsets of survey respondents who reported ever retiring for the dependent variable of post-retirement employment status and factors or determinants associated with working after retirement.

Beginning with employment status (defined broadly to include any paid work in a job or business after first reported retirement), over one in five re-

tirees reported having returned to work in the 2002 survey, increasing to over one in four retirees in the 2007 survey. These data reveal a clear trend towards bridge employment, highlighting the increasingly transitory nature of subjectively-defined 'retirement' and that it must be viewed as an evolving process rather than as a definitive state. Turning to descriptive statistics for factors associated with post-retirement employment, there is a near-even gender split (gender parity) in both survey years, and about three in ten reported retiring before the age of 55, while over two in five indicated first retiring at age 60 years or later. About one in eight respondents had some college or university education, and less than one in six had completed a university degree in 2002. By 2007, about one in

eleven had some college or university education, while fully one in five reported completion of a university degree, pointing to a clear progression in educational attainments over time.

Fully two-thirds of both samples of retirees were married or common-law, and over a third of each survey group reported that their spouse or partner had retired in the past year, with a four percentage point increase over time. Between one in eight and one in seven retirees reported at least one single adult child living at home. The vast majority of retirement decisions were voluntary in nature, although voluntary retirement was more prevalent in the 2002 survey. A relatively small and declining proportion of retirees reported that their retirement decision was due to no longer enjoying work.

Only subjective self-report measures of health status are provided in both cycles of the General Social Survey being compared in this research. Survey respondents were asked to provide a subjective assessment of their health at the time of their first retirement, on a five-point ordinal scale ranging from 'poor' to 'excellent'. The health of retirees improved modestly between the two surveys – more retirees in 2002 reported their health status as either 'fair' or 'poor', while three in five retirees in 2007 indicated their health as being 'very good' or 'excellent'. Overall, the vast majority of retirees in both surveys indicated that their health at the time of retirement was at least 'good' or better.

Table 2

Descriptive Statistics for Factors Associated with Post-Retirement Employment For Canadians Aged 45 Years and Older Who Ever Retired

Variable – Category	GSS 2002 (N = 7,960)	GSS 2007[2] (N = 8,711)
Employment Status – Held Job Post Retirement[1]	22.8%	27.6%
Gender – Male	49.9%	49.7%
Age First Retired – Before 55 Years	33.8%	29.5%
Age First Retired – 60 Years Plus	42.3%	43.8%
Education – Some College or University	12.8%	9.0%
Education – University Degree Completed	15.7%	20.3%
Family Status – Married or Common Law	67.6%	68.9%
Family Status – Spouse Retired in Past Year	37.2%	41.2%
Family Status – Single Adult Children at Home	14.0%	12.7%
Retirement Decision – Voluntary Retirement	70.0%	57.8%
Retirement Decision – No Longer Enjoyed Work	13.0%	8.3%
Health at Retirement – Poor	11.6%	7.3%
Health at Retirement – Fair	10.1	8.5
Health at Retirement – Good	23.3	23.1
Health at Retirement – Very Good	23.7	27.4
Health at Retirement – Excellent	31.3	33.5
Financial – No RRSPs, Other Investments	29.1%	21.1%
Financial – RRSPs or Other Investments	38.7	46.5
Financial – RRSPs and Other Investments	32.2	32.4
Financial – Paid Off Debts Before Retirement	74.4%	43.1%
Financial – Receive Pension from Employer	43.9%	54.1%

1 Reported any paid work at any time at a job or business <u>after</u> first retirement.
2 Bootstrap weights applied to GSS 2007 to correct variance estimates for survey design following methods outlined in Gagne, Roberts and Keown. (2010).

Nearly three in ten retirees in 2002 reported no Registered Retirement Savings Plans (RRSPs) or other investments at the time of retirement, while retirees in the 2007 survey were more likely to report holding RRSPs or other investments relative to the earlier survey respondents. Close to a third of retirees in both surveys indicated they had both RRSPs and other investments at the time of their retirement. Nearly three-quarters of retirees in 2002 reported that they had paid off debts before retirement, compared to less than half of retirees in 2007, and over half of retirees in 2007 reported that they received a pension from a former employer, compared to over two in five of retirees in 2002. These descriptive statistics reveal somewhat distinct portraits of financial preparations among retirees with more focus on debt repayment in 2002, and more attention to building financial assets in 2007.

To assess the effects of each of these factors on the likelihood of post-retirement employment among Canadian retirees, and to compare patterns of association over time (between 2002 and 2007 surveys), logistic regression modelling is employed with a dichotomous dependent variable of post-retirement employment status. The overall likelihood of post-retirement employment for Canadian retirees grew by nearly five percentage points between 2002 and 2007. Table 3 provides individual variable results from modelling in the form of odds ratios (logit coefficients in parentheses), as well as overall model results in the lower

panel. Overall, logistic regression models applied to each of these samples of Canadian retirees were highly statistically-significant after taking into account the 18 specific factors.

Beginning with Canadian retirees surveyed in 2002, those retiring before the age of 55 years and respondents holding a university degree were more than twice as likely to be employed in retirement. Other factors which increased the odds of post-retirement employment include deciding to retire due to no longer enjoying work, having RRSPs and other investments, being male, married or common-law, having RRSPs or other investments, having some college or university education, and receiving a pension from an employer. Several factors reduced the odds of post-retirement employment including retiring at age 60 or beyond, having a spouse or partner who retired within the last year, and especially poorer health status – retirees reporting 'poor' health status at the time of retirement were only about a third as likely to be employed in retirement relative to those indicating 'excellent' health (reference category). Several factors (voluntary retirement, paying off debts before retirement and having a single

adult child living at home) were not statistically-significant with odds ratios close to parity. Results found for the 2002 survey were largely consistent with hypotheses specified in the previous section, with the notable exception of the financial status indicators, each of which served to increase the odds of bridge employment in retirement.

For Canadian retirees surveyed in 2007, all tested variables yielded odds of post-retirement employment of less than a factor of two (less than two times likely). Important factors which increased the odds of post-retirement employment included: university degree completion, retiring before the age of 55 years, having some college or university education, having RRSPs or other investments, being male, having RRSPs and other investments, being married or common-law, receiving a pension from an employer, deciding to retire due to no longer enjoy-

Table 3

Factors Associated with Post-Retirement Employment For Canadians Aged 45 Years and Older Who Ever Retired. Odds Ratios with Logit Coefficients in Parentheses

Factor	GSS 2002		GSS 2007[3]	
Male Retiree	1.61**	(0.48)	1.70**	(0.53)
Retired Before 55 Years	2.51**	(0.92)	1.77**	(0.57)
Retired 60 Years Plus	0.70**	(-0.35)	0.67**	(-0.40)
Some College or University	1.48**	(0.39)	1.73**	(0.55)
University Degree Completed	2.15**	(0.77)	1.83**	(0.60)
Married or Common Law	1.55**	(0.44)	1.58**	(0.46)
Spouse Retired in Past Year	0.49**	(-0.71)	0.61**	(-0.49)
Single Adult Children at Home	1.15	(0.11)	1.15	(0.14)
Voluntary Retirement	0.92	(-0.09)	1.32**	(0.27)
Retired No Longer Enjoyed Work	1.74**	(0.55)	1.43**	(0.36)
Poor Health at Retirement[1]	0.32**	(-1.14)	0.34**	(-1.09)
Fair Health at Retirement[1]	0.45**	(-0.79)	0.52**	(-0.66)
Good Health at Retirement[1]	0.81*	(-0.21)	0.75**	(-0.29)
Very Good Health at Retirement[1]	0.75**	(-0.28)	0.86*	(-0.16)
RRSPs or Other Investments[2]	1.53**	(0.42)	1.72**	(0.54)
RRSPs and Other Investments[2]	1.64**	(0.50)	1.68**	(0.52)
Paid Off Debts Before Retirement	1.05	(0.05)	1.23**	(0.24)
Receive Pension from Employer	1.23**	(0.21)	1.55**	(0.43)
Constant	---	(-2.20)**	---	(-2.39)**
-2 log likelihood	7270.57		8947.83	
Model χ²	1086.52**		1183.69**	
Model degrees of freedom	18		18	
N	7,779		8,599	

1   Excellent Health is the omitted reference category
2   No RRSPs or Other Investments is the omitted reference category
3   Bootstrap weights applied to GSS 2007 to correct variance estimates for survey design following methods outlined in Gagne, Roberts and Keown. (2010).
     * p < .05   ** p < .01

ing work, retiring voluntarily, and paying off debts before retirement. The same set of factors reduced the odds of post-retirement employment including retiring at age 60 or beyond, having a spouse or partner who retired within the last year, and poorer health status. Only having adult children living at home was found to be not statistically-significant in the 2007 survey data. Results found for the 2007 survey were largely consistent with hypotheses specified in the previous section, with several notable exceptions including each of the financial status measures (increasing rather than decreasing the odds of bridge employment), and voluntary retirement which also served to increase the odds of re-employment in retirement.

In comparing logistic regression models for Canadian retirees across the 2002 and 2007 surveys, results are largely consistent with the same sets of factors increasing and decreasing the odds of post-retirement employment, respectively. However, there were notable shifts in the magnitudes of some odds ratios across the two surveys. The largest magnitude shift was found for retirees who retired before the age of 55 years, with the odds of post-retirement employment for this group declining markedly between 2002 and 2007. The odds of post-retirement employment for those who retired voluntarily increased from near parity in 2002 to roughly a third higher by 2007. Increasing odds over time were also found for Canadian retirees with some college or university education, having RRSPs or other investments, and having

paid off debts before retirement. In fact, the odds of re-employment increased for all of the financial status indicators over time, signifying a new dynamic for the relationship between financial considerations and retirement. Decreasing odds over time were found for retirees with university degree completion, as well as those who retired because they no longer enjoyed their work.

The impact of educational attainment on the likelihood of post-retirement employment was especially pronounced in logistic regression models applied to both surveys. University degree completion exhibited the highest odds ratio for post-retirement employment of retirees in 2007 (second highest in 2002), and having some college or university educational attainment had the third highest odds ratio in 2007. Given the prominence of educational attainment in both models, Table 4 explores actual employment outcomes for retirees who returned to work as a secondary measure of socio-economic status. Industry sector is used to measure employment outcomes since data on occupational classification is unavailable for comparison across the two surveys. The industry grouping captured in these surveys only pertains to bridge employment held within the last twelve months of the survey, serving to reduce the sample subset.

Table 4 reveals some subtle but important shifts in the nature of post-retirement employment of Canadians, including declines in both primary and secondary industry employ-

ment between 2002 and 2007. These sector declines are offset by an increase in broader service sector employment, although there is a mixed pattern across the industry groups found in this broad sector. While educational services, public administration, professional, scientific & technical services, and transportation & warehousing increased in proportionate share of post-retirement employment across the surveys, other industry groups of health services, trade, and other services experienced declines between 2002 and 2007 surveys. Industry shifts in post-retirement employment across the surveys are entirely consistent with broader labour force trends evident across post-industrial societies (declining primary and secondary sector employment, expanding service sector), with further evidence of expansion of upper-tier service industries (education, public administration, professional, scientific & technical services) over time. These industry sector trends are entirely consistent with the increased ranking of higher educational attainment factors evident in models for both 2002 and 2007 survey data, since post-secondary education is typically required for employment in upper-tier service sector industries.

Discussion

Post-retirement or bridge employment has become increasingly prevalent in Canada (Deschenes & Stone, 2006; Duchesne, 2004; Hebert & Luong, 2008; Pyper & Giles, 2002; Schellenberg, Turcotte & Ram, 2005; Wannell, 2007a), and

Table 4

Industry of Employment For Post-Retirement Employment For Canadians Aged 45 Years and Older Who Ever Retired

North American Industrial Classification System (NAICS)[1]	GSS 2002 (N = 1,157)	GSS 2007[2] (N = 1,535)[3]
Primary Industries[4]	6.4%	5.4%
Secondary Industries	14.1%	11.6%
Construction	6.4	5.2
Manufacturing	7.7	6.4
Service Industries	79.5%	83.0%
Trade	14.3	13.2
Transportation & Warehousing	4.2	5.7
Finance, Insurance, Real Estate & Leasing	7.2	6.9
Professional, Scientific & Technical Services	8.6	10.2
Management, Administrative & Other Support	5.7	6.0
Educational Services	8.4	11.6
Health Services	11.2	8.1
Other Services[5]	15.0	13.6
Public Administration	5.0	7.8

1   Collapsed from 16 category NAICS coding due to small cell sizes
2   Bootstrap weights applied to GSS 2007 to correct variance estimates for survey design following methods outlined in Gagne, Roberts and Keown. (2010).
3   Refers only to employment 'in the last 12 month' prior to the survey
4   Primary industries include agriculture, forestry, fishing, mining, oil and gas
5   Other services include information, culture and recreation, accommodation and food services, and all other services.

other post-industrial societies (Cahill, Giandrea & Quinn, 2011; Giandrea, Cahill & Quinn, 2009; Kim & Feldman, 2000; Pengcharoen & Shultz, 2010; Ruhm, 1990; Yeandle, 2005). Bridge employment among retired Canadians aged 50 to 69 years averaged about nine percent annually between 1999 and 2004 (Hebert & Luong, 2008), with many returning to the workforce after retiring from long-term jobs (Pyper & Giles, 2002; Wannell, 2007a), and often returning to work on a part-time basis (Schellenberg, Turcotte & Ram, 2005). A range of incentives could be offered to encourage older workers to return to, or remain attached to the labour force through 'retirement smoothing' work practices such

as self-employment, part-time work and other flexible work arrangements (Walsh, 1999; Schellenberg, Turcotte & Ram, 2005), or other measures such as fewer annual work weeks, or reduced impact on salary/pension income (Morissette, Schellenberg & Silver, 2004). The potential to reduce work effort to part-time hours is likely the most important incentive which could be offered to retain older workers in the labour force (Morissette, Schellenberg & Silver, 2004; Schellenberg, Turcotte & Ram, 2005; Wannell, 2007a).

Data from two Canadian General Social Surveys (2002 and 2007 cycles), also confirm that post-retirement employment has become more prevalent over time, with over a quarter of more

recent retirees engaged in bridge employment of some form. This supports the view of retirement as a longer-term transitional process which may entail multiple exits and re-entry into the labour force over time. To some extent, this pattern may reflect differences in the educational profile of the two GSS samples, with a higher proportion of more recent retirees – about one in five – holding a university degree. Those retirees with a university degree exhibited the highest odds of re-employment during retirement in 2007 (second highest odds for retirees in 2002), relative to all other groups examined in this multivariate analysis. As educational attainments increase, one can expect even higher rates of post-retirement employment, particularly among highly-educated retirees. Based on industrial sector breakdowns for post-retirement jobs, one can also expect a greater proportion of these jobs will be found in upper-tier service sector occupations. This suggests that not only is bridge employment increasing as a phenomenon, but that the quality of such jobs is also improving with time, with higher proportions of retirees returning to work in desirable jobs, even if on a part-time basis.

GSS data also reveal the critical importance of age and the timing of retirement in terms of the likelihood of bridge employment. Canadians retiring before the age of 55 years exhibited the highest odds of re-employment in 2002 (second highest odds in 2007), relative to all other groups, while Canadian workers retiring at age 60 or beyond had

among the lowest odds of re-employment in both years. The greater likelihood of early retirees returning to the labour force may be attributed to a number of possible factors. Early retirees may become disenchanted with retirement life beyond the initial 'honeymoon' phase, and actively seek out employment to fill their time with meaningful, constructive activity. Early retirees may become aware that their financial resources are inadequate or insufficient to maintain the standard of living and quality of life they had become accustomed to prior to retirement, and decide to return to employment to supplement their income levels and top up financial reserves. For those early retirees who left the labour force due to health concerns or issues, there may be improvement in their health status post-retirement prompting them to return to work, even if on a part-time basis. Early retirees may conclude that their initial retirement was primarily due to poor morale or dissatisfaction with their previous job, employer or workplace, and may actively seek out new ventures after retirement in a different form of employment situation.

Survey results on the financial status measures from both surveys did not support hypotheses as specified, and signify that there is a new dynamic for the interaction between financial circumstances and post-retirement employment. Those retirees who were financially advantaged – who had RRSPs and/or other investments, who paid off their debts before retirement, and who received a private

pension through a registered pension plan (RPP) – were also more likely to return to the labour force after retirement. In fact, for all of these financial measures, the odds of post-retirement employment actually increased between 2002 and 2007. These data reveal that Canadian retirees who can well-afford to retire and remain retired are actually more likely to reverse their retirement decisions and return to paid work in the labour force after their initial retirement. It is reasonable to assert that those retirees who 'have their financial house in order' in terms of greater investments, fewer debts and access to private pensions are much more likely to be higher in socio-economic status, reflected in higher levels of educational attainment, better quality jobs and higher incomes before retirement. Accordingly, these higher-SES retirees may be well-positioned to seek out and obtain good quality jobs during their retirement phase, encouraging them to return to the labour force to similar or different jobs. Higher-SES retirees are more likely to possess the right combination of knowledge, skills and experience, and the appropriate network connections necessary to secure good quality bridge jobs during the course of their retirement.

There were mixed results for declared 'voluntary' retirement among surveyed retirees, with voluntary retirees modestly less likely to engage in bridge employment in 2002 and much more likely to participate in the labour force after retirement in 2007 (increasing odds of re-employment by about a third). The

reversal of odds over the five-year time frame could reflect instability in this measure over time, or may signify a more fundamental change – the voluntary/involuntary retirement distinction may represent an arbitrary or false dichotomy which is not especially helpful for understanding post-retirement employment outcomes. A clear majority of Canadian retirees declare that they retired from the labour force 'voluntarily', although this subjectively-defined measure may not accurately represent the moral suasion influences of family and others on the decision-making process, nor their employers' encouragements or inducements through one or more early retirement incentives offered at the workplace. For those who retire 'involuntarily' (whether through compulsory layoff when a company goes out of business, or due to poor or failing health, or through other forms of 'involuntary terminations' such as dismissals, or other subtle but sure ways to push a worker out of a workplace), they likely have little or no potential to reverse the immediate decision of cessation of work activity. However, these involuntarily displaced workers remain free-willed individuals who usually can and often do re-define or re-shape their identities over the life course. While many such individuals will return to the workforce out of economic necessity, many others will engage in post-retirement employment after some time of introspective soul searching leading to new identity and seeking out new ventures in the work world.

Although these particular General Social Surveys are well-suited to formally investigate some of the key determinants of bridge employment among Canadians, there are important limitations to recognize. The cross-sectional design of each GSS provides at best a 'snapshot' of circumstances at a particular point in time, along with retrospective data about previous statuses and experiences. By contrast, longitudinal survey designs capturing data at two or more distinct points in time would yield a more sophisticated understanding of the dynamics of work-retirement transitions, and such survey designs are recommended for future research on the important topic of bridge employment. Beyond this, the timing of these surveys clearly limits our ability to generalize forward – data for the 2002 GSS were collected towards the end of a recessionary period, while the 2007 GSS was conducted just prior to the global economic crisis of 2008 with collapsed money, stock and housing markets, higher unemployment, and greater risk and uncertainty regarding the economic future. The value of most public and private pension plans, RRSPs and other savings/investment vehicles declined precipitously after GSS 2007, with no clear recovery in sight. Trends towards fewer 'defined benefit' and more 'defined contribution' pension plans will leave individual retirement plans more precarious, with greater numbers of Canadians either deferring retirement out of economic necessity, or engaging in bridge employment after retire-ment to maintain their financial security and quality of life.

Given prior trends and current economic circumstances, the prevalence of post-retirement or bridge employment is expected to increase over time, with important potential benefits for the individual retiree, for their employers and work organizations, and for the broader society more generally. At an individual level, re-employment after retirement may lead to greater financial stability and security (boosting income levels in the short-term, and financial investment reserves in the longer-term), may promote personal self-fulfillment through engaging in productive, meaningful work activity, and may psychologically ease the transition between life phases of work and full retirement by not forcing an abrupt adaptation to very different state in a very short time. Through post-retirement employment, individuals are able to constructively apply their accumulated human capital (their education, skills and knowledge, and work/life experiences) in the workplace to benefit themselves and others.

For employers and their work organizations, post-retirement employment can obviously help in balancing labour supply and demand shortfalls through the employment of typically older, more skilled, knowledgeable and experienced workers. Often retirees returning to the workforce are interested in participating at a reduced level of work activity, whether through part-time or otherwise short-term casualized employment condi-tions, serving to reduce actual labour costs to the work organization while retaining expertise – this is a 'win-win' scenario for the individual retiree and the employer. When retirees return to their former career job with their previous employer – even if on a part-time basis – then there are further benefits to the work organization in the form of retained 'institutional memory', reducing the likelihood of repeating mistakes from the past, or embarking on previously disproven strategies or ventures at the workplace. Post-retirement employment can be proactively adopted as a workplace strategy by employers through offering flexible working hours and other 'smoothing' work time arrangements (especially providing the option of part-time employment to retirees returning to the workforce) to interested retirees.

For society at large, the broader benefits of post-retirement employment can be profound, especially when considering the sheer demographic magnitude of the 'baby boom' cohorts and their on-going transition from regular work to full retirement. As large numbers of 'baby boomers' (those born between 1946 and 1965) approach the retirement phase in life, there are profound implications for costs to public pension plans, for long-term burdens on health and social welfare systems and services, and for increasing demands and expectations placed upon the remaining labour force (especially levels of taxation to cover the long-term costs of public pensions, government systems and services created by signifi-

cant shifts in demographic dependency ratios over time). When retirees return to work, they contribute much more than their work effort – they continue to pay taxes (albeit at reduced rates and levels), they may defer receipt of public pension funds (reducing the burden upon public pension plans in the short-term), and they remain physically and mentally active and engaged (reducing the likelihood of sliding into a state of poor health, and lowering demands on health care systems and services). From a broader societal perspective, post-retirement employment can be viewed as an important mechanism to promote and encourage the full utilization of human capital to the long-term benefit of society.

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Career Planning in Ontario Grade 10 Students: Student Perspectives

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Abstract

Despite the recognized importance of career guidance to postsecondary access and persistence, research on the topic with key stakeholders in Canadian secondary schools is meager at best. This study sought the perspectives of Grade 10 students on the career planning context in selected Ontario high schools. The results show that most students recognized the importance of career planning and perceived it to be an important component of their identity. While some had developed a career plan, most were experiencing difficulty and were trying to decide between competing options. Information to help identify their passions, abilities and related careers was most useful to their planning and, ideally, this would be accessed via 'on the job' experience, speaking with someone in the job they were attracted to or a comprehensive 'one-stop' web site. The findings suggest that increased exposure to experiential learning and comprehensive, computer-based career exploration tools combined with individual guidance could help more Ontario Grade 10 students identify a career path that is consistent with their passions and abilities. The benefits would be increased progression to and suc

cess in postsecondary programs of study.

The dominant theories of the late 20th century posited that with adequate access to good career information and guidance, individuals would acquire the tools to make sound career decisions on their own. These decisions would result in improved human-resource allocation, labor force mobility and productivity, and improved cost-effectiveness of employment, education, and training programs (Krumboltz and Worthington, 1999). However, recent analysis of school-to-work programs globally brings this assumption into question by highlighting the need to empower individuals engaged in locating and processing career information so they are able extract meaning rather than simply providing basic information and guidance. (Lent, Hackett, and Brown, 1999; Savickas, 1999; Worthington and Juntenen, 1997; Grubb, 2002).

The benefits of career guidance programs are well documented. Magnusson and Roest's (2004) meta-analysis and synthesis of the efficacy of career-development interventions has shown that they are by and large positive and enabling tools for Canadian adolescents across the provinces. Despite the lack of longitudinal studies and best practice analyses, many impact studies conclude that career planning services among adolescents in junior and senior high schools often lead to reduced drop out rates, improved employment prospects, an increase in self-esteem, more efficient use of resources, a greater supply of skilled workers to employers, changed attitudes to increased career choice, and increased motivation to continue learning after high school (McCrea Silva and Phillips, 2007; Bell and Bezanson, 2006). Some, however, have argued that career planning supports could reap greater benefits if they went beyond the typical descriptive format; there must be an active engagement with key stakeholders that goes beyond an information dump (Grubb, 2002; Walker, Alloway, Dalley-Trim and Patterson, 2006).

Barriers to Postsecondary Participation and Persistence

Numerous studies (Barr-Telford et. al., 2003; Ringer-Lepre, 2007; Malatest, 2007; McElroy, 2008; King et. al., 2009) have examined the barriers cited by high school students as reasons for not pursuing postsecondary education immediately after high school. One study (Malatest, 2007), suggests an information gap exists with respect to making decisions about post-

secondary studies. Less than half the high school students surveyed reported they had received enough information to make informed choices about their career path. In addition, over one third felt that high school had not provided enough information to make good postsecondary decisions. The same information was also found to be important for persistence in that half of the respondents who had discontinued their postsecondary studies did so because they were undecided about their career and reported they had not been provided with sufficient information about postsecondary options (Malatest, 2007). Foley (2001) found that nearly thirteen per cent of high school graduates did not pursue PSE because they couldn't decide what to do. A regional analysis found that in Ontario, more than other provinces, this reason was cited by one fifth of those who did not pursue postsecondary education. The findings across many studies are consistent in that career indecision or 'not knowing what I really wanted to do' placed second or third among the reasons given for not pursuing postsecondary education.

The Council of Ministers of Education, Canada and the Canada Millennium Scholarship Foundation (2009) have highlighted the need for more emphasis on career development. Their study concluded that inadequate information about postsecondary choices and the connection to careers led some Grade 11 students to discount the possibility of additional studies after high school. It also found that only a minority of participants had interacted

with their school's guidance counsellors. Those who spoke to them typically reviewed grades and courses. Very few participants had approached their guidance counsellors to inquire specifically about postsecondary education and in most cases discussions with guidance counsellors took place after students had already begun considering alternatives to postsecondary studies. An important finding, consistent with the argument made by Grubb (2002), is the need to present information about postsecondary education alongside information about careers. This would not only illustrate how they are linked, but also help students think more about postsecondary education and future careers. Improved career guidance resources at the secondary school level, therefore, is clearly one way to increase college and university participation rates.

A report based on Statistics Canada's Youth in Transition Survey (Lambert, Zeman, Allen & Brussiere, 2004), concluded that a lack of program fit was the major reason cited by those who had left college or university without completing their program. Ultimately, a notable proportion of postsecondary leavers stated that they had done so either because they didn't like the program or their program wasn't for them. Similarly, the Price of Knowledge (Berger, Motte & Parkin, 2007) concluded that a lack of career direction is a barrier to persistence in and of itself.

Findings from the 2006 – 2008 Ontario College Student Engagement Survey (OCSES) (Dietsche, 2009) also support this

conclusion. The study showed that while three in five entering Ontario college students are quite certain about the type of job they will obtain when they graduate, that is they are high in career clarity, approximately one quarter are not. Career clarity was defined by a student's response to the Likert item, "I feel undecided about what my career will be after college". Consistent with the findings of Berger et. al. (2007), the OCSES results demonstrated the importance of career clarity in an educational context where most academic programs are designed to develop occupation-specific knowledge and skills. The study revealed that students who began college with significant doubt regarding their future career and the relationship between their program of study and their eventual career destination were significantly less likely to become engaged in their studies, were more likely to express a preference for working rather than studying after a few months of college experience and more strongly indicated a desire to leave. Other research, both nationally (Finnie and Qiu, 2010) with college and university students and with Ontario college students alone (Finnie, Childs and Qiu, 2010), has produced similar results.

King (2003) and King and Warren (2006) examined access to and perceptions of career guidance activities in Ontario secondary schools. His research found that the vast majority of students had received information from their teachers and guidance counsellors about universities and colleges. For students who had

received career and educational information on colleges, approximately one-half found the information they received from guidance counsellors 'helpful' and 'very helpful', while approximately one quarter viewed the information as 'slightly' or 'not' helpful. Additionally, two-fifths found teachers' information 'helpful' or 'very helpful', and over one third viewed the information as 'slightly' or 'not' helpful. Finally, one fifth of the students claimed they had received 'no information' about colleges from guidance counsellors and teachers.

These results are consistent with those obtained by Bloxom, Bernes, Magnusson, Gunn, Bardick, Orr & McKnight (2008) who showed that Grade 12 students in Alberta generally did not find career planning resources to be very helpful. The authors noted that the results confirm the importance of students being active participants in influencing the development of career services. Further, the Canadian Career Development Foundation (2003) has stressed the need to strengthen student awareness, planning and decision-making with reference to postsecondary education choices. Their study documented students' frustration with not having enough help connecting entrance requirements and courses of study with a career direction or career path; the relatively narrow focus on university as the preferred postsecondary option; the complexity of information and applications; and understanding of costs associated with post-secondary participation. Clearly, more work is re-

quired to identify the types of career information, delivery formats and other supports that will facilitate the career planning efforts of Grade 10 students who are required to select future courses tied to career destinations.

Despite the overwhelming evidence for the importance of career guidance to postsecondary access and persistence, research on this topic with Canadian secondary school stakeholders outside of Alberta (Magnusson and Bernes, 2002; Pyne, Bernes, Magnusson & Poulsen, 2002; Bardick, Bernes, Magnusson & Witko, 2004; Code, Bernes, Gunn & Bardick, 2006; Bloxom, Bernes, Magnusson et. al., 2008), is meager at best. This is particularly true for research on stakeholder groups such as students, teachers and guidance counsellors. The study of student perceptions reported on here was part of a larger research program designed to portray stakeholder views of career planning resources in Ontario secondary schools. Views regarding career information needs, resources and realities were sought from secondary students, school guidance staff and teachers involved in the mandatory Ontario Grade 10 Career Studies course. Research objectives were to: i) identify the understanding, attitudes and plans held by junior high school students toward their future career; ii) identify the types of career information and delivery format(s) desired by adolescent learners iii) identify key agents and activities that influence their career planning; iv) describe the availability, use and helpfulness

of career information, activities and resources typically available to Ontario high school students. This report focuses on the perspectives of students enrolled in the mandatory Grade 10 Career Studies course offered by Ontario secondary schools.

Methods

Perspectives on the career planning needs and activities of Ontario secondary students were collected with a parallel version of a questionnaire also administered to teachers and guidance counsellors. Questionnaire content, adapted from a study with high school students in Alberta (Magnusson and Bernes, 2002), examined the relative utility of various types of career planning information and activities, the relative utility of various formats for the delivery of career information, the relative influence of individuals and groups on adolescent career planning, and the availability, use and perceived helpfulness of diverse career planning resources typically available to Ontario secondary school students. The term "career plan" in this study is defined as the outcome of a multi-faceted decision making process resulting in tentative directions regarding course choices for senior high school, intentions regarding postsecondary participation and program of study. While it is clear that these decisions can change over time, within the context of Ontario junior high, all students are required to fashion a "career plan", however tentative.

Student views were collected via an in-class survey ad-

ministered by the researcher during the last week of the Grade 10 Career Studies course in selected Ontario school boards and schools between May 2010 and June 2011. Survey administration began with a brief description of the study emphasizing the goal was to obtain their views on career planning generally and not the Career Studies course specifically. The Career Studies course was selected as the survey venue since students had been intensively involved in career exploration for nine weeks and would be familiar with career planning information and activities. The course teaches students how to develop and achieve personal goals for future learning, work, and community involvement. Students assess their interests, skills, and characteristics and investigate current economic and workplace trends, work opportunities, and ways to search for work. The course explores postsecondary learning and career options, prepares students for managing work and life transitions, and helps students focus on their goals through the development of a career plan (Ontario Ministry of Education, 2006). The study was designed to elicit the participation of both public and Catholic school boards representative of the province of Ontario. Five geographic regions, North, East, Central, Southwestern and Western were targeted and school boards in each region were invited to participate.

The questionnaire consisted of seven sections and included both closed and open response types. In addition to demographic and educational goals

questions, four closed response sections examined student perceptions of the information that would be most useful to their career planning, the most useful format for presenting such information and who influenced their career planning. A final section asked respondents to indicate what types of resources were available to them, whether they had utilized these resources and, if so, the degree to which they believed each was helpful in supporting their career planning.

Student perceptions of the most useful resources for career planning in Grade 10 were based on their ratings of fifteen types of information or activities that might be available in their school or community. These were presented in a sequence following Gati and Asher's (2001) characterization of the career decision-making process as involving six tasks. This framework was chosen since the tasks closely parallel the Career Studies course topics and would, therefore, be somewhat familiar to the students. The sequence begins with a student recognizing the need to undertake the planning process followed by self exploration to identify passions, interests, and abilities and progresses to a broad exploration of types of careers available. This is followed by acquiring more in-depth, career-specific information such as annual salary, employment opportunities, required knowledge, skills and duties, information about related postsecondary programs and opportunities for financial support. The last two stages involve deciding between a few possibilities and finally

committing to a single career path.

Results

The survey yielded 1,665 completed questionnaires from the 12 Ontario English language school boards who agreed to participate. Four of the six provincial school board regions as defined by the Ontario Ministry of Education were represented. One half of the sample was from the Toronto region, 30% was from the Barrie region, 17% was from London region boards and 3% was drawn from the North Bay/Sudbury region. The 31 participating schools consisted of 22 public and 9 Catholic schools. While it is difficult to determine whether the sample is representative of Ontario Grade 10 students more generally, it is noted that little variation in student responses on core questions was observed between jurisdictions. In addition, profiles of participating schools developed from Ontario Ministry of Education web site information including Grade 10 literacy and Grade 9 math achievement scores, demographic information such as socioeconomic status and first language, and percentage of gifted students showed considerable student diversity across schools. Ninety-two per cent of the sample was enrolled in grade 10 with the remainder in grades 11 and 12. Almost three-quarters (72%) were fifteen years old and one-quarter (23%) was 16 years of age. Males (48%) and females (52%) were almost equally represented.

Career Understanding, Attitudes and Plans

Because students' understanding of and attitudes toward a career and career planning could influence their level of engagement in the planning process, this study asked students about their understanding of the word "career" with responses ranging from I think I know exactly what the word career means, I kind of know what it means, but not really, I have no idea what it really means, and No opinion. Almost half of respondents (45%) said they knew exactly what "career" meant, one-half reported they kind of knew what it meant, one per cent said they had no idea and three per cent had no opinion. The level of student engagement in career planning was measured with two questionnaire items. The first asked how important career planning was for them at this time in their life with responses ranging from 1 = very important to 5 = not at all important. In spite of the ambiguity about what "career" meant for some, one third said career planning was very important to them at their stage of life and two fifths (44%) said it was quite important. Approximately one-fifth (19%) said it was slightly important and only a very small group (3%) reported career planning was not at all important for them. When the latter group was asked when it would become important, the majority (51%) said in grade 11, one quarter said it would become important in grade 12 and a small number (9%) indicated it would be after high school once they had worked for a while. A

slightly larger group (12%) said they didn't know. In addition, as suggested above, a larger proportion (39%) of students who indicated they knew exactly what the word career meant compared to those who kind of knew what it meant (29%), indicated it was very important to them at this time of their life.

A second measure of engagement in career planning asked about the degree to which having a future career goal describes who you are as an individual. Responses ranged from 1 = very much to 5 = not at all. In keeping with theories of adolescent identity formation (Chickering and Reiser, 1993; Erikson, 1968), the majority reported that defining a career path was an important component of their identity. Almost one quarter (23%) reported it very much defined who they were, slightly less than one half (42%) said quite a bit and over one quarter (29%) said it somewhat defined their individuality. Less than five per cent said it had no bearing on their identity.

To assess the current status of their career planning, students were asked about their career and educational plans and the degree of difficulty they experienced with the activity. Consistent with the importance they attached to planning for a career and the role it played in their identity, one-quarter (26%) reported they had a specific career plan in mind for after high school with almost half (43%) indicating they were trying to decide between a couple of different plans. One-sixth (17%) said they did not know what they would be

doing but had started working on developing a plan and one in ten (8%) did not know what they would be doing and were not worried about it. Slightly fewer (6%) said they did not know what they were doing after high school and were worried about it.

Attending a university was the educational plan most frequently cited (58%) for the year after high school while almost one in five (18%) planned to enter college. Relatively small percentages had no idea (7%), planned to enroll in an apprenticeship program (6%) or enter directly into the work force (3%). Only a very small percentage (0.4%) indicated they would leave before graduating high school and go directly to work. In spite of the fact that students were about to complete a nine week course that provided extensive career guidance and support, substantial numbers reported they found the process quite difficult. When asked, "How difficult would you say planning for a future career is right now", one quarter (23%) said it was very difficult, almost one half (40%) said it was quite difficult and one third (33%) reported it was somewhat difficult. Only a very small minority (5%) said it was not at all difficult.

An analysis of career and educational plans by sex revealed differences that are consistent with the literature. More males (11%) than females (6%) reported they did not have a career plan for after high school but were not worried about it. Differences were also seen in the post-high school educational plans of males and females. More males

(15%) than females (4%) indicated they would enter the labour force or enroll in an apprenticeship program in the year after high school. In contrast, more females (65%) than males (52%) reported they would be attending university.

Career Planning Support and Influences

This study explored the influence of various agents on the career planning of Grade 10 students in three ways. This included ranking individuals they would be most comfortable approaching for help with career planning, the degree to which various agents had influenced their planning and, lastly, the nature of this influence. In the first instance, students were presented with a list of eight individuals that included teachers, counsellors, parents, friends and some-

one working in the field they like, and assigned a '1' to the individual they were most comfortable approaching, with a '2' and '3' assigned to the second and third place individuals, respectively. The results show that parents were overwhelmingly ranked first (M = 1.45) followed by guidance counsellors (M = 2.02), friends (M = 2.20), a school personal/spiritual counsellor (M = 2.25), and other relatives (M = 2.26). Someone working in the field (M = 2.30), classroom teachers (M = 2.31) and other people they knew and trusted (M = 2.32) were ranked last.

The second approach to assessing support for career planning asked students the question, Please indicate the degree to which you believe each of the following has influenced your career planning so far. Responses ranged from 0 = Don't Know to 4

= Very Much. Table 1 presents the proportion of respondents rating possible influences as quite a lot and very much and a mean rating for each option excluding Don't Know responses. Consistent with other research, slightly more than two in five students rated parents/guardians as the primary influence on their career planning. Someone they admired who worked at a job they liked was ranked second as the most influential individual by almost one third of respondents. Agents such as other family members, friends, and the media were much less influential. Surprisingly, only one in ten students reported that guidance counsellors and teachers were very influential.

Anecdotal evidence from career guidance staff in colleges and universities and research (Council of Ministers of Education, Canada and Canada Millennium Scholarship Foundation,

Table 1

Sources of Influence

Individual/Group	Quite a Lot (%)	Very Much (%)	Mean
My parent(s) or guardian(s)	31	45	3.12
Someone you admire working in a field/job you like	28	30	2.66
The media (e.g. movies, TV programs, etc)	29	15	2.35
Friend(s)	30	14	2.35
Brother, sister, cousins	25	20	2.32
Teacher(s)	28	13	2.32
Other relative(s)	25	15	2.28
Guidance counsellor(s)	20	9	1.95

2009) indicates that some students are influenced by others to select a career path they are reluctant to follow. In order to gauge the magnitude of this phenomenon, students were asked, To what degree would you say those who have significantly influenced your career planning have suggested a career you are not really interested in? Responses ranged from 1 = Not at all, 2 = Somewhat, 3 = Quite a bit, 4 = Very much and 5 = No opinion. While almost one tenth (8%) had no opinion and an equal percentage said very much, almost one quarter responded with quite a bit and two in five indicated somewhat. Only one fifth said not at all.

by self exploration to identify their passions, interests, and abilities (Task 2) along with a broad exploration of types of careers (Task 3). This is followed by collecting more in-depth, career-specific information such as annual salary, employment opportunities, required knowledge, skills and duties, information about related postsecondary programs and opportunities for financial support (Task 4). The last two stages involve selecting between possible alternatives (Task 5) and finally committing to a single career path (Task 6). Usefulness ratings for each type of information or activity ranged from 0 = Don't Know, to 5 = Very Much.

Table 2 presents, in descending order, the types of information students rated as very useful to their career planning and their correspondence to Gati and Asher's sequence of tasks.

One in two students indicated that self-exploration information, Task 2 in Gati and Asher's list, to help identify careers related to things they are really passionate about and related to their interests, talents and abilities would be most useful to their career planning. Slightly less than one half (46%) reported that in-depth exploratory information (Task 4) regarding the knowledge and skills required for specific careers would be very

Ideal Career Planning Information

Students were asked to indicate the degree to which each of fifteen types of information or activities could help them plan their future career. These were presented in a sequence corresponding to Gati and Asher's (2001) characterization of the career decision-making process as involving six tasks. The process begins with a student committing to undertake the career planning process (Task 1) followed

Table 2

Ratings of Usefulness

Decisional Task	Information/Activity	Very Much (%)	Mean	S.D.
2. Self Exploration	1. Finding careers related to the things you are really passionate about	52	4.28	0.91
2. Self Exploration	2. Help you identify careers related to your interests, talents and abilities	51	4.25	0.93
4. In-depth Exploration	3. Information about the knowledge and skills for specific careers	46	4.21	0.91
3. Broad Exploration	4. Information about career-related postsecondary programs of study	41	4.07	0.98
2. Self Exploration	5. Help you understand / identify your interests, talents and abilities	41	4.04	1.03
4. In-depth Exploration	6. Information about the different types of careers available	39	4.06	0.97
3. Broad Exploration	7. Information about what it's like to take a college / university program	37	3.96	1.04
3. Broad Exploration	8. Information about financial help to continue education after high school	33	3.81	1.09
4. In-depth Exploration	9. Information about the day-to-day tasks / duties for specific careers	32	3.94	0.96
4. In-depth Exploration	10. Information about the salaries associated with specific careers	31	3.83	1.04
4. In-depth Exploration	11. Information about your chances of getting hired in specific careers	30	3.85	1.03
4. In-depth Exploration	12. Obtaining personal one-on-one support to develop your career plan	26	3.60	1.12
5. Decisional Status	13. Help with choosing between two or more career options / choices	24	3.63	1.09
6. Commitment	14. Help with planning the next steps in a career plan already developed	21	3.59	1.06
1. Orientation to Choice	15. Help you understand that career planning is important right now	18	3.46	1.07

useful to them. Approximately two in five said that a mix of information about career-related postsecondary programs of study (Task 3), identifying their interests, talents and abilities (Task 2) and information about the different types of careers available (Task 4) would also be very useful. Approximately one-third felt that information about what it would be like to take a college/university program, financial support available for education after high school and information about the day-to-day tasks/duties for specific careers would be very useful for their career planning.

Overall, less than one-third of students indicated that information involving in-depth exploration such as the salaries and hiring potential associated with specific careers would be useful to them. Fewer respondents reported that information related to Gati and Asher's final stages would be helpful as only one quarter felt that they needed help deciding between more than one career plan (Task 5), and one in five believed help with a career plan they had developed (Task 6) would be very useful. Finally, only one in five students reported that 'orientation to choice' information (Task 1), or creating an awareness of the need to make a career decision, would be very useful to them.

Utility of Information Delivery Formats

Information about careers may be provided to students in a number of ways including workplace experiences, conversations with individuals working in various careers, watching videos profiling specific careers or reading print or web-based text. Which of these formats Grade 10 students considered most useful to their career planning was assessed with the question, Information on careers can be presented in different ways. How useful you think each of the following would be to you? Responses ranged from 0 = Don't Know, to 4 = Very Useful.

Table 3 shows that almost two thirds (65%) of students ranked spending time on the job first in usefulness and that three fifths (59%) rated talking to people working in their area of career interest second. A web-based tool that provides all the information needed to select a future career that matches their interests and abilities was third with almost two in five (39%) indicating this would be a very useful format. One third ranked speaking with college or university students about their career planning strategies, interactive web sites with surveys and quizzes and videos of people describing their careers as very useful. Text-based career information on web sites and printed materials were only seen as very useful by one fifth of respondents.

Availability, Use and Helpfulness of Current Career Planning Resources

The final closed response section of the questionnaire focused on the current career planning resource context as perceived by Grade 10 students. This was assessed by asking respondents to indicate whether a particular planning resource was available to them, how often they had used it and, if used, how helpful they thought it was. Availability responses varied from, Don't Know, Not Available and Is Available; degree of use responses were Never, Once or Two or more times; helpfulness ratings were, Don't Know, Not at all, Somewhat, or Very Much.

Table 4 shows the perceived availability and reported use of career planning resources

Table 3

Utility of Career Information Formats

Delivery Format	Very Useful (%)	Mean
Spending time 'on the job' exploring what the career involves on a day-to-day basis	65	3.54
Talking to people working in the career area you are interested in	59	3.46
A web-based tool that provides all the information you need to select a future career that matches your interests and abilities	39	3.13
Meeting with students in college or university to hear about the career planning strategies they used	32	2.96
Interactive web sites (e.g. surveys, quizzes, careers game etc.)	30	2.88
Video clips of people talking about what they do in their career.	29	2.82
Text-based information on web sites describing potential careers	21	2.80
Printed materials (e.g. books, brochures etc.)	17	2.64

that might be accessed within most Ontario secondary schools or the community. While Grade 10 students indicated a substantial number of career planning resources were available to them, many were used infrequently. The mandatory Career Studies course, the provincially required participation in volunteer work, co-op courses, computer programs such as Career Cruising and written materials were reported to be available by four out of five students. Working individually with a guidance counsellor, paid work experience and a school career library were available to three in four students. Two thirds indicated they had access to career-related videos, community agencies such as the YMCA, career interest questionnaires and information sessions with guest speakers. Approximately one half indicated they could access a career fair, job shadowing, internet sites such as myBlueprint and the Ontario Youth Apprenticeship program. Speaking with college or university guidance staff, working in a group with a high school guidance counsellor, and workplace or industry tours were available to only two in five students.

In spite of the reported availability of many career planning resources, only a few were used by the majority of students. Participation in the Grade 10 Career Studies course was universal since it is an Ontario Ministry of Education required course. Table 4 also indicates that four in five students used Career Cruising software and volunteered in the community. Seven in ten had accessed a career interest questionnaire, sessions with guest speakers and career-related written materials. Some resources, however, were widely available but little used. Working individually with a guidance counsellor, reportedly available to three quarters of students was used by two in five. Similarly, community agencies such as the YMCA and Canada Employment Centres were available to two thirds of students but utilized by only one quarter. Co-op courses were said to be available by over four fifths of respondents but had only been used by slightly more than one in ten students. This is due to the fact that registration is normally limited to those in Grade 11 or 12 (Ontario Ministry of Education, 2000). Other resources such as speaking with college or university guidance staff, groups of students working with a high school guidance counsellor and workplace tours had low rates of use.

Table 4 also presents the perceived helpfulness of career planning resources based on the responses of students who had used them. Computer programs such as Career Cruising and working one-on-one with a guidance counsellor were reported to be the most helpful career planning resources since one half of respondents rated them as very helpful. High school co-op courses were also reported to be very helpful by one half of the small percentage (13%) of students in the survey sample who had enrolled in such a course.

Table 4

Availability, Use and Helpfulness of Career Planning Resources

Resource	Available (%)	Used (%)	Very Helpful (%)
Mandatory Career Studies course in high school	100	100	41
40 hour high school volunteer requirement	100	81	38
High school co-op courses	85	13	53
Computer programs (e.g. Career Cruising etc.)	85	85	50
Written materials (magazines, brochures etc)	80	71	25
Working one-on-one with a guidance counsellor to explore future careers	78	41	49
Paid work experience (full/part-time work, etc.)	76	48	43
School career information centre / library	72	60	27
Short videos that show actual on-the-job duties for specific careers	69	51	34
Community agencies (e.g. YMCA, CEC, etc.)	64	28	27
Career Interest questionnaire (e.g. Strong Interest Inventory, etc.)	64	70	33
Career information sessions with guest speakers	64	70	23
Career Fairs/Career Days	59	49	27
Job Shadowing (time with someone at their job)	58	45	45
Career related internet sites (e.g. MyBlueprint)	56	48	32
Ontario Youth Apprenticeship Program (OYAP)	51	11	34
Speaking with college / university guidance staff	46	33	47
Groups of students working with a guidance counsellor to explore future careers	40	22	31
Workplace/Industry Tours	39	38	33

Approximately two fifths reported they found speaking with college or university guidance staff, job shadowing, paid work experience, the mandatory Career Studies course and the mandatory community service requirement very helpful.

A third tier of resources were rated as very helpful by approximately one third of respondents. These included the Ontario Youth Apprenticeship Program, career-specific videos, workplace tours, career interest inventories and internet sites, and groups of students working with high school guidance staff. Other resources such as information sessions with guest speakers, career fairs/days, school career libraries and print materials were rated as very helpful by roughly one quarter of respondents.

The ranking of planning resources presented in Table 5 shows that, generally, those perceived to be most helpful by the Grade 10 students in this study were experiential activities such as co-op courses, job shadowing, work experience and volunteering. Interacting with individuals such as guidance counsellors or speaking with college/university guidance staff was also reported to be very helpful. One significant deviation from this pattern was the high value placed on computer software programs that help students identify potential careers such as Career Cruising.

Discussion

This study sought to describe Grade 10 student perspectives on career planning in Ontario high schools. The results document their understanding of and attitudes toward career planning, the status of current career and future educational plans, their relative comfort in seeking advice from a variety of individuals and the influence of these individuals and groups on their career planning. Their views on the types of career planning information and activities that would best support their planning and the relative utility of various formats to present this information was a second major goal. Finally, the availability, use and perceived helpfulness of diverse career guidance resources typically available to Ontario secondary school students were also examined.

Career Understanding, Attitudes and Plans

Adolescents' understanding of the term "career" has important implications not only for their own career planning but also for the design and delivery of career development courses and programs. Indeed, students in this study who reported confusion about what is meant by "career" also placed less importance on career planning activities. The

Table 5

Ranking of Career Planning Resource Helpfulness

Resource	Mean	S.D.
1. Computer programs (e.g. Career Cruising etc.)	2.41	.648
2. High school co-op courses	2.39	.719
3. Working one-on-one with a guidance counsellor to explore future careers	2.38	.679
4. Speaking with college / university guidance staff	2.35	.675
5. Mandatory Career Studies course in high school	2.33	.625
6. Job Shadowing (time with someone at their job)	2.33	.680
7. Paid work experience (full/part-time work, summer jobs etc.)	2.31	.672
8. 40 hour high school volunteer requirement	2.23	.680
9. Short videos that show actual on-the-job duties for specific careers	2.19	.670
10. Career Interest questionnaire (e.g. Strong Interest Inventory, etc.)	2.18	.665
11. Workplace/Industry Tours	2.17	.683
12. School career information centre / library	2.14	.625
13. Career related internet sites (e.g. MyBlueprint, The Real Game etc.)	2.12	.705
14. Written materials (magazines, brochures etc)	2.12	.613
15. Career information sessions with guest speakers	2.12	.583
16. Career library outside of your school	2.11	.681
17. Career Fairs/Career Days	2.10	.658
18. Groups of students working with a guidance counsellor to explore future careers	2.10	.722
19. Ontario Youth Apprenticeship Program (OYAP)	2.07	.777
20. Career planning workshops	2.05	.691
21. Community agencies (e.g. YMCA, Canada employment centre, etc.)	2.02	.715

fact that the majority of students said they "kind of knew what it meant, but not really" is especially intriguing given they were at the end of a nine week Career Studies course. However, as others (Noeth, Engen & Prediger, 1984; Pyne, Bernes, Magnusson & Poulson, 2002) have found, senior as compared to junior high school students are more likely to understand a "career" as being more of a longer term commitment. The implication is that as students progress from the junior to senior high school they develop a less concrete and more complex understanding of what a career is. Courses designed to explore future career paths with students in Grade 10, therefore, might begin with a more concrete approach that focuses on the types of occupations that are related to their passions, interests and abilities.

Despite their uncertainty about what "career" means, Ontario Grade 10 students ascribed a great deal of significance to career planning. The majority said it was important to them and of those who said it was not, most said it would be in the following year. This is consistent with what others (Collins & Hiebert, 1995; Hiebert & Huston, 1992; Hiebert, Kemeny, & Kurchak, 1998) have found; students in the seventh to twelfth years of school rank career-related concerns among the top ten of their self-expressed needs. Similar levels of importance were found for junior (Bardick, Bernes, Magnusson and Witko, 2004) and senior (Bloxom, Bernes, Magnusson, Gunn, Bardick, Orr and McKnight, 2008) high school students

in Alberta. To further highlight the significance of career planning for students in this study, the majority also indicated that having a future career goal was an important component of their identity. As has been noted elsewhere (Pyne, Bernes, Magnusson & Poulson, 2002), "career is not only a job, it is part of their identity. Career provides personal meaning and a sense of importance for the individual" (p. 71).

In keeping with the importance and personal meaning associated with career plans, most Ontario Grade 10 students reported they either had a specific career in mind or were trying to decide between alternatives. This is quite similar to the results reported for Grade 12 students in Alberta (Bloxom, Bernes, Magnusson, Gunn, Bardick, Orr and McKnight, 2008). While fewer of the Ontario students compared to those in Alberta reported they had reached a stage of career commitment (26% vs 39%), in both cases two in five said they were trying to decide between a couple of plans. In addition, a somewhat larger percentage of Ontario Grade 10 students were unsure about their future career or did not yet have a clear plan. The lower level of career certainty found in Ontario students is likely due to their younger age and earlier stage of career planning.

Despite their uncertainty about a future career, the majority of the Grade 10 students reported they had a clear educational plan for after high school. Consistent with the high postsecondary participation rates

in Ontario (Statistics Canada and Council of Ministers of Education, Canada. 2007), four in five Grade 10 students reported they would be attending a college or university following high school graduation. While this contrasts sharply with Alberta Grade 12 students (Bloxom, Bernes, Magnusson, Gunn, Bardick, Orr and McKnight, 2008) where fewer than one third had postsecondary attendance as their destination after high school, it is consistent with differences in provincial postsecondary participation rates (Statistics Canada and Council of Ministers of Education, Canada. 2007). The percentage of students identifying a college destination in the current study was almost identical to that reported for Ontario Grade 10 students more generally (King and Warren, 2006). The same study, however, found that postsecondary destination changed between grades 10 and 12. More students identifying university as a destination in Grade 10 decided on college in Grade 12 reinforcing the notion that career and educational plans are quite fluid during the final years of high school.

The absence of a clear understanding of "career" for many students could have contributed to the fact that the majority found career planning quite difficult. Gati, Krausz and Osipow (1996) described three types of career-related decision-making difficulties exhibited by Israeli students in grades 9, 10 and 11; a lack of readiness, a lack of information or inconsistent information. Findings from this study, to be discussed more fully below, suggest that some of the difficulty experi-

enced by Ontario Grade 10 students might be related not only to a lack of understanding of "career", but also to a lack of information since the majority of students reported the most useful career planning resources were not readily available, or if they were, were infrequently used.

The portrait of career planning that emerges for Ontario Grade 10 students is of a group who are somewhat confused about what a "career" is but nonetheless attach great importance to the activity and, despite experiencing considerable difficulty with the task, consider identifying a career to be an important component of their personal identity. By Grade 10, the majority has either identified a specific career or is weighing alternatives and almost all are intending to continue their education at the postsecondary level.

Career Planning Support and Influence

This study examined the level of comfort students had in seeking support from, and the influence various groups and individuals had on the career planning of Grade 10 students. The results are consistent with those of Bloxom, Bernes, Magnusson, Gunn, Bardick, Orr & McKnight (2008) who showed that parents and guidance counsellors were ranked first and second in level of comfort, respectively, by Grade 12 students. While this affirms the primacy of parents in supporting adolescent career planning (Prairie Research Associates, 2005), other findings suggest that

counsellors may be seen as more approachable as students near graduation (Bardick, Bernes, Magnusson & Witko, 2004). The latter study found counsellors were ranked much lower in level of comfort by Alberta students in grades 7 to 9. The current study suggests that comfort levels associated with seeking support from guidance counsellors may begin to change in Grade 10.

The level of comfort associated with a particular individual or group, however, does not necessarily translate into an influence on career planning. While parents were again ranked first in influence, a group associated with a low level of comfort, someone the student admired working in a field of interest, was ranked second. The independence of 'comfort' and 'influence' is further exemplified by the finding that while guidance counsellors were ranked second in approachability they were ranked last in terms of influence. And as with other research (Council of Ministers of Education, Canada & Canada Millennium Scholarship Foundation, 2009), teachers, with whom students have daily contact, were ranked low in both approachability and influence. The findings of this study highlight the almost exclusive role that parents play in supporting the career development of high school students.

Such exclusivity, however, could have negative implications as there is also some concern regarding the content of the advice and direction that parents provide. Middleton and Lougheed (1993) noted that parental encouragement, al-

though well-meaning, may focus only on a range of alternatives acceptable to the parent and thus may limit adolescents' career exploration and choice. King and Warren (2006) found that some high school students reported their parents felt so strongly about universities that they would not let them attend college. They also found evidence that parents' advice may not be adequate. A third of university and of college-bound high school students thought the career information provided by parents was 'slightly' or 'not' helpful. Focus groups with students (Council of Ministers of Education, Canada & Canada Millennium Scholarship Foundation, 2009) suggest that some parents were more inclined to nag their children about postsecondary attendance rather than provide them with practical information that could help them to decide what they might like to study. While parental influence has generally been shown to be positive (Grant, 2000), and Otto (2000) found that four-fifths of high school juniors said their career aspirations were consistent with those of their parents, the one in five cases where the career aspiration of the student does not match that of the parent could lead to enrolling in a program of study for which the student might be ill-suited. And while parents were not identified explicitly as the source, one third of students in the current study reported being encouraged to follow a career path that was not consistent with their interests.

The relatively low level of influence attributed by students to counsellors and teachers

is noteworthy and also consistent with other research (Alexitch & Page, 1997; Domene, Shapka & Keating, 2006; King & Warren, 2006). The King and Warren study showed that while teachers and counsellors were suppliers of career information, one-third of students thought the information provided by teachers was 'slightly' or 'not' helpful and one-quarter felt the same about information from counsellors. In addition, a number of studies (Bardick et al, 2004; Kotrlik & Harrison, 1989; Mau, 1995; Stratton, 2001) have shown that only a small percentage of high school students make use of guidance services and that this is particularly true in provinces like Ontario that have a mandatory high school career guidance course. Structural barriers might also account for the low levels of interaction between students and guidance staff. High school counsellors must divide their time with students to deal with personal/social issues, academic issues such as course selection, and career guidance. There are very few Ontario schools with dedicated career counsellors (Malatest, 2009) and the numbers of guidance counsellors are spread quite thinly in most Ontario secondary schools (Malatest, 2009). There is also evidence (Dietsche, forthcoming; King, Warren, King, Brook & Kocher, 2009; Malatest, 2009) that much of their time is spent on activities other than career advising such as helping senior students with course selection and prepare applications to postsecondary institutions.

Ideal Career Planning Information

Identifying the type of information that would best support Grade 10 students with their career planning was one of the core questions posed by this study. Students rated various types of information following the task sequence described by Gati and Asher (2001) where each task level brings the individual closer to identifying a specific career plan.

Only a very small proportion of the Grade 10 students said information to convince them that career planning was important would be useful. This, and the results regarding the importance they attached to the task, the perceived role of a career in their identity, and that many had already developed a career plan, indicate the majority of students is beyond Gati and Asher's 'orientation to choice' task. The largest proportion of Ontario Grade 10 students said self-exploration information to help identify careers related to their passions, talents and abilities would be most helpful to their career planning. As with other studies (Bardick, Bernes, Magnusson & Witko, 2004; Bloxom, Bernes, Magnusson, Gunn, Bardick, Orr & McKnight, 2008), this was followed in degree of usefulness by a mix of broad and in-depth information related to types of careers available, the knowledge and skills required, and relevant postsecondary programs of study. Generally, fewer students saw more in-depth types of information such as financing for postsecondary studies, salaries and

hiring potential as very useful. While over one half said that information corresponding to Gati and Asher's Task 5, deciding between two career options, would be quite or very useful, only one in five reported that information corresponding to Gati and Asher's Task 6, helping to decide on a specific career, would be useful. The implication is that many Ontario Grade 10 students are at the point of deciding between careers but few are ready to commit to a specific career. Indeed there is evidence that this task becomes more dominant in the career planning of Grade 12 students (Germeijs & Verschueren, 2005). Ontario Grade 10 students, therefore, clearly understand the importance of career planning and would like information, first and foremost, to help them discover careers that match their passions and that they "would be good at". Most are in the earlier stages of career planning dedicated to exploring potential future careers; few are ready to make a definitive choice.

Ideal Format for Career Information

Students' perceptions of the ideal format for career planning information was the second core question posed by this study. Options included print material, static and interactive web sites, and experiential activities such as speaking with those employed in an area of interest or work experience. Most students had some experience with all of these formats as indicated by their responses to the availability and use section of the survey. The top

two formats rated as the most useful for career planning by three in five students were exposure to concrete 'on the job' experiences such as work placements and opportunities to speak with others working in their field of interest. Indeed, the utility of experiential activities such as co-op and work placements has also been highlighted by others (King et. al, 2009). A comprehensive review of the impact of experiential learning opportunities for the Ontario Ministry of Education (Canadian Council on Learning, 2009) concluded, "Regardless of program type or the quality of the study, when career awareness was used as a measure of career preparation, all results were positive" (p.1). However, as borne out in this study and others (King & Warren, 2006), opportunities to obtain career information in this way, such as visits to businesses and industries, appear to be quite infrequent for Ontario high school students. Other jurisdictions, however, such as the U.K. (EBP West Berkshire, 2011) have been successful in creating organizations that facilitate such opportunities on a broader scale and might serve as models for Ontario.

A comprehensive 'one-stop' web tool providing all of the information required to plan a career path was rated as the third most useful format for career-related information, consistent with research (Canadian Career Development Foundation, 2003) that highlights an increased use of tools such as the Real Game, Career Cruising, myBlueprint and other web-based career de-velopment resources. Such tools allow students to access career planning information independ-ently and reduce the workload of guidance staff. Their effective-ness, however, is likely to depend on the student's ability to make sense of the information they obtain or else it simply becomes an 'information dump' (Grubb, 2002).

Availability, Use and Helpfulness of Current Career Planning Resources

The results of this study confirm that from the Ontario Grade 10 student perspective, a wide variety of resources are available to support their career planning. Those available to all or almost all students include the Career Studies course, volunteering for community service, co-op courses, print materials and computer programs such as Career Cruising. Of these, co-op courses and Career Cruising were considered to be the most helpful although use of co-op by Grade 10 students was minimal due to Ontario Ministry of Education (2000) policy. Indeed, while Ontario is the province with the highest enrollment in co-op programs, counsellors have reported that only between twenty and forty per cent of Ontario students enroll in such courses (Malatest, 2009). Other research confirms the value students place on co-op programs in helping them decide on a future career (King et. al, 2009). Career Cruising and the mandatory Career Studies course were both considered to be very helpful while print materials were generally not perceived to be so.

A second tier of widely available resources included working one-on-one with a guidance counsellor, paid work experience and a school career information library. While meeting individually with guidance staff was also rated as the third most helpful resource, fewer than half the students had done so. Indeed, interviews with students and parents (Canadian Career Development Foundation, 2003) have shown that both groups desire greater access to individualized support. However, while such support is available to students, this and other research (Malatest, 2009) has shown that a minority of counsellor time is actually devoted to individual career planning. The value students ascribed to paid work experiences is consistent with their desire to explore potential careers via 'on the job" or experiential learning opportunities. Results from student interviews (King et. al, 2009) suggest the experiences help them decide on a career path in that it affords students the opportunity to test jobs related to potential career aspirations. The effectiveness of such opportunities has been noted elsewhere (Canadian Career Development Foundation, 2003).

Generally, the perceptions of students regarding the most helpful of the resources available to them parallel their views on the ideal format for obtaining information about potential careers. In both cases experiential opportunities were rated first followed by conversations with knowledgeable individuals. A desire for individual support was also seen as working individually with high

school and college or university guidance staff were rated as among the most helpful resources.

Conclusions and Implications

This study gathered information from students in numerous high schools across Ontario with the goal of gaining their perspective on career planning. Those enrolled in the Grade 10 Career Studies course were surveyed since their formal curricular experience with the process positioned them as 'key informants'. A number of important conclusions can be drawn from the study findings. First, the results support Blustein's (1997) view that adolescent development involves experimenting with various work roles in planning for the future. The fifteen year olds in this study reported career planning was very important at that time of their life and that a career played a major role in their identity. While some had a career plan, most were finding the planning process difficult and were trying to decide between competing alternatives.

Second, it is clear that from the career planning perspective, the junior and senior high school years are a time of change. While the importance of attending a postsecondary institution following high school was clear to the Grade 10 students and the vast majority intended to attend a college or university, other studies (King, 2003) suggest that many change their destination between grades 10 and 12. This, and the fact that many in

this study were vacillating between alternative careers, argues that for many students both postsecondary destination and career plan can change in the final years of high school. The implication is that students in grades 11 and 12 could benefit from specific supports in negotiating this change.

The primacy of parents in influencing career planning and the weak influence of counsellors and teachers found in this study is well documented in the literature (Domene, Shapka & Keating, 2006). The results also suggest that for some students, parental influence on career planning might be inconsistent with the desires of the adolescent. Perhaps as others (Council of Ministers of Education, Canada & Canada Millennium Scholarship Foundation, 2009; King & Warren, 2006) have suggested, some parents might not be aware of the full range of careers and postsecondary destinations available to their child. Many parents also rely on guidance counsellors as the expert sources of support in student decision making, information on postsecondary education options and future career possibilities (Canadian Career Development Foundation, 2003). While the same research also indicates parents are willing to become more involved, if they had information and coaching, surveys of Ontario guidance counsellors (Dietsche, forthcoming; Malatest, 2009) have found that less than half of their schools offered parent workshops, and if they were, it was typically once a year. The conclusion, as others have argued, is that the benefits

of promoting increased parental involvement in career planning workshops in concert with their son or daughter are likely to be significant (Bardick, Bernes, Magnusson & Witko, 2004).

The optimization of career planning resources for junior and senior high school students must recognize the type of information they need and the most effective way to provide it. As with Grade 12 students in Alberta (Bardick, Bernes, Magnusson & Witko, 2004), the Ontario Grade 10 students desired information that would help identify careers related to their passions, interests and abilities and they wanted the opportunity to experience a job/occupation or speak to someone who was in the job before making a decision. However, the findings regarding the availability and use of career planning resources in Ontario high schools show that experiential opportunities are limited. While Grade 10 students are not generally eligible for co-op courses, increased participation on the part of Grade 11 and 12 students could be one way to help them clarify a future career.

The helpfulness attributed to Career Cruising is consistent with the ranking of a web-based "one-stop" tool third, after experiential options, as the most useful way to provide career planning information. Career Cruising has been designed to help students plan their future by packaging interest assessment tools with detailed occupation profiles and comprehensive postsecondary education information. The concept is for students to

move seamlessly through the career exploration and planning process similar to Gati and Asher's (2001) sequence to ultimately identify a career path. While access to computer resources is clearly required, it was found that some schools in this study, as well as individual students, had limited access. In addition, given the complexity of the information presented and the cognitive integration that is required to 'make sense of it', more individual support would be beneficial (Canadian Career Development Foundation, 2003; Grubb, 2002). Indeed, students in this study reported that working one-on-one with guidance staff was a great help to their career planning.

Despite this helpfulness and the degree of comfort Grade 10 students associated with guidance staff, only two in five reported having met one-on-one with a counsellor. While structural factors no doubt account for some of this (Dietsche, forthcoming; Malatest, 2009), the relatively low level of usefulness attributed to individual support for career planning suggests that Grade 10 students might underestimate the value of this resource since those who did meet with a counsellor found the experience to be very positive.

The mandatory Career Studies course could provide a venue for increasing interaction between Grade 10 students and guidance staff. Like many students in Grade 12 who meet individually with guidance counsellors to plan postsecondary studies, those in Grade 10 might do so toward the end of their Ca-

reer Studies course. Such personal support could help more students 'connect the dots' than is currently the case. Such meetings could also allow counsellors to highlight ways in which students might test their career aspirations via co-op, job shadowing or other experiential options. For example, the mandatory community service requirement, completed by all students, could be very helpful to career planning if students were encouraged to select their service activities with potential careers in mind. Overall, greater exposure to experiential forms of career information seems warranted given the findings of this study and while workplace tours for Ontario students do not appear to be widely available, other jurisdictions have been successful with such programs and might provide useful models for Ontario.

Taken together, the information provided by Ontario Grade 10 students suggests a need to rethink the access to and delivery of career planning resources in Ontario secondary schools. There is little doubt that increased exposure to experiential learning and comprehensive, computer-based career exploration tools combined with individual counsellor support could help more high school students identify a career path that is consistent with their passions and abilities. The integrated delivery of career resources in this way would not only empower students to be more involved in their planning but also increase progression to and success in postsecondary programs of study.

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Intersections of Career Development and Post Secondary Education for Indigenous Students: Exploring the Integrity of Social and Cultural Issues

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Abstract

Indigenous peoples in Canada often have unique experiences of finding and keeping work, which are strongly tied to cultural and community identity and histories. This paper explores the relationship of career development with post secondary education. These two facets of life for Indigenous peoples seem to intersect around issues of discrimination, modeling and mentoring, and access to education and career opportunities, which are discussed through a review of literature and the presentation of new data from two Indigenous research projects. Implications for career development and educational practices presented offer concrete guidelines for changing the way universities service the career needs of Indigenous students.

The cultural landscape of Canada is constantly evolving. This evolution is a process in which we interact and learn through features of human knowing and their implications for human change. The concepts of career and formal Western education are integral aspects of change for Canadian Indigenous peoples. Successful careers require interactions between individuals and society at large.

Through individual, group, and class-size interventions, culturally responsive educators need to be trained and capable of meeting the career needs of culturally diverse populations; however, there is a realization that career development models and concepts currently in use are not addressing the challenges of Indigenous peoples in Canada, who represent a broad range of cultural identities (Herring, 1997; Lee, 1995). Post-secondary educators are becoming aware that European-North American (i.e., Eurocentric) cultural values dominate current systems of career development and education, and that these values frequently come into conflict with those of culturally different students, particularly Indigenous students (Lee, 1989; Pedersen, 1991).

The term *Indigenous* is a general term used to describe members of three distinct Aboriginal cultural groups in Canada: First Nations, Métis peoples, and Inuit (Assembly of First Nations, 2002; Health Canada, 2003a). The term Indigenous will be used interchangeably with the terms Aboriginal and Native. First Nations, Indian, Métis, Inuit are also used as specific authors cited have utilized them. *Colonization* refers to the deliberate attempt by Canadian governments to destroy Indigenous institutions of family, religious belief systems, tribal affiliation, customs, and traditional ways of life through enacted and enforced legal sanctions (Garrett & Herring, 2001). Colonization is marked by cultural assimilation and destruction tactics in the form of residential schools, removal of Indigenous groups from ancestral lands, and cultural genocide (Green, 1997).

Rationale

Human Resources and Skills Development Canada (2010) reports that the national rate of unemployment for Indigenous peoples in Canada is 14.8%, whereas the rate of unemployment for the general Canadian population is 6.1%. Indigenous youth aged 15 to 24 have unemployment rates ranging from 12% to over 20%, depending on provincial location, compared to the average unemployment rate for non-Indigenous youth at 6%. Therefore, according to these statistics, Indigenous youth are 2 to 3 times more likely to be unemployed than their non-Indigenous counterparts. The Canadian federal government recognizes Indigenous unemployment as a major concern and in response has enacted equity policies to address hiring of Indigenous workers (Dwyer, 2003), but this action

alone is insufficient in addressing this problem.

Education and employment are directly related: As the amount of education a person attains increases, so does his or her opportunities for employment (Betz, 2006). Recent statistics (Statistics Canada, 2008) indicate that 38% of the Indigenous Canadians population will not graduate from high school; among Indigenous peoples living on reserve, 50% of do not complete secondary school. Given this relationship, the statistics regarding educational attainment for Indigenous peoples as a whole in Canada do not bode well for their career attainment and success.

In terms of post-secondary studies, Indigenous university students represent an elite population within the greater population of Canadian Indigenous peoples. Compared to non-Native Canadian populations, very few Native adults enter and complete post-secondary studies. Statistics show that in the case of status Indians, only 20% of those under the age of 24 have pursued some form of post-secondary education, compared with 42% of their non-Indigenous peers (Junor & Usher, 2004). The gap in university graduates is also wide; in 1996, 6% of Indigenous people aged 25 to 64 had a completed university education. This increased to 8% in 2001. For non-Native Canadians, 23% of the population aged 25 to 64 had a university education in 2001, up from 17% a decade earlier (Statistics Canada, 2003). Thus the actual number of Native graduates remains very small, as Indigenous peoples currently

account for about 3.9% of the overall population of Canada (Statistics Canada, 2003). These statistics can be understood to reflect the limited access to education that is experienced by Indigenous peoples, which suggests limited possibilities for career development and career outcomes.

The Royal Commission on Aboriginal Peoples (2004) noted this disparity in educational attainment and achievement among Indigenous peoples but has offered no concrete solutions or understandings of the issues. Battiste (1998), a prominent researcher in the field of Indigenous education, explains this disparity in education as resulting from the colonial experience, which has left generations of Indigenous individuals and communities with multiple healing issues, limited access to health care and education, and in a state of economic marginalization.

It is clear that existing data point to an important relationship between career and education that is worth exploring for the Indigenous population for theoretical and pragmatic reasons. Theoretically, academics need refine their understandings of poorly understood processes that underlie the lack of career and educational success for Indigenous peoples. Pragmatically, addressing this crisis state of unemployment for Indigenous individuals both on and off reserve is necessary to address the social inequities faced by this population within the social service and education systems.

Overview

In a review of the relevant academic literature and through a presentation of the authors' current research on career development and Indigenous education, this paper seeks to identify and describe some of the more salient issues in working with Indigenous post secondary students on career development. The goal of this paper is to clarify the relationship between career development and Indigenous education themes. Also incorporated into the discussion are the experiences of the primary author, a professor in Counselling Psychology and a University Administrator in Aboriginal Education. Dr. Suzanne Stewart carries out research and teaches in the areas of Indigenous career development and mental health as well as Indigenous pedagogies in post secondary education.

Existing literature in this area presents career counselling interventions or theoretical frameworks for working with Indigenous populations within the career development or post secondary contexts. This paper extends from what has been discussed in this literature to synthesize knowledge and experiences of Indigenous peoples regarding careers and post secondary education by revealing research findings on Indigenous graduate student's experiences of supports and challenges in higher education (see Stewart & Reeves, 2009) and on Indigenous youth's narratives on employment experiences (see Marshall & Stewart 2011; Stewart & Reeves, 2011; Stewart, Reeves, Mohanty &

Syrette, 2011). This paper is designed to appeal to academic researchers, as well as post secondary educators and career counsellors who wish to increase cross-cultural consciousness and cultural competency in their work with Indigenous clients and students. Further, through a process of exploration of current intersections between Indigenous education and career development, this paper seeks to generate more research questions around Indigenous education and career. Therefore, this paper focuses on both the articulation of issues relevant to Indigenous career development as well as future research into Indigenous students' learning and career needs in post secondary education. The current themes around these issues that will be explored here are: Discrimination in the educational setting, modeling and mentoring for Indigenous students, and access to education and career opportunities. A discussion of these issues will be followed by implications for career development models in postsecondary education. In order to give a deeper perspective on the topics discussed here, a brief overview of the historical context of Indigenous Canadians will first be presented.

Historical context

In examining how Indigenous peoples exist and learn in a society dominated by a culture that is not their own, understanding socio-political historical realities is necessary in order to provide the context for a deeper understanding of the current issues. According to oral tradition, prior to first contact with Europeans in the 16th century, North American Indigenous peoples' societies existed with successful methods of dealing with educational and health challenges. Prior to first contact, the incidence of health and social problems among Indigenous peoples in what is now called Canada was low (Waldram, 2004). However, contact brought a dramatic increase in physical and mental illness and social problems to Indigenous peoples, as well as a disruption in traditional ways of knowing and living (Kirmayer, Brass, & Tait, 2000). Over seven million Indigenous peoples are estimated to have inhabited North America prior to contact in 1492; by 1600, almost 90% of these individuals perished as a result of indirect and direct effects of European settlement. Infectious disease brought from Europe was primarily responsible for this dramatic decrease, followed by a change in traditional diet to one of European foodstuffs as well as direct combat (Young, 1988). Today, health problems, such as diabetes and obesity, continue to exist in Indigenous communities related to diet and epidemiology (Kirmayer et al., 2000). Current social problems viewed as a result of a disruption of traditional living and colonial oppression are described in terms of the social determinants of health, which reflect low educational achievement, poverty, poor maternal health, family violence, inadequate housing, lack of access to health care and education, and high rates of unemployment (Kramer et al., 2000).

Further, implementation of federal government policies in Canada, such as the Indian Act, have attempted to destroy and eradicate Indigenous cultures through the creation of creation of reserve lands, residential schools, and bureaucratic control of all aspects of Indigeniety and individual, family, and community life. In order to accommodate colonial settlement and natural resource exploration, Indigenous settlements were chosen by non-Native federal governments, who forced Indigenous groups off of their traditional lands and onto other territories, often grouping bands together who had previously no history of living together (Dickason, 1997). These groupings were forced to make new social structures and sustainable ways of life, which often failed to be successful. Indigenous groups were also relegated to lands with little or no natural resources, i.e., lands not deemed habitable or desirable for European settlers (Royal Commission on Aboriginal Peoples, 1994). Referring to an example of this relocation, Kirmayer et al. (2000) observe: "The disastrous 'experiment' of relocating Inuit to the Far North to protect Canadian sovereignty—a late chapter in this process of forced culture change—revealed the government's continuing lack of awareness of cultural and ecological realities" (p. 609). In other words, the Canadian Federal government's attempt to move the Inuit to a non-traditional territory was decided based on what would benefit the colonizers rather than what was in the best

interest of the cultural and environmental perseverations of the Inuit, whose identity and way of life was tied closely to their traditional lands.

Through the implementation of the Indian Act, which began in 1872 and continues into today, the colonization, bureaucratization, missionization, and education processes of the Canadian colonial governments, the control of education, healing, and other social and health practices were largely transferred from Indigenous peoples to programs and institutions sponsored by the Canadian government (Malatest & Associates, 2002). Historically, through such colonial processes, traditional teachers and healers were ridiculed and persecuted by the dominant culture and by governmental legislation (Waldram, 2004). Traditional teachers, often Elders or healers in the community, were forced to practice their traditions such as Potlatch, Sundance, and traditional healing in secret or face incarceration by the Royal Canadian Mounted Police at the directive of federal law. As a result of this outlawing of traditional cultural practices, which also included speaking Indigenous languages, many Indigenous peoples today no longer avail themselves of the benefits of their traditional cultural skills and knowledge, either because they did not know how to access these services or because they had been taught to mistrust, fear, or condemn their own cultural and healing traditions through residential school teachings. This continues to date to be the case in many Indigenous communities and for

many individuals. Through this process of eliminating the practice of traditional healers and Elders, a great deal of very valuable cultural knowledge has been lost or has been forced to be hidden 'underground'. Currently, such persecution of traditional healing and traditional teachings takes the form of overt and subtle discrimination, which has been cited in past decades as being the most serious challenge being experienced by Indigenous students in post-secondary institutions, where Indigenous forms of learning, teaching, and knowing are not accepted or respected (Kirkness & Barnhardt, 1991).

Current Issues

Discrimination

Academic practices are based almost exclusively on Western worldviews and pedagogies that differ substantially from Native ways of being and doing. Further, some researchers have suggested that employing a Western paradigm with Indigenous peoples is a form of continued colonial oppression and discrimination (Gone, 2004). Barnhardt (2002) explains that universities, through the maintenance of an "ivory tower" (p. 241) structure that is based on a hierarchy of knowledge and individuals, remain inhospitable to Indigenous or other non-Western forms of knowledge. Western knowledge is based on a hierarchy of rational or empirical truth with logical positivism held as the ultimate form of true knowledges and all other ways of knowing seen as

inferior or even invalid (Duran, 2006; Lamarche 1993).

Many Western educational practices, including those employed in postsecondary institutions, run almost anti-theoretical to Indigenous philosophies and conceptions of self (Battiste, 2002; McCormick, 1997). These differences create an atmosphere that fosters continued assimilation, in the forms similar to the historical colonial history, rather than healing (or democracy) in Native communities (Malatest & Associates, 2002; McCormick, 1997). For example, Barnhardt (2002) writes,

> Native students trying to survive in the university environment (an institution that is a virtual embodiment of modern consciousness) must acquire and accept new forms of consciousness, an orientation that not only displaces but often devalues the worldviews they bring with them. (p. 241)

Indigenous university students are thus forced to accept that their worldview is not acceptable in the academic environment in order to be a part of the institution of higher education. Doing well in school would then mean to leave behind Indigenous worldviews, such as ways of knowing and being, and defer to Western epistemologies.

Postsecondary institutions employ Western research and educational methods in order to define the level of cognitive functions of individuals and to reflect cognitive and educational performance (Thomason, 1999). Assessment tools and educational

testing strategies, such as Western-based teaching and research methods, are biased in favour of non-Native students because peoples from Indigenous groups differ from norms on measures of self-efficiency, career maturity, and self-directed search (Juntunen et al., 2001, Malone, 2000). The current discourse on such competing ways of knowing and the cognitive imperialism of Western education has been well articulated in the literature by researchers calling for a need to bring Indigenous knowledge into the academy (see Battiste, 2002; Kwagley 1995; Malatest & Associates, 2002).

Such articulations point to an implicit denial of Indigenous identity within postsecondary institutions, which reflect a discriminatory process of education. Very few educational or research-oriented or career counselling tests based on the emic (insider's) perspective exist, and there is often objection to this in the literature by researchers who suggest that within and between group differences with Indigenous peoples would make culturally-based educational testing inefficient, as each group might require a specific method of testing.

Specifically, there are several areas of bias in educational testing (such as cognitive or vocational assessments or classroom testing to measure course learning) of Indigenous students that have been identified in the literature. A test itself may not be designed to produce valid information when used with Natives, whose general conception of the self as a collective with

family, extended family, and the community as the whole runs in opposition of Western ideals of individualism (Battiste & Youngblood Henderson, 2000). Secondly, the very idea of testing goes against traditional Native philosophy, in which a method of classifying people on quantitative scales is contrary to basic values such as equality, co-cooperativeness, and collectivity (McCormick, 1997). An educator, or institution, may be biased or racist (whether consciously or unconsciously) and may not be knowledgeable or sensitive to cultural practices of Indigenous people (Malatest & Associates, 2002). Assessment and testing procedures that are designed to measure learning from a Western epistemology can also be biased and therefore discriminatory, because they emphasize factors that conflict with basic Indigenous values. For example, Indigenous students who take timed tests may be penalized because traditional Indigenous philosophy does not value the speed-task completion as a measure of competency. Martin and Farris (1994) identify speed of test completion as a cultural parameter that affects test performance.

Contemporary education theory and practice, including career assessments used in university counseling centres, have largely destroyed or distorted Indigenous knowledges and heritages (Battiste & Youngblood Henderson, 2000). Eurocentric public school systems practice cognitive imperialism through a perpetuation of romanticized myths about Indigenous knowledge, languages, beliefs, and

ways of life (Milloy, 1999). Public education systems in Canada, for example, continue a quest to confine Native students' thought to cognitive imperialism by: (a) denying Indigenous peoples access to and participation in the formulation of educational policy, including curriculum and assessment tools; (b) limiting education to a positivistic scientific worldview; and (c) denying the use and development of Indigenous knowledge in schools (Battiste & Youngblood, 2000; Minnick, 1990).

An important principal in an Indigenous worldviews of teaching and learning is empowerment. Methodologically, this concept has its roots in Paolo Friere's (2003) seminal work, *Pedagogy of the Oppressed.* Friere (1970/2003) states that the educator's efforts

> must be imbued with a profound trust in people and their creative power. To achieve this, they must be partners of the students in their relations with them…The teacher's thinking is authenticated only by the authenticity of the students' thinking. The teacher cannot think for her students, nor can she impose her thought on them. Authentic thinking, thinking that is concerned about reality, does not take place in ivory tower isolation, but only in communication. (p.61)

Thus, Indigenous postsecondary education is based on Friere's notion of liberating, and that teaching is a practice of freedom, not domination. In practice, an in-

structor from an Indigenous paradigm must take responsibility and leadership in pragmatic ways that reflect notions of respect, incorporation of community, voice, trust, mutuality, authentic communication, and shared interest in learning. Examples of this may include inviting local and visiting Elders, consultants, and healers to be part of classroom discussions and presentations. A post secondary pedagogy in Indigenous contexts must be rooted in a newly founded relationship of trust with the academy because generations of Indigenous peoples have a relationship based on trauma and basic human rights violations due to residential school experiences, as discussed earlier in this paper. Additionally, university research relationships with Indigenous communities have been historically wrought with ethical violations, which now must be corrected through Indigenous protocols to research, community based research initiatives, and the development and implementation Indigenous research methodologies (Smith, 1999). For career development, there is a similar connection, with discrimination and other moral and ethical violations beginning in education or career counseling, and working its way through all aspects of career life. For example, when Indigenous students seek support in dealing with discrimination and racism in the classroom, they are often blamed for being seen as hostile or defensive when in fact they are being scapegoated as the defender of Indigenous stereotypes and products of colonial agendas. From Stewart &

Reeves's (2009) research on Indigenous post secondary success, one participant who had five years of university experience discussed this issue:

> [The students] were just laughing [at me], you know. And I had to face that kind of [racism], but it was also invigorating me. And in my papers I wanted to voice what was missing, and finally something mattered— math and science never mattered before. (P.17)

This student described how racism motivated her to find her voice to speak against such oppression and work to eradicate systemic oppression through classroom experience.

Modeling and mentoring

Part of career development for some Indigenous peoples includes attaining a graduate degree, though little is known about the experiences of Indigenous peoples who complete post secondary education; instead, much of the current literature focuses on the academic failures of Indigenous students. In 2009, Stewart completed a study that examined the narratives of the successes of Indigenous graduate students at a large Canadian University in a large urban centre (see Stewart & Reeves 2009). The small qualitative study showed that mentoring within the university setting as well as in one's personal life was key to their success as students, and that this represented an overall part of their successful career development. One student in the study spoke about the guidance she re-

ceived from her friend, another Indigenous student in graduate school: "He really has supported me through it all, and, the first year of my- of my program last year, the graduate masters program was really hard. Like, if it weren't for [him], I probably would have quit!" (Stewart & Reeves 2009, P.14). Other students in the study talked about being guided and transformed by mentors within the university, including both Indigenous and non-Indigenous faculty, who they felt understood them, and were "on their side" as unconditional supporters of their cultural and social positions. One participant described a positive learning experience with one professor: "She really taught me [about Indigenous people], you know? We are who we are. End of sentence" (p.18). Another student participant stated that she was able to successfully complete her program of study after changing to a new supervisor with whom she felt accepted and understood as an Indigenous person: "I felt she [my first supervisor] was very rigid. […] I changed supervisors. […] That was the key for me. I think what's really important with my supervisor now and my committee now is that they're not forcing me to use an approach or language that I'm not comfortable with" (p.17).

Modeling has been documented in the literature on career development as key to success for peoples of all cultures. What makes modeling unique in the Indigenous context is that there is a special need for it because of the lack of suitable models that exist in the academy for Indigenous

students who come from Indigenous worldviews and positions. For many Indigenous students, key supports, including mothers, partners, friends and professors, assist them in remaining motivated to continue with their program of study when they otherwise feel isolated and unsure. In Stewart and Reeves's study (2009), almost all students interviewed felt they had benefited from mentorship of some kind, making their educational journey feel less challenging and alone.

Research findings have shown that many Indigenous youth feel that inspiration and support from their families and other support systems underpin their connection with their specific Indigenous culture and gives them the motivation to attend university and complete their programs of study (McCormick, 1997; Stewart & Reeves 2009; Stewart et al. 2011). For example, one student in the study by Stewart and Reeves (2009) remarked on role modeling in her life:

> You live it. And it's something that's passed down through sharing. It's passed down. […] Especially that basic value wheel of the kindness, honesty, sharing and faith of strength, you know? That was something that my mother instilled in me at a very young age. You know, she didn't say these are the core values— she, she didn't say you have to be kind to people, she didn't say you have to do this you have to do that. […] She weaved it within

everything she spoke to us with everything she did with us, you know, she weaved, weaved her mother work, you know into by just, what she did. (p.18)
This participant explained that modeling and mentoring was an integral value in her family and was passed down to her through her mother's actions, leaving a lasting impact on her. Values like these helped to sustain her motivation to complete her graduate studies and continue with career development.

Access to Work and Education

It is well documented in the literature that Indigenous peoples across Canada have limited access to both employment and educational opportunities. The figures presented in the opening section suggest that this situation is dire for on on-reserve populations. Additionally, recent research by Stewart et al. (2011) suggests that urban Indigenous youth also experience significant barriers to employment opportunities and educational supports. Stewart et al. (2011) completed a study that looked at the employment experiences of Indigenous youth in downtown Toronto. The purpose of the research was to understand the career development of Indigenous youth within urban areas. These youth reported that career supports and services often existed in their communities but were also difficult to access if you did not meet a certain criteria, such as being a student enrolled in full-time studies in a college or university, or being a receipt of some form of

social assistance. Results of the same study also revealed barriers associated with accessing and maintaining employment within Indigenous organizations, both on reserve and in urban areas. Participants spoke of the importance of having the status of a "community insider" in order to gain employment in this sector. Specifically, "community outsiders" felt that they faced barriers such as nepotism and the tendency for individuals to hire within circles of friends, and therefore as a community outsider it can be challenging to gain entry into certain types of work opportunities. The study also suggested that a possible barrier to accessing employment for some Indigenous youth is that non-Native people, who often have competitively high levels of post-secondary education, take many jobs within Indigenous organizations and related work placements, despite often lacking the cultural understandings and sensitivities to successfully complete the work.

Many youth also experience instances of discrimination and racism when working outside of the Indigenous sector, according to Stewart et al. (2011). For example, some youth reported that they would often hide their true ancestry in order to protect themselves from ill treatment and unfair disparaging remarks, and to gain a sense of emotional and physical safety in their place of work. Other youth in both universities and Western workplaces often felt they were treated unfairly (i.e., being singled out as the voice of all Indigenous people, working beyond their job de-

scription, working for unfair wages) due to their identity as an Indigenous person (Stewart & Reeves 2009, Stewart et al., 2011).

Accessing employment and education supports such as academic and vocational services is less challenging for those residing in urban areas (Stewart & Reeves 2009, Stewart et al. 2011). However, what does appear to be lacking are employment opportunities, vocational training and post secondary supports that are specifically geared toward the needs of Indigenous youth within the context of their current needs. Stewart & Reeves (2009) and Stewart et al.'s work (2011) indicate that while some employment opportunities and employment programmes specifically geared to Indigenous peoples are available, these opportunities remain unknown to many and are therefore inaccessible (especially if one is not a post-secondary student and lacks access to resources and information through school). Additionally, while career counselling and support for University students is available, it is often culturally inappropriate for Indigenous students whose career context and needs are different to those of non-Indigenous students.

Implications

What does Indigenous learning and career mean together today? Western epistemologies have posed questions regarding what Indigenous peoples know or how they think and learn (psychologies), but these inquires have often been steeped in biases, racism, and arrogance (Kenny et al., 2004). Is it challenging for contemporary Indigenous peoples to deconstruct Indigenous knowledge and learning because the dominant culture has created mysticism and romance around Indigenous knowledge and learning. A fact remains that in the literature, debates concerning competing knowledge claims could continue indefinitely. For future research, examining specific implementations of Indigenous ways of knowing could offer some insight into understanding what this means for career and education. This could occur through further qualitative examinations of young people's career development or through the evaluation of an Indigenous model of career counseling or community programming.

In Indigenous policy research, for example, the research is holistic and balanced, and the diverse positions on knowledge claims must all be considered in the context of ethical research practice (Erasmus & Ensign, 1998). Knowledge claims are scrutinized for how they can best represent an Indigenous worldview, Indigenous systems of knowledge, and balance in a holistic perspective on policy research. Thus it becomes critical to be aware that all sources of data derived from research in Indigenous communities are ethically questionable if their methodology does not include appropriate attention to an Indigenous cultural and social approach to contemporary research (Hudson & Taylor-Henley, 2001). Thus for career development and education, approaching these concepts and applications from a cultural and community based framework is necessary.

Colonization has interrupted many traditional ways of living and knowing for Natives throughout the world (Mussell et al., 1993), as discussed earlier in this paper. However, many Native groups today are presently undergoing a profound spiritual renaissance of traditional ecological value renewal and Indigenous ways of knowing—two concepts which are intimately intertwined (Wenzel, 1997). This paper, for example, reflects this return to traditional ways of knowing by its discussion of career development through Indigenous education in the context of an Indigenous paradigm.

Previously in this paper there was a discussion of Indigenous individual learning in terms of an intimate and oral method of communication. Indigenous within group communication and learning is a more complex process to discuss, particularly in the context of post secondary education, which occurs mainly in the Western world. Indigenous knowledge is not a linear concept that remains stable across all Native peoples; it is a diversity of knowledges that is comprised of many layers (Battiste & Youngblood Henderson, 2000). According to some Elders, those who are in possession of such knowledge cannot categorize it in Eurocentric thinking, partly due to the fact that the processes of categorizations are not part of Indigenous thinking (Kawagley, 1993). Further, Indigenous knowledge is very much a part of

a specific community (i.e., language-based), band, or even family, and cannot be separated from the bearer of such knowledge to be codified into a definition (Battiste & Youngblood Henderson, 2000). For example, those who possess such knowledge use it in everyday activity and existence and it becomes part of identity within a personal or cultural context, and this is tied closely to relationship with others. Kawagley (1993) identifies these personal cognitive maps as manifesting in humility, humor, observation, tolerance, experience, listening to natural and spiritual worlds, and social interaction. Therefore this contextual and personal facet of Indigenous knowledge is a sensitive area of inquiry, and there exists a caution that discussing it out of context may be intrusive or disrespectful to Indigenous cultures. The implication of these considerations for career development within higher education is that institutions must have a respect for other ways of understanding what career and learning might be, which may not fit within the Western paradigm of educational outcomes. For example, successful learning outcomes may be based not only on test scores for Indigenous students, but on how curriculum and relationships within the classroom has shifted and supported the personal healing journey of the student, and how this impacts the family and community of the student.

One possible way to respectfully understand Indigenous knowledge and ways of being and doing is by removing one's self from a cross-cultural or

multi-cultural lens and embracing a *different* way of thinking. Abandoning Indigenous education and career development from a Western paradigm would mean enveloping a worldview that comes from within Indigenous cultures, such as what is termed in cross-cultural psychology as an emic (insider's) approach. One such worldview is described by contemporary Indigenous researchers as "Indigenous Standpoint Pedagogy" (ISP), which is described as being the "inherently political, reformative, relational, and deeply personal approach that is located in the chaos of colonial and cultural interfaces" (Philips, Whatman, Hart, & Winslett, 2005, p. 7). ISP places education in the context of culture, values, relationship, and historical realities. ISP fundamentally identifies and embeds Indigenous community participation in the development and teaching of Indigenous perspectives, or standpoints, and is a multi-faceted process.

This sort of pedagogy is mainly concerned with Indigenous perspectives in education not as an alternative to Western approaches but as a legitimate form of education in and of itself. For example, the first author of this paper brings this perspective to her academic work by virtue of her identity as a First Nations [Yellowknife Dene] woman and her desire to work from an Indigenous perspective in all aspects of her teaching methods. What this means in practice is that she values multiple perspectives on learning and teaching in interaction with students and co-workers, such as linear and non-

linear thinking, differing time orientation, holistic approaches and dualism, and community-based and individual focused connection. Her philosophy and methods of teaching and working stem from her cultural position as well as her keen awareness of the impacts of colonialism and movement toward attempting to articulate and eliminate the negative impacts of colonialism in teaching and learning practices. The foundation of this pedagogical approach lies in relationship, as this is the basis of success for meaningful communication rooted in Indigenous knowledges. As described by Friere, "Yet only through communication can human life hold meaning" (1970/2003, p. 61).

When career development and post secondary education intersect within the context of relationships between students, faculty and counselors, family, and community members, a more effective and successful form of career development will begin to emerge for students, as there is no success in individualism or solitary endeavors within an Indigenous paradigm. In practice, this may mean toppling down the ivory tower, formerly home to only academic and Western experts, by, for example, inviting in community members, Elders, family, and children to be part of the teaching and learning process in the classroom for students within the context of their educational and career development. Further to this, recruiting and employing Indigenous career practitioners and Indigenous faculty who work from Indigenous worldviews is one of first strate-

gies that can be implemented to begin to positively influence career development for Indigenous students. This move to increase the capacity of Indigenous faculty and staff in universities would address the issues of discrimination, the need for modeling and mentoring, and improve access to services for Indigenous students.

Summary & Conclusion

This paper brought together issues of career development in the context of post secondary education for Indigenous students. A backdrop of colonial history and its impact on the current status of career and educational development of Indigenous peoples provided a contextual understanding of current issues of discrimination, modeling and mentoring, and access to education and career opportunities. These issues were explored though the dissemination of existing literature and through illustrations from two of the authors' current studies on the topic of career and educational development for Indigenous peoples. Discussion of implications provided future directions for research from the issues articulated and concrete solutions for addressing some of the issues identified in the literature and research data.

In conclusion, addressing the career development needs of Indigenous peoples in the context of post secondary education can be understood in terms of how the academy must change to accommodate the needs of the students, rather than how the students must change to meet the requirements of the university. Many university pedagogical methods and epistemological bases remain rooted in oppressive and colonizing practices that serve to further marginalize, rather than support, Indigenous peoples in successful career development. This can be addressed by respectfully looking to Indigenous peoples to guide them towards non-Eurocentric academic practices that include Indigenous paradigms.

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Creating Hope, Opportunity, and Results for Disadvantaged Youth: Part II

Carolyn Acker & Norman Rowen
Co-Founders, The Pathways to Education Program

Abstract

This paper recounts the development of the Pathways to Education Program from its origins in the Regent Park community of Toronto, Ontario, Canada. The Program was conceived in 2000 as a response to the seeming intractable and longstanding problem of high school dropouts in one of Canada's most economically disadvantaged and culturally diverse communities. In the first section, the authors recount the development of the Program. Section Two documents the Program's remarkable success in significantly reducing the dropout rate and increasing post-secondary participation through the provision of comprehensive, community-based supports. The final section offers lessons first about the Program itself and, second, about possible implications for other social innovations. The Program's success has led to its replication in other low-income communities across Canada.

As Pathways to Education (Pathways) enters its second decade, it seemed like an appropriate time to reflect on its origins, achievements and lessons. As one of two founding funders, the Counselling Foundation of Canada helped unleash a powerful social innovation which has the ability to change the lives of youth in our lowest income communities; youth whose life chances have historically been so severely limited. Over the course of the creation of the Pathways program along with implementation and replication, we have had precious little time to publish some of the key findings, both results and lessons. This is an important moment to do both as Pathways develops in new ways and takes new directions.

In Part I of the paper, we described the background and context for the development of the initial Pathways to Education Program in the Regent Park community of Toronto. The second part outlines the principal results and achievements of Pathways young people, providing data covering the past decade including both Regent Park as well as the second generation communities which have replicated the Program, as well as some qualitative data and the voices of Pathways students which convey some of what the numbers can't tell us. The final part will offer some lessons learned from Pathways' first decade focusing on lessons regarding the program itself (and relevant to other youth development initiatives), as well as offering some lessons from our experiences with Pathways as a social innovation which, hopefully, will be of value to those considering other innovations to address similarly complex challenges in other communities.

Section II. What Has Pathways Achieved?

In designing Pathways, we needed to address several challenges. One of these challenges was the need to determine the Program's effectiveness at the earliest possible point for at least three important reasons.

First, there was the need to be accountable to the community. Given the long history of initiatives in Regent Park, there was, even with the enormous good will and trust of the community, a need to be truthful about the actual, rather than potential, benefits of the program.

Second, there was – and remains – a strong need to demonstrate the program's effectiveness to funders and potential funders. In retrospect, the ability of the Program to document some very basic results in a relatively short time and to consistently report these results meant that funders could see directly the benefits of the program. Through the development of the program and the subsequent efforts to support its replication, the availability of results has consistently been a major factor in the willingness of funders, first private,

then public, to support the Program.

Finally, and related to the first reason, Pathways is a very difficult and complex program to execute well. If results were not positive, if the hoped for and planned for benefits were not being realized for a large number of young people, surely the considerable energies of so many people – staff and volunteers – could be put to better use.

The Program's ability to address the need to document results in a timely manner was aided considerably by relations with the local school board. As noted earlier, the relationship with Toronto District School Board (TDSB) research coordinator Robert Brown was crucial as he facilitated the initial data and analysis which showed that the young people from Regent Park had historically been struggling to complete high school in large numbers; specifically, that over half (56%) of students entering grade 9 failed to graduate after fully seven years. This baseline data was possible given the ability – and interest – on the part of Dr. Brown to track the progress of student cohorts and his personal commitment to this tracking has been an ongoing contribution to research far beyond the TDSB and Pathways.

Among the unique and timely features of working with such data as was available from the TDSB was the ability, new at the time, to address the challenge of analysis by community, rather than by school. Historically, graduation rates were available (and sometimes reported) for the several secondary schools. Par-

ents and prospective students had access to data about the proportion of graduates and post-secondary bound students from a given high school. Indeed, these data were used by prospective secondary schools to attract new students. However, until the data cited above, no analysis was available to answer the question of what are the destinations of students who come from a given community and attend a variety of secondary schools. No one had ever asked.

In addition, Brown's previous work established the importance of several intervening factors which are highly correlated with high school graduation. Taken from earlier cohort research (Brown 1999), there were data which consistently demonstrated that both attendance and credit accumulation were valid and reliable indicators which could be used as interim measures of success. The availability of such data would prove crucial to the Program's development by providing data on an annual basis which could be used to examine the efficacy of the intervention. Coupled with additional data, these results would both support program improvement as well as demonstrate accountability to funders and well as to the community.

As noted earlier, Pathways development included an explicit hypothesis; namely, that with the supports provided, the young people of Regent Park could succeed in similar proportions to students in the rest of the City. Several types of data have been secured and examined to explore this hypothesis including:

school attendance, school credit accumulation, dropout rates from school, graduation from school, and entrance to post-secondary education. In addition, a range of background and supplementary information on students has been consistently collected including the demographic backgrounds (e.g. home language and cultural groups), and a variety of school program factors (e.g. courses and course levels, special needs).

The relationship with the TDSB (and subsequently with school boards in each Pathways community) also provides for data to be regularly provided for several important analyses. First, and most important, comparable data is available for "historical" cohorts; that is, students from the same geographic community who began secondary school in the year (or two years) immediately prior to the initial Pathways cohort. This is crucial data in assessing the effectiveness of the Program since these students are comparable in the most meaningful ways with the Pathways' students: they are subject to the same curriculum and paedogogy (by virtue of attending the same schools), they come from the same cultural and language groups, and, most important, are subject to the same community factors. This process of comparison is the closest possible to a "pure" experimental design (where matched samples of students would be given/not given the supports). As noted earlier, the community's wisdom in designing the program included their clear view that to have an impact on the community all young people should be included,

as opposed to the design of many existing programs which either "creamed" or "targeted" a limited number of students. Given this "universal" character, the best design to determine effectiveness included the comparisons with those immediate historical cohorts.

As well, data has also been provided for the peers of Pathways students in the same major schools attended by those in the Program. This allows comparisons between Pathways students and those in the same schools who are not receiving the Program's supports. These comparisons were, in the initial years of the Program in Regent Park, reported for major schools. However, sensitivities on the part of some school and school board staff, both in Toronto and in other communities, has meant that the data is reported in aggregate, rather than for individual schools (which data is still available for internal program use).

Initially, data was also secured for comparison communities; that is, for students in neighbourhoods within the same school board which were judged to be comparable along key dimensions (e.g. income, language and cultural groups, level of student need) to again determine if Pathways students showed increased attainment compared to students from these comparison communi-

ties. However, many school boards outside of Toronto are under severe staffing pressures, with even several larger school boards in Ontario lacking a proper research function. Therefore, analyses of students from comparable communities has become increasingly difficult.

The data reported below clearly indicate that Pathways has indeed been effective. Based on the data provided by school boards, Pathways students in Regent Park (the original program) show statistically significant advantages over their pre-Pathways cohorts from the same community. While the results are less striking for some of the second generation sites, the data support the efficacy of the program when comparing Pathways to pre-Pathways cohorts. As well, graduation rates in Regent Park have increased significantly, while dropout rates have shown consid-

erable decline. And post-secondary enrolment has similarly increased markedly in a community where young people had historically attended in low numbers.

II. 1 Results to Date

Table 1 provides the data on enrolment in Pathways by young people in each community. It should be noted that, as per the development of the Program in Regent Park, a target rate of 75% was established and, in most communities, that proportion has been exceeded.

As can be seen from Table 1, enrolment in the Pathways programs in each of the "second generation" sites in Ontario (Lawrence Heights, Rexdale, Kitchener, and Ottawa) has increased with the introduction of each additional cohort. With the fourth cohort beginning in Sep-

Table 1

Enrolment by Community as of October 31, 2010

Name of Community	# of Students 2007/08	# of Students 2008/09	# of Students 2009/2010	Actual # Oct 31, 2010 Total (C1/C2/C3/C4)	# Eligible Oct 31, 2010 (C1/C2/C3/C4)	Enrol. Rate 10/11 {09/10} (08/09)
Generation 1						
Regent Park	850	852	861	918	987	93% {93%} (92%)
Generation 2						
Kitchener	100	265	387	517 (142/135/127/113)	566 (146/150/128/142)	91% {91%} (87%)
Lawrence Heights	66	173	312	388 (81/98/107/102)	420 (84/112/114/110)	92% {92%} (91%)
Ottawa	77	150	297	316 (68/72/95/81)	406 (90/100/115/101)	78% {84%} (79%)
Rexdale	72	165	280	395 (90/105/107/93)	459 (103/124/120/112)	86% {85%} (81%)
Generation 3						
Hamilton	n/a	n/a	80	140 (87/53)	234 (132/102)	60%
Scarborough	n/a	n/a	83	157 (87/70)	216 (110/106)	73%
Total	**1165**	**1605**	**2300**	**2831**	**3288**	**86% {90.1%} (88.4%)**

tember 2010, enrolment in these programs, as well as Regent Park, approaches three thousand students (2831) with the addition of "third generation" sites of Hamilton and Scarborough in Ontario. As well, the data suggest increasing levels of community support which is approaching 90% of geographically eligible youth overall. In addition, three "fourth generation" programs began in September 2010 in Halifax (Nova Scotia), Kingston (Ontario) and Winnipeg (Manitoba) providing a more pan-Canadian presence for the Program through eleven program sites in four provinces with plans for further expansion over the coming years. As of September 2011, it is expected that Pathways enrolments will total over 4,000 students.

I.1.1 2009/10 Student Achievement

The data summarized below provides a snapshot of the achievement of students participating in the four Ontario "second generation" Pathways to Education programs, two "third generation" programs, as well as the ongoing annual data for the original program Regent Park. In what follows we provide the intervening measures which have been used for over the decade of Pathways to examine the effectiveness of the Pathways program; namely, attendance and credit accumulation, both of which have been shown to be related secondary school graduation.[1] This is followed by data on graduation and dropout rates, as well as post-secondary enrol-

ment. The principal comparisons provided below are the achievements of Pathways' young people compared to their pre-Pathways cohorts in each community.[2]

Attendance.

The data provided compares students participating in the Pathways to Education program, with students from the same geo-

Table 2

Grade 9 Absenteeism by Community – Pre-Pathways and the 2007-2008, 2008-2009 and 2009-2010 School Years

Cohort	Mean Rate & SD	Less than 5%	Effect size (less than 5%)	15% or more	Effect size (15% or more)
REGENT PARK					
Regent Park Historical (N= 123)	10.76	52.8% (n=65)		24.4% (n=30)	
Regent Park Cohort 7 (N=185)	7.20 SD=9.57	61.7% (n=113)	.21	15.3% (n=28)	.34
Regent Park Cohort 8 (N=177)	5.74 SD=7.41	65.0% (n=115)	.31	9.0% (n=16)	.64
Regent Park Cohort 9 (N=206)	5.30 SD=7.07	68.4% (n=141)	.41	6.8% (n=14)	.80
LAWRENCE HEIGHTS					
Lawrence Heights Historical (N=91)	7.41 SD=10.62	61.5% (n=56)		14.3% (n=13)	
Lawrence Heights Pathways Cohort 1 (N=65)	6.30 SD=5.22	54.8% (n=34)	-.24	8.1% (n=5)	.36
Lawrence Heights Pathways Cohort 2 (N=98)	5.84 SD=5.84	62.2% (n=61)	.02	8.2% (n=8)	.33
Lawrence Heights Pathways Cohort 3 (N=102)	6.25 SD=7.27	57.8% (n=59)	-.10	8.8% (n=9)	.28
REXDALE					
Rexdale Historical (N=100)	6.46 SD=6.87	58.0% (n=58)		13.0% (n=13)	
Rexdale Pathways Cohort 1 (N=72)	5.34 SD=5.67	72.2% (n=52)	.39	8.3% (n=6)	.26
Rexdale Pathways Cohort 2 (N=73)	5.03 SD=6.28	72.6% (n=53)	.40	6.8% (n=5)	.36
Rexdale Pathways Cohort 3 (N=91)	4.28 SD=4.65	73.6% (n=67)	.43	5.5% (n=5)	.47
KITCHENER					
Kitchener Historical (N=106)	7.75 SD=7.34	43.4% (n=46)		13.2% (n=14)	
Kitchener Pathways Cohort 1 (N=103)	6.87 SD=8.06	57.6% (n=57)	.30	10.1% (n=10)	.18
Kitchener Pathways Cohort 2 (N=110)	6.63 SD=7.27	59.1% (n=65)	.40	14.5% (n=16)	-.06
Kitchener Pathways Cohort 3 (N=112)	6.13 SD=8.07	58.9% (n=66)	.39	6.3% (n=7)	.42
OTTAWA					
Ottawa Historical (N=90)	6.25 SD=8.17	57.8% (n=52)		10.0% (n=9)	
Ottawa Pathways Cohort 1 (N=72)	4.40 SD=5.14	74.6% (n=53)	.38	4.2% (n=3)	.47
Ottawa Pathways Cohort 2 (N=70)	7.53 SD=9.71	57.1% (n=40)	-.07	10.0% (n=7)	-.02
Ottawa Pathways Cohort 3 (N=93)	5.88 SD=6.58	62.4% (n=58)	.07	8.6% (n=8)	.10
HAMILTON					
Hamilton Historical (N=102)	9.85 SD=13.01	58.8% (n=60)		19.6% (n=20)	
Hamilton Pathways Cohort 1 (N=75)	3.60 SD=3.97	77.3% (n=58)	.53	4.0% (n=3)	.89
SCARBOROUGH					
Scarborough Historical (N=109)	8.98 SD=13.03	54.1% (n=59)		15.6% (n=17)	
Scarborough Pathways Cohort 1 (N=78)	5.07 SD=6.27	70.5% (n=55)	.43	11.5% (n=9)	.19

graphic catchment area immediately prior to the implementation of the Program. In general, the data demonstrate that the program has indeed produced important positive results, with newer sites consistent with results achieved by the Regent Park Pathways to Education Program. Tables 2 through 6 report the attendance of grade 9s and 10s across the several sites, as well as attendance by gender and program stream. The data show, for the most part, a continued decline in absenteeism in each community compared to the respective pre-Pathways cohorts. For example, a comparison of mean absenteeism demonstrates significant effect sizes overall and in each community, and means are below their pre-Pathways peers.3

As can be seen in Table 2, with the exception of Lawrence Heights, effect sizes for grade 9s with good attendance (less than five percent absenteeism) across the seven communities are moderate (.3 to .5); and these effect sizes are higher when comparing those with serious attendance problems (more than fifteen percent absenteeism), though less consistent (ranging from -.06 to .89). For grade 10s (Table 3), Pathways students show dramatic increases in attendance in some communities and, overall, similar effect sizes when comparing pre-Pathways and Pathways grade 10s with serious attendance problems

(ranging from .03 to .64). It may be useful to note that, overall, the proportion of Pathways young people with serious attendance problems is relatively consistent across communities and cohorts: between 5% and 10% of grade 9s, and between 8% and 15% for grade 10s; for both grades significantly lower than historical proportions in most communities. From Table 7 showing the aggregated proportions across the seven communities, the proportion of grade 9s with serious attendance problems (over 15%) has been more than halved from over 16% (for the pre-Pathways cohorts) to just over 7% for the most recent grade 9s. For the most recent grade 10s across the five communities with these students, the proportion of grade 10s

with similar challenges has declined from 23% to just 13%, and consistent across the two years of the second generation sites. The overall effect sizes for these differences are .47 and .30 (for grade 9 and 10 respectively).4

Gender differences in attendance (shown in Tables 4 and 5 for grades 9 and 10, respectively) are not consistent across communities; for example, among the proportions with very good attendance, three of the five communities show no appreciable difference by gender; conversely, among those with serious attendance problems, the perhaps unexpected results show that only for two communities does the proportion of males exceed that of female students.

Table 3

Grade 10 Absenteeism by Community – Pre-Pathways and the 2008-2009 and 2009-2010 School Years

Cohort	Mean Rate & SD	Less than 5%	Effect size (less than 5%)	15% or more	Effect size (15% or more)
REGENT PARK					
Regent Park Historical (N= 119)	18.64	37.0% (n=44)		35.3% (n=42)	
Regent Park Pathways Cohort 7(N=166)	7.70 SD= 8.77	49.1% (n=82)	.32	13.2% (n=22)	.74
Regent Park Pathways Cohort 8(N=193)	7.15 SD= 8.96	56.5% (n=109)	.50	15.5% (n=30)	.64
LAWRENCE HEIGHTS					
Lawrence Heights Historical (N=85)	7.49 SD=10.22	51.8% (n=44)		11.8% (n=10)	
Lawrence Heights Pathways Cohort 1 (N=72)	7.60 SD=9.65	41.7% (n=30)	-.25	11.1% (n=8)	.03
Lawrence Heights Pathways Cohort 2 (N=85)	7.12 SD=7.83	55.3% (n=47)	.09	12.9% (n=11)	.06
REXDALE					
Rexdale Historical (N=89)	8.11 SD=9.11	52.8% (n=47)		13.5% (n=12)	
Rexdale Pathways Cohort 1 (N=70)	6.95 SD=7.84	51.4% (n=36)	-.03	8.6% (n=6)	.26
Rexdale Pathways Cohort 2 (N=87)	4.81 SD =5.81	67.8% (n=59)	.39	8.0% (n=7)	.30
KITCHENER					
Kitchener Historical (N=98)	12.34 SD=13.61	28.6% (n=28)		28.6% (n=28)	
Kitchener Pathways Cohort 1 (N=104)	8.86 SD=9.84	48.1% (n=50)	.52	19.2% (n=20)	.30
Kitchener Pathways Cohort 2 (N=130)	9.39 SD=11.88	45.4% (n=59)	.45	16.2% (n=21)	.42
OTTAWA					
Ottawa Historical (N=85)	9.25 SD=9.24	37.6% (n=32)		21.2% (n=18)	
Ottawa Pathways Cohort 1 (N=63)	7.60 SD=7.61	42.9% (n=27)	.13	9.5% (n=6)	.51
Ottawa Pathways Cohort 2 (N=74)	7.21 SD=6.41	48.6% (n=36)	.28	9.5% (n=7)	.51

Table 4

Absenteeism by Gender for Grade 9 Pathways Students – by Community

Cohort	Less than 5%		5-9.9%		10-14.99%		15% or more	
	Males	Females	Males	Females	Males	Females	Males	Females
REGENT PARK								
Regent Park Cohort 8 (N=177)	60.9% (n=56)	69.4% (n=59)	18.5% (n=17)	16.5% (n=14)	7.6% (n=7)	9.4% (n=8)	4.7% (n=12)	13.0% (n=4)
Regent Park Cohort 9 (N=206)	66.4% (n=71)	70.7% (n=70)	15.9% (n=17)	15.2% (n=15)	8.4% (n=9)	10.1% (n=10)	9.3% (n=10)	4.0% (n=4)
LAWRENCE HEIGHTS								
Lawrence Heights Cohort 2 (N=98)	58.9% (n=33)	66.7% (n=28)	19.6% (n=11)	19.0% (n=8)	17.9% (n=10)	- (n=0)	3.6% (n=2)	14.3% (n=6)
Lawrence Heights Cohort 3 (N=102)	65.9% (n=29)	51.7% (n=30)	25.0% (n=11)	22.4% (n=13)	2.3% (n=1)	15.5% (n=9)	6.8% (n=3)	10.3% (n=6)
REXDALE								
Rexdale Cohort 2 (N=73)	72.2% (n=26)	73.0% (n=27)	8.3% (n=31)	13.5% (n=5)	13.9% (n=5)	5.4% (n=2)	5.6% (n=2)	8.1% (n=3)
Rexdale Cohort 3 (N=91)	68.3% (n=28)	78.0% (n=39)	22.0% (n=9)	8.0% (n=4)	4.9% (n=2)	8.0% (n=4)	4.9% (n=2)	6.0% (n=3)
KITCHENER								
Kitchener Cohort 2 (N=110)	51.5% (n=34)	70.5% (n=31)	21.2% (n=14)	13.6% (n=6)	9.1% (n=6)	6.8% (n=3)	18.2% (n=12)	9.1% (n=4)
Kitchener Cohort 3 (N=112)	52.8% (n=38)	64.4% (n=28)	20.3% (n=12)	18.9% (n=10)	10.2% (n=6)	20.8% (n=11)	5.1% (n=3)	7.5% (n=4)
OTTAWA								
Ottawa Cohort 2 (N=70)	45.7% (n=16)	68.6% (n=24)	25.7% (n=9)	17.1% (n=6)	17.1% (n=6)	5.7% (n=2)	11.4% (n=4)	8.6% (n=3)
Ottawa Cohort 3 (N=93)	67.4% (n=29)	58.0% (n=29)	25.6% (n=11)	18.0% (n=9)	2.3% (n=1)	12.0% (n=6)	4.7% (n=2)	12.0% (n=6)
HAMILTON								
Hamilton Cohort 1 (N=75)	78.8% (n=26)	76.2% (n=32)	12.2% (n=4)	19.0% (n=8)	6.1% (n=2)	- (n=0)	4.8% (n=2)	3.0% (n=1)
SCARBOROUGH								
Scarborough Cohort 1 (N=78)	69.2% (n=27)	71.8% (n=28)	15.4% (n=6)	10.3% (n=4)	5.1% (n=2)	5.1% (n=2)	10.3% (n=4)	12.8% (n=5)

Table 5

Absenteeism by Gender for Grade 10 Pathways Students – by Community

Cohort	Less than 5%		5-9.9%		10-14.99%		15% or more	
	Males	Females	Males	Females	Males	Females	Males	Females
REGENT PARK								
Regent Park Cohort 7 (N=166)	49.4% (n=41)	49.4% (n=41)	19.3% (n=16)	34.9% (n=29)	12.0% (n=10)	8.4% (n=7)	19.3% (n=16)	7.2% (n=6)
Regent Park Cohort 8 (N=193)	61.9% (n=60)	51.0% (n=49)	17.5% (n=17)	22.9% (n=22)	7.2% (n=7)	8.3% (n=8)	13.4% (n=13)	17.7% (n=17)
LAWRENCE HEIGHTS								
Lawrence Heights Cohort 1 (N=72)	32.6% (n=14)	55.2% (n=16)	41.9% (n=18)	44.8% (n=13)	7.0% (n=3)	- (n=0)	18.6% (n=8)	- (n=0)
Lawrence Heights Cohort 2 N=85	60.0% (n=27)	50.0% (n=20)	17.8% (n=8)	32.5% (n=13)	4.4% (n=2)	10.0% (n=4)	17.8% (n=8)	7.5% (n=3)
REXDALE								
Rexdale Cohort 1 (N=70)	54.8% (n=17)	48.7% (n=19)	22.6% (n=7)	30.8% (n=12)	9.7% (n=3)	15.4% (n=6)	12.9% (n=4)	5.1% (n=2)
Rexdale Cohort 2 (N=87)	64.4% (n=29)	71.4% (n=30)	26.7% (n=12)	11.9% (n=5)	2.2% (n=1)	7.1% (n=3)	6.7% (n=3)	9.5% (n=4)
KITCHENER								
Kitchener Cohort 1 (N=104)	51.1% (n=24)	45.6% (n=26)	14.9% (n=7)	26.3% (n=15)	8.5% (n=4)	14.0% (n=8)	25.5% (n=12)	14.0% (n=8)
Kitchener Cohort 2 (N=130)	39.7% (n=29)	52.6% (n=30)	28.8% (n=21)	29.8% (n=17)	11.0% (n=8)	7.0% (n=4)	20.5% (n=15)	10.5% (n=6)
OTTAWA								
Ottawa Cohort 1 (N=63)	35.3% (n=12)	51.7% (n=15)	41.2% (n=14)	31.0% (n=9)	14.7% (n=5)	6.9% (n=2)	8.8% (n=3)	10.3% (n=3)
Ottawa Cohort 2 (N=74)	45.9% (n=17)	51.4% (n=19)	32.4% (n=12)	24.3% (n=9)	8.1% (n=3)	18.9% (n=7)	13.5% (n=5)	5.4% (n=2)

Differences in attendance for the two major streams (i.e. those students taking primarily "academic" and "applied" courses) are shown in Tables 6a and 6b (for grades 9 and 10, re-

spectively) and are as expected, with academic level students far more likely to have very good attendance than those primarily taking courses at the applied level. Effect sizes for these differences range from .31 to .89. For grade 10 students, mean absenteeism is higher, in some communities considerably higher, for students in applied courses. Effect sizes for differences between the two streams of grade 10s (comparing the proportions with serious attendance problems, i.e. 15% or more absenteeism) are more varied (.12 to 1.38).5

The importance of attendance, however, is not of consequence in itself; but, rather, as an intervening variable en route to credit accumulation.

Credit Accumulation.

Tables 8 and 9 report the pattern of grade 9 and 10 credit accumulation, respectively. The proportions demonstrate, for the most part, important increases from the pre-Pathways cohorts in each community and compare favourably with the initial years of the Program in Regent Park. The proportion of grade 9 students with good credit attainment after Pathways range from 77% to 89% for the most recent cohorts across the seven Program sites and, when compared to pre-Pathways cohorts in each community, effect sizes range from .19 to .86. This pattern of improved achievement is also evident in the proportions most academically at risk; specifically, the proportions with five or fewer credits continue to decline in

Table 6a

Stream Differences in Absenteeism for Pathways Students only - Grade 9s

Program Site	Less than 5%	5-9.9%	10-14.9%	15% or more	Mean & SD	
Academic Stream						
Regent Park (N=122)	73.8% (n=90)	11.5% (n=14)	8.2% (n=10)	6.6% (n=8)	4.74 (6.28)	
Lawrence Heights (N=49)	75.5% (n=37)	16.3% (n=8)	4.1% (n=2)	4.1% (n=2)	4.12 (3.82)	
Rexdale (N=40)	80.0% (n=32)	15.0% (n=6)	2.5% (n=1)	2.5% (n=1)	3.70 (5.13)	
Kitchener (N=42)	73.8% (n=31)	11.9% (n=5)	4.8% (n=2)	9.5% (n=4)	4.81 (5.85)	
Ottawa (N=38)	76.3% (n=29)	15.8% (n=6)	2.6% (n=1)	5.3% (n=2)	5.84 (10.08)	
Applied Stream					Mean & SD	Effect size[1]
Regent Park (N=44)	38.6% (n=17)	34.1% (n=15)	9.1% (n=4)	18.2% (n=8)	8.81 (9.82)	.60
Lawrence Heights (N=38)	44.7% (n=17)	23.7% (n=9)	18.4% (n=7)	13.2% (n=5)	8.06 (6.97)	.62
Rexdale (N=28)	60.7% (n=17)	3.6% (n=1)	21.4% (n=6)	14.3% (n=4)	7.44 (7.50)	.89
Kitchener (N=44)	45.5% (n=20)	22.7% (n=10)	15.9% (n=7)	15.9% (n=7)	8.00 (7.81)	.31
Ottawa (N=21)	38.1% (n=8)	19.0% (n=4)	23.8% (n=5)	19.0% (n=4)	10.02 (10.07)	.74

Table 6b

Stream Differences in Absenteeism for Pathways Students only - Grade 10s

Program Site	Less than 5%	5-9.9%	10-14.9%	15% or more	Mean & SD	
Academic Stream						
Regent Park (N=110)	54.5% (n=60)	27.3% (n=30)	8.2% (n=9)	10.0% (n=11)	6.46 (7.51)	
Lawrence Heights (N=46)	50.0% (n=23)	45.7% (n=21)	4.3% (n=2)	0	4.68 (3.25)	
Rexdale (N=41)	65.9% (n=27)	19.5% (n=8)	7.3% (n=3)	7.3% (n=3)	5.94 (7.98)	
Kitchener (N=41)	56.1% (n=23)	14.6% (n=6)	12.2% (n=5)	17.1% (n=7)	7.19 (8.32)	
Ottawa (N=28)	53.6% (n=15)	32.1% (n=9)	3.6% (n=1)	10.7% (n=3)	6.97 (8.35)	
Applied Stream					Mean & SD	Effect size
Regent Park (N=41)	46.3% (n=19)	26.8% (n=11)	14.6% (n=6)	12.2% (n=5)	7.55 (6.88)	.12
Lawrence Heights (N=23)	26.1% (n=6)	43.5% (n=10)	4.3% (n=1)	26.1% (n=6)	9.57 (7.68)	1.38
Rexdale (N=18)	33.3% (n=6)	33.3% (n=6)	22.2% (n=4)	11.1% (n=2)	8.51 (8.16)	.23
Kitchener (N=44)	45.5% (n=20)	20.5% (n=9)	11.4% (n=5)	22.7% (n=10)	9.87 (9.59)	.20
Ottawa (N=25)	36.0% (n=9)	40.0% (n=10)	20.0% (n=5)	4.0% (n=1)	7.12 (4.68)	.51

[1] These effect sizes shown are for the differences in proportions of 15% or more absenteeism comparing academic to applied students within the same Pathways cohort.

each community (to between 7% and 13%, with one third generation program showing 20% for their first cohort). As well, the proportion of Regent Park's eighth cohort of grade 9s similarly at-risk is the lowest since Pathways began in 2001 and is nearly a 70% reduction in the proportion at risk compared to their historical cohort. The effect sizes for communities range from .11 to .92.6

Grade 10 results for the most recent cohorts continue to demonstrate similar positive effects with the proportions earning at least fifteen credits increasing significantly compared to their respective historical comparators; effect sizes ranging from .13 to .67. As would be expected, the proportions of most academically at-risk in grade 10 (ten or fewer total credits) show significant declines compared to their pre-

Pathways cohorts in all communities, now ranging between 8% and 17%. The effect sizes for these range from a negative -.19 to a strong 1.10, reflecting in part the significantly larger proportion historically deemed at risk by this measure in Regent Park.7

Grade 11 data across the five sites are reported in Table 10 and shows increases in the proportion with at least 22 credits compared to historical cohorts, with approximately sixty percent now achieving this level; and positive effect sizes (.23 to .47). Conversely, the proportion of grade 11 students most academically at-risk has been halved in three communities (Ottawa, Rexdale and Regent Park), reduced more marginally in the two others (Lawrence Heights and Kitchener), with effect sizes ranging from .19 to 1.03 when compared to historical cohorts in the respective communities.

While comprehensive grade 12 data across the sites requires another year, Table 11 reports on six grade 12 cohorts from the outset of the program in Regent Park. The most recent grade 12 cohort's results are consistent with previous Pathways cohorts and continues to show more than twice the historical cohort's proportion with all of their credits, as well as a continued reduction in the proportion most academically at risk and more than a full year behind; at just over 10%, the lowest since the Program began and only one quarter the proportion of students who were most seriously struggling academically prior to Pathways (effect size 1.16).8

Table 7

Aggregate Grade 9 & 10 Absenteeism Pre-Pathways & Pathways cohorts; 2009/10.

Categories	Less than 5%	15% or more
Pre-Pathways, all gr 9s (N=510)	54.3% (n=277)	15.5% (n=79)
All Pathways (07/08) (N=497)	62.2% (n=309)	10.5% (n=52)
Effect size	.20	.24
All Pathways (08/09) (N=528)	63.3% (n=334)	9.8% (n=52)
Effect size	.23	.27
Pre-Pathways, all gr 9s (N=721)	**54.9% (n=396)**	**16.1% (n=116)**
All Pathways (09/10) (N=757)	**66.6% (n=504)**	**7.3% (n=55)**
Effect size	**.30**	**.47**
Pre-Pathways, all gr 10s Cohort 1, (N=476)	41.0% (n=195)	23.1% (n=110)
All Pathways (08/09) (N=475)	47.4% (n=225)	13.1% (n=62)
Effect size	.16	.39
All Pathways (09/10) (N=569)	**54.5% (n=310)**	**13.4% (n=76)**
Effect size	**.34**	**.37**

Table 9

Grade 10 Credit Accumulation by Community – Pre-Pathways and Pathways Cohorts for the 2008-2009 and 2009-2010 School Years

Cohort	Mean # of credits & SD	15+ credits	Effect size (15+ credits)	12.5-14.5 credits	12 or fewer	10 or fewer	Effect size (10 or fewer)
REGENT PARK							
Regent Park Historical (N= 122)	not available	44.3% (n=54)		9.8% (n=12)	46.3% (n=56)	42.6% (n=52)	
Regent Park Cohort 1 (N=86)	not available	57.0% (n=49)	.32	18.6% (n=16)	24.5% (n=21)	15.1% (n=13)	.85
Regent Park Cohort 7 (N=183)	14.26 SD = 3.06	69.4% (n=127)	.65	14.8% (n=27)	15.8% (n=29)	11.5% (n=21)	1.02
Regent Park Cohort 8 (N=193)	14.56 SD = 2.96	69.9% (n=135)	.67	13.0% (n=25)	17.1% (n=33)	9.8% (n=19)	1.10
LAWRENCE HEIGHTS							
Lawrence Heights Historical (N=85)	13.52 SD = 3.72	51.8% (n=44)		20.0% (n=17)	28.2% (n=24)	15.3% (n=13)	
Lawrence Heights Pathways Cohort 1, (N=73)	14.04 SD = 3.41	68.5% (n=50)	.44	13.7% (n=10)	17.8% (n=13)	13.7% (n=10)	.07
Lawrence Heights Pathways Cohort 2, (N=85)	14.24 SD = 3.20	70.6% (n=60)	.50	7.1% (n=6)	22.4% (n=19)	16.5% (n=14)	-.05
REXDALE							
Rexdale Historical (N=89)	13.11 SD = 4.13	51.7% (n=46)		19.1% (n=17)	29.2% (n=26)	15.7% (n=14)	
Rexdale Pathways Cohort 1 (N=77)	14.48 SD = 3.39	67.5% (n=52)	.41	16.9% (n=13)	15.6% (n=12)	11.7% (n=9)	.19
Rexdale Pathways Cohort 2 (N=88)	14.52 SD = 3.01	69.3% (n=61)	.46	11.4% (n=10)	19.3% (n=17)	8.0% (n=7)	.40
KITCHENER							
Kitchener Historical (N=98)	13.84 SD = 3.01	55.1% (n=54)		18.4% (n=18)	26.5% (n=26)	13.3% (n=13)	
Kitchener Pathways Cohort 1 (N=111)	14.00 SD = 3.31	64.0% (n=71)	.23	15.3% (n=17)	20.7% (n=23)	12.6% (n=14)	.03
Kitchener Pathways Cohort 2 (N=130)	13.65 SD =3.84	60.0% (n=78)	.13	13.1% (n=17)	26.9% (n=35)	17.7% (n=23)	-.19
OTTAWA							
Ottawa Historical (N=85)	13.09 SD = 4.67	54.1% (n=46)		16.5% (n=14)	29.4% (n=25)	18.8% (n=16)	
Ottawa Pathways Cohort 1 (N=68)	14.30 SD = 2.49	60.3% (n=41)	.16	20.6% (n=14)	19.1% (n=13)	8.8% (n=6)	.47
Ottawa Pathways Cohort 2 (N=74)	14.72 SD = 2.81	73.0% (n=54)	.51	12.2% (n=9)	14.9% (n=11)	8.1% (n=6)	.51

Table 12 includes data for each of the nine Regent Park cohorts and each year of their participation. Among the noticeable results is the continued decline in the proportions of students at risk first, as each cohort progresses in secondary school and, second, across succeeding cohorts as the program has progressed. For example, the most recent cohort in each grade appears to have approximately ten percent of students who are most at-risk academically; and there is an overall pattern of progressively smaller proportions being at-risk academically in each grade. As noted in reporting to the Ontario Ministry of Training, Colleges and Universities (March 2011): "The results, as compared to the pre-Pathways cohort, are impressive. At the Regent Park site, year after year, the Pathways cohorts substantially outperform the pre-Pathways cohort in credit accumulation for each grade."

As with school attendance, analyses of the data have included gender (Tables 13a and 13b for grades 9 and 10, respectively) and stream (Tables 14a and 14b) as potentially demonstrating some important differences. Among grade 9 students, the proportions most at-risk (i.e. with five or fewer credits) are disproportionately male, though these differences are smaller than for pre-Pathways cohorts. In the most current data, there are fewer difference and at four sites, though some substantial differences at three others. As the relatively weaker achievement of boys compared to girls has become an increasing concern in educational circles, it is impor-

Table 8

Grade 9 Credit Accumulation by Community – Pre-Pathways and the 2007-2008, 2008-2009 and 2009-2010 School Years

Cohort	Mean # of credits & SD	7+ credits	Effect size (7+ credits)	6 or fewer	5 or fewer	Effect size (5 or fewer)
REGENT PARK						
Regent Park Historical (N= 119)	5.80 SD=2.70	58.0% (n=69)		42.0% (n=50)	38.6% (n=46)	
Regent Park Pathways Cohort 1 (N=107)	N/A	71.0% (n=76)	.59	29.0% (n=31)	18.7% (n=20)	.60
Regent Park Pathways Cohort 7 (N=185)	7.07 SD = 2.15	78.8% (n=145)	.82	21.1% (n=39)	15.2% (n=28)	.74
Regent Park Pathways Cohort 8 (N=178)	7.41 SD = 1.64	83.7% (n=149)	1.01	16.3% (n=29)	11.2% (n=20)	.93
Regent Park Pathways Cohort 9 (N=206)	7.38 SD = 1.74	85.0% (n=175)	.83	15.0% (n=31)	11.7% (n=24)	.90
LAWRENCE HEIGHTS						
Lawrence Heights Historical (N=91)	6.41 SD = 2.22	61.5% (n=56)		38.5% (n=35)	28.6% (n=26)	
Lawrence Heights Pathways Cohort 1 (N=65)	6.95 SD = 1.84	81.5% (n=53)	.60	18.5% (n=12)	13.8% (n=9)	.52
Lawrence Heights Pathways Cohort 2 (N=104)	6.80 SD = 1.81	67.3% (n=70)	.16	32.7% (n=34)	20.2% (n=21)	.27
Lawrence Heights Pathways Cohort 3 (N=102)	7.10 SD = 1.81	77.5% (n=79)	.46	22.5% (n=23)	12.7% (n=13)	.57
REXDALE						
Rexdale Historical (N=100)	6.34 SD = 2.40	65.0% (n=65)		35.0% (n=35)	28.0% (n=28)	
Rexdale Pathways Cohort 1(N=72)	6.98 SD = 2.16	79.2% (n=57)	.43	20.8% (n=15)	18.1% (n=13)	.33
Rexdale Pathways Cohort 2 (N=85)	7.26 SD = 1.59	81.2% (n=69)	.50	18.8% (n=16)	8.2% (n=7)	.81
Rexdale Pathways Cohort 3 (N=90)	7.63 SD = 1.08	88.9% (n=80)	.86	11.1% (n=10)	6.7% (n=6)	.92
KITCHENER						
Kitchener Historical (N=106)	6.87 SD = 1.85	70.5% (n=74)		29.2% (n=31)	20.0% (n=21)	
Kitchener Pathways Cohort 1 (N=103)	4.91 SD = 3.57	78.6% (n=81)	.28	21.4% (n=22)	15.5% (n=16)	.17
Kitchener Pathways Cohort 2 (N=112)	7.39 SD = 1.57	81.3% (n=91)	.37	18.8% (n=21)	12.5% (n=14)	.30
Kitchener Pathways Cohort 3 (N=112)	7.24 SD = 1.86	82.1% (n=92)	.41	17.9% (n=20)	14.3% (n=16)	.22
OTTAWA						
Ottawa Historical (N=90)	6.40 SD = 2.64	64.4% (n=58)		35.6% (n=32)	31.1% (n=28)	
Ottawa Pathways Cohort 1(N=72)	7.08 SD = 1.64	75.0% (n=54)	.24	25.0% (n=18)	13.9% (n=10)	.62
Ottawa Pathways Cohort 2 (N=70)	7.40 SD = 1.40	87.1% (n=61)	.70	12.9% (n=9)	10.0% (n=7)	.82
Ottawa Pathways Cohort 3(N=93)	7.39 SD = 1.74	82.8% (n=77)	.52	17.2% (n=16)	8.6% (n=8)	.90
HAMILTON						
Hamilton Historical (N=103)	6.64 SD = 2.50	72.8% (n=75)		27.2% (n=28)	23.3% (n=24)	
Hamilton Pathways Cohort 1(N=75)	6.87 SD=2.20	78.7% (n=59)	.19	21.3% (n=16)	20.0% (n=15)	.11
SCARBOROUGH						
Scarborough Historical (N=109)	6.72 SD=2.62	78.1% (n=83)		23.9% (n=26)	20.2% (n=22)	
Scarborough Pathways Cohort 1(N=78)	7.62 SD = 1.65	85.9% (n=67)	.36	14.1% (n=11)	7.7% (n=6)	.59

tant to note that, while Pathways female grade 9's continue to be less likely to be academically at-risk than males, there has been a significant reduction in the proportion of young men struggling when Pathways' grade 9s are compared to the pre-Pathways proportions of males deemed most at-risk; for example, in Ot-

tawa and Rexdale, the proportion of boys with five or fewer credits has been reduced by nearly three quarters compared to pre-Pathways grade 9 boys in these communities.

Among grade 10 students, the results are similarly varied, with these same communities showing significant reductions in

the proportions of males at risk compared to their historical peers. Given the relatively small numbers overall, it is difficult to conclude about the program's effects, save for the fact that the Regent Park data has, over time, suggested that Pathways can indeed reduce the proportion of males deemed at risk in all grades. Pathways grade 10s showed an overall increase in the proportion of males with at least 15 credits: from just over 50% of those before the program to nearly two-thirds of Pathways grade 10s. As well, the proportion of those most at risk (having 10 or fewer credits after grade 10) has also been halved.

From Table 15, whether five or six credits is used as the criterion for defining academic risk, the program continues to demonstrate the effectiveness in all seven communities that we observed for earlier Regent Park cohorts. Taken together, the results suggest that the proportion of grade 9 students in the seven communities with five or fewer credits is half what it is was for pre-Pathways students (11.6% vs. 23.0%); while the decrease in proportions with six or fewer credits across the seven communities are similarly dramatic (14.7% vs. 32.8%). Effect sizes for differences using five credits was .45, for six credits .61. Whether aggregated or disaggregated, the results are a clear indication of the effectiveness of Pathways in each of these Ontario communities. As well, the results suggest that the proportion of grade 10 students in the five communities with ten or fewer credits is nearly half what

Table 10

Grade 11 Credit Accumulation by Community – Pre-Pathways and Pathways Cohorts for the 2008-2009 and 2009-2010 School Years

Cohort	Mean # of Credits & SD	22.5+ credits	Effect size (22.5+)	20.5-22.0 credits	15 or fewer	Effect sizes (15 or fewer)
REGENT PARK						
Regent Park Historical (N=122)	Not available	35.2% (n=43)		8.2% (n=10)	43.4% (n=53)	
Regent Park Pathways Cohort 1(N=89)	Not available	52.8% (n=47)	.45	14.6% (n=13)	15.7% (n=14)	.84
Regent Park Pathways Cohort 6(N=161)	Not available	54.0% (n=87)	.48	15.5% (n=25)	15.5% (n=25)	.85
Regent Park Pathways Cohort 7(N=189)	21.44 SD=5.00	59.8% (n=113)	.39	16.9% (n=32)	11.1% (n=21)	1.03
LAWRENCE HEIGHTS						
Lawrence Heights Historical (N=85)	19.80 SD = 5.50	42.9% (n=36)		10.7% (n=9)	15.5% (n=13)	
Lawrence Heights Pathways Cohort 1 (N=76)	21.28 SD = 4.87	56.6% (n=43)	.36	18.4% (n=14)	10.5% (n=8)	.23
REXDALE						
Rexdale Historical (N=88)	18.97 SD = 6.43	42.0% (n=37)		15.9% (n=14)	21.6% (n=19)	
Rexdale Pathways Cohort 1 (N=81)	21.94 SD =4.02	60.5% (n=49)	.47	17.3% (n=14)	8.6% (n=7)	.58
KITCHENER						
Kitchener Historical (N=96)	13.84 SD = 3.01	35.4% (n=34)		13.5% (n=13)	22.9% (n=22)	
Kitchener Pathways Cohort 1 (N=131)	20.60 SD =5.24	46.6% (n=61)	.29	17.6% (n=23)	17.6% (n=23)	.19
OTTAWA						
Ottawa Historical (N=77)	20.42 SD = 6.47	51.9% (n=40)		14.3% (n=11)	14.3% (n=11)	
Ottawa Pathways Cohort 1 (N=68)	22.26 SD = 4.13	63.2% (n=43)	.23	17.6% (n=12)	7.4% (n=5)	.90

Table 11

Grade 12 Credit Accumulation for Regent Park Pathways Students Cohorts 1-6

	Pathways Cohort 6	Pathways Cohort 5	Pathways Cohort 4	Pathways Cohort 3	Pathways Cohort 2	Pathways Cohort 1	Pre-Pathways Regent Park
Grade 12	**N=169**	**N=149**	**N=176**	**N=201**	**N=202**	**N=82**	**N=122**
30+ credits	51.5% (n=87)	50.3% (n=75)	56.2% (n=99)	54.7% (n=110)	52.5% (n=106)	45.1% (n=37)	23.8% (n=29)
Effect size	.75	.72	.87	.83	.78	.59	
21.5 or fewer	10.7% (n=18)	19.5% (n=29)	12.5% (n=22)	16.4% (n=33)	13.4% (n=27)	17.1% (n=14)	46.7% (n=57)
Effect Size	1.16	.78	1.07	.90	1.03	.87	
Grade 12+		**N=82**	**N=95**	**N=74**	**N=18**	**N=3**	**Not available**
30+ credits		61.0% (n=50)	69.5% (n=66)	68.9% (n=51)	38.9% (n=7)	66.7% (n=2)	
21.5 or fewer		14.6% (n=12)	7.4% (n=7)	9.5% (n=7)			

it was for pre-Pathways students (12.1% vs. 22.5%). As well, if comparing grade 10 students earning twelve or fewer credits, the differences are nearly as dramatic (17.6% vs. 32.8%). Effect sizes for the differences at ten credits was .42; for twelve credits .39.

Table 14a shows credit accumulation for grade 9s in the several communities for the two major streams.9 As might be expected, academic level students are far more likely to have earned at least seven credits than those primarily taking their major courses at the applied level. Indeed, over 90% in three communities and nearly 90% in a fourth, were successful is earning 7 or more credits. Conversely, those

doing applied level courses are considerably more likely to have earned five or fewer credits compared with their academic level peers with more than twice the proportion of applied as academic level students being so academically at-risk. Effect sizes for these differences in the proportions most at-risk range from .59 to 1.05, with three of five communities showing strong effect sizes (over .90).

Table 14b reports credit accumulation for Pathways grade 10s showing each community and the proportions in each credit category for students in academic compared to those in applied courses. As would be expected, mean credit accumulation is higher for those in academic courses. By grade 10, these differences range from a 1.2 credit difference to more than 2.5 credits. It is clear that a very high proportion of academic level students – and consistent across the five communities – have earned at least 15 credits by the end of grade 10; ranging from 76% to 85%. There is similar consistency across the communities for applied level students, though at a much lower proportion; between 45% and 53% earned at least 15 credits. Alternatively, the proportions most academically at risk show a much wider disparity by stream: very few academic level students are struggling by this measure. Effect sizes for the differences in proportions who are most academically at-risk (i.e. ten or fewer credits) for those by stream range from .39 to 1.5, suggesting that the effects of stream on credit accumulation is more variable

Table 12

Credit Accumulation; Pathways and Pre-Pathways from 2001/02 to 2009/10 by Grade and Cohort.

	Pathways Cohort 9	Pathways Cohort 8	Pathways Cohort 7	Pathways Cohort 6	Pathways Cohort 5	Pathways Cohort 4	Pathways Cohort 3	Pathways Cohort 2	Pathways Cohort 1	Pre-Pathways Regent Park
Grade 9	**N=206**	**N=178**	**N=185**	**N=160**	**N=144**	**N=164**	**N=160**	**N=138**	**N=107**	**N=119**
7 + credits	85.0% (n=175)	83.7% (n=149)	78.8% (n=145)	66.9% (n=107)	75.7% (n=109)	75.6% (n=124)	73.1% (n=117)	69.6% (n=96)	71.0% (n=76)	58.0% (n=69)
5 or fewer	11.7% (n=24)	11.2% (n=20)	15.2% (n=28)	21.9% (n=35)	15.3% (n=22)	14.0% (n=23)	16.4% (n=27)	18.8% (n=26)	18.7% (n=20)	38.6% (n=46)
E.S.	.90	.93	.74	.49	.74	.79	.67	.60	.60	-
Grade 10		**N=193**	**N=183**	**N=171**	**N=143**	**N=177**	**N=174**	**N=141**	**N=86**	**N=122**
15+ credits		69.9% (n=135)	69.4% (n=127)	58.5% (n=100)	51.7% (n=74)	60.5% (n=107)	56.9% (n=99)	56.0% (n=79)	57.0% (n=49)	44.3% (n=54)
10 or fewer		9.8% (n=19)	11.5% (n=21)	18.7% (n=32)	23.1% (n=33)	15.8% (n=28)	18.4% (n=32)	18.4% (n=26)	15.1% (n=13)	42.6% (n=52)
E.S.		1.10	1.01	.70	.55	.82	.71	.71	.85	-
Grade 11			**N=189**	**N=183**	**N=161**	**N=153**	**N=191**	**N=175**	**N=143**	**N=89**	**N=122**
22.5+ credits			59.8% (n=113)	54.0% (n=87)	48.0% (n=73)	51.3% (n=98)	59.4% (n=104)	52.4% (n=75)	52.8% (n=47)	35.2% (n=43)
15 or fewer			11.1% (n=21)	15.5% (n=25)	21.1% (n=32)	17.3% (n=33)	11.4% (n=20)	13.3% (n=19)	15.7% (n=14)	43.4% (n=53)
E.S.			1.03	.85	.64	.78	1.04	.95	.84	-
Grade 12				**N=169**	**N=149**	**N=176**	**N=201**	**N=202**	**N=82**	**N=122**
30+ credits				51.5% (n=87)	50.3% (n=75)	56.2% (n=99)	54.7% (n=110)	52.5% (n=106)	45.1% (n=37)	23.8% (n=29)
21.5 or fewer				10.7% (n=18)	19.5% (n=29)	12.5% (n=22)	16.4% (n=33)	13.4% (n=27)	17.1% (n=14)	46.7% (n=57)
E.S.				1.16	.78	1.07	.90	1.03	.87	-

among communities for grade 10 students than for grade 9 students.

II. 1. 2 Regent Park Comparison Data

As noted, Table 12 presents data for nine cohorts and each year from 2001/02 through 2009/10. The data highlights the proportions of young people in each grade and cohort who are accumulating an appropriate number of credits, as well as those understood to be most at-risk of not graduating secondary school.

As the data shows, the proportions at-risk at each grade level and for each cohort are considerably below the historical cohort, indicating the consistent achievement of Pathways youth in Regent Park. While there are clearly variations among the cohorts in different grades, it is noteworthy that the dramatic decline in the proportion of such struggling students in each grade; in grade 9, for example, 2008/09 is the lowest of the eight cohorts to date, as is the proportion struggling in grade 10.

As these data also show, the proportion of Pathways students at risk in each grade and cohort appears consistently in the 15%-20% range; and these proportions are consistently less than half the proportions of Regent Park youth prior to Pathways – proportions that ranged from nearly 40% to nearly 50% by grade 12, students whose likelihood of academic success was extremely poor. For all cohorts and across all years, the effect sizes for differences between the Pathways' cohorts and the pre-Pathways cohorts are moderate to large, ranging from .49 (cohort 6 in grade 9) to 1.16 (cohort 6 in grade 12), with the majority between .7 and .9 demonstrating substantial effects and consistency in the Program.

The reduction in proportions of "at-risk" students for each cohort and each year of the Pathways in Regent Park are also in line with overall proportions in Toronto. For example, data for 17,000 grade 10 TDSB students show that 23.5% were similarly at risk in 2006/07; a proportion greater than that of Regent Park Pathways students over several cohorts.10

In addition, Table 16 provides the distribution of students with special learning needs as identified through the IPRC process, as well as the proportion of students taking GLE/GLS courses. The proportions of students with IPRC designations varies considerably, both within and among the communities, ranging from 2% to nearly 30%. The overall rate of 17% across the five communities clearly obscures such important differences. Similarly, the proportion of students taking GLE or GLS courses (which are an indication of the support being provided for students who might otherwise be struggling) also varies greatly from 6% to nearly 25%. As with IPRC distributions, the overall 12.5% taken by itself distorts such wide variations.

It is difficult to conclude on the causes of such variations. Some may be attributable to actual differences in the needs of students in each cohort and across communities. Alterna-

Table 13a

Grade 9 Credit Accumulation by Gender – Pre-Pathways and Pathways Cohorts for the 2007-2008, 2008-2009 and 2009-2010 School Years

Cohort	7+ credits		5.5-6.5 credits		5 or fewer credits	
	Males	Females	Males	Females	Males	Females
REGENT PARK						
Regent Park Historical (N=119)	56.7% (n=34)	59.3% (n=35)	1.7% (n=1)	5.1% (n=3)	41.7% (n=25)	35.6% (n=21)
Regent Park Pathways Cohort 7 (N=185)	77.8% (n=77)	80.0% (n=68)	5.1% (n=5)	7.1% (n=6)	17.2% (n=17)	12.9% (n=11)
Regent Park Pathways Cohort 8 (N=178)	79.6% (n=74)	88.2% (n=75)	6.5% (n=6)	3.5% (n=3)	14.0% (n=13)	8.2% (n=7)
Regent Park Pathways Cohort 9 (N=206)	82.2% (n=88)	87.9% (n=87)	4.7% (n=5)	2.0% (n=2)	13.1% (n=14)	10.1% (n=10)
LAWRENCE HEIGHTS						
Lawrence Heights Historical (N=91)	57.4% (n=31)	67.6% (n=25)	13.0% (n=7)	5.4% (n=2)	29.6% (n=16)	27.0% (n=10)
Lawrence Heights Pathways Cohort 1 (N=65)	72.5% (n=29)	96.0% (n=24)	5.0% (n=2)	4.0% (n=1)	22.5% (n=9)	– (n=0)
Lawrence Heights Pathways Cohort 2 (N=104)	63.8% (n=37)	71.1% (n=33)	15.5% (n=9)	8.7% (n=4)	20.7% (n=12)	19.6% (n=9)
Lawrence Heights Pathways Cohort 3 (N=102)	75.0% (n=33)	79.3% (n=46)	9.1% (n=4)	10.3% (n=6)	15.9% (n=7)	10.3% (n=6)
REXDALE						
Rexdale Historical (N=100)	48.9% (n=22)	78.2% (n=43)	11.1% (n=5)	3.6% (n=2)	40.0% (n=18)	18.2% (n=10)
Rexdale Pathways Cohort 1 (N=72)	65.6% (n=21)	90.0% (n=36)	3.1% (n=1)	2.5% (n=1)	31.2% (n=10)	7.5% (n=3)
Rexdale Pathways Cohort 2 (N=85)	72.7% (n=32)	90.2% (n=37)	15.9% (n=7)	4.9% (n=2)	11.4% (n=5)	4.9% (n=2)
Rexdale Pathways Cohort 3 (N=85)	82.5% (n=33)	94.0% (n=47)	5.0% (n=2)	4.0% (n=2)	12.5% (n=5)	2.0% (n=1)
KITCHENER						
Kitchener Historical (N=106)	70.2% (n=40)	70.8% (n=34)	8.8% (n=5)	10.4% (n=5)	21.1% (n=12)	18.8% (n=9)
Kitchener Pathways Cohort 1 (N=103)	76.0% (n=38)	81.1% (n=43)	4.0% (n=2)	7.5% (n=4)	20.0% (n=10)	11.3% (n=6)
Kitchener Pathways Cohort 2 (N=112)	76.5% (n=52)	88.6% (n=39)	7.4% (n=5)	4.5% (n=2)	16.2% (n=11)	6.8% (n=3)
Kitchener Pathways Cohort 3 (N=112)	83.0% (n=44)	81.4% (n=48)	5.1% (n=3)	1.9% (n=1)	13.6% (n=8)	15.1% (n=8)
OTTAWA						
Ottawa Historical (N=87)	56.1% (n=23)	72.1% (n=31)	7.3% (n=3)	2.3% (n=1)	36.6% (n=15)	25.6% (n=11)
Ottawa Pathways Cohort 1 (N=72)	71.4% (n=25)	78.4% (n=29)	11.4% (n=4)	10.8% (n=4)	17.1% (n=6)	10.8% (n=4)
Ottawa Pathways Cohort 2 (N=70)	77.8% (n=28)	97.1% (n=33)	5.6% (n=2)	– (n=0)	16.7% (n=6)	2.9% (n=1)
Ottawa Pathways Cohort 3 (N=93)	83.7% (n=36)	82.0% (n=41)	7.0% (n=3)	10.0% (n=5)	9.3% (n=4)	8.0% (n=4)
HAMILTON						
Hamilton Historical (N=103)	71.2% (n=37)	74.5% (n=38)	5.8% (n=3)	2.0% (n=1)	23.1% (n=12)	23.5% (n=12)
Hamilton Pathways Cohort 1 (N=75)	81.8% (n=27)	76.2% (n=32)	3.0% (n=1)	– (n=0)	15.2% (n=5)	23.8% (n=10)
SCARBOROUGH						
Scarborough Historical (N=109)	77.2% (n=44)	75.0% (n=39)	3.5% (n=2)	3.8% (n=2)	19.3% (n=11)	21.2% (n=11)
Scarborough Pathways Cohort 1 (N=78)	82.1% (n=32)	89.7% (n=35)	7.7% (n=3)	5.1% (n=2)	10.3% (n=4)	5.1% (n=2)

tively, there are likely inconsistencies in the IPRC processes; certainly this may be true across different school boards. Finally, some of the difference may be attributable to the relative effectiveness of the Program's advocacy; that is, some SPSWs are more experienced and therefore more successful in advocating for those of their students who require school-based supports to help address their challenges. In the absence of more

data, it is difficult to suggest either that the data indicates a serious problem or that the Program might have a means to address it. The ranges reported, however, are a matter of concern.

Graduation and Dropout Rates

As shown in Table 17, the four year graduation rates for the first seven Regent Park cohorts vary somewhat: a higher proportion of Cohort 3 graduated after four years (51% and approaching the City average), compared to other cohorts. A few years of declining four year graduation rates (only 36.4% of Cohort 5) were followed by increases in more recent cohorts, to over 45% by Cohort 7. Similarly, there has also been a modest decline in five year graduation rates with the total for the most recent (Cohort 6) at only 64.4%, a decline of nearly eight percent from Cohort 2's high of more than 72%. And Cohorts 4 and 5 showed marginal declines in the six (or more year rate) year rates.

Overall, the graduation rates for Pathways seven Regent Park cohorts to date show significant improvements compared to their pre-Pathways peers. As shown in Table 18, the four year rate (43.5%) is a sixty percent increase from the rate (26.7%) of the two historical cohorts. Similarly, the five-year rate for six Pathways cohorts (68.7%) is a similar increase from the historical proportion (43.3%, similar to the Pathways four year rate. Effect sizes for these differences are .46 and .66 for 4 and 5 year rates, respectively).

Table 13b

Grade 10 Credit Accumulation by Gender – Pre-Pathways and Pathways Cohorts for the 2008-2009 and 2009-2010 School Years

Cohort	15+ credits		10.5-14.5 credits		10 or fewer	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
REGENT PARK						
Regent Park Historical (N=122)	39.3% (n=24)	49.2% (n=30)	11.5% (n=7)	11.5% (n=7)	49.2% (n=30)	39.3% (n=24)
Regent Park Cohort 7 (N=183)	64.9% (n=61)	74.2% (n=65)	21.3% (n=20)	16.9% (n=15)	13.8% (n=13)	9.0% (n=8)
Regent Park Cohort 8 (N=193)	67.0% (n=65)	72.9% (n=70)	21.6% (n=21)	18.8% (n=18)	11.3% (n=11)	8.3% (n=8)
LAWRENCE HEIGHTS						
Lawrence Heights Historical (N=85)	46.0% (n=23)	60.0% (n=21)	38.0% (n=19)	25.7% (n=9)	16.0% (n=8)	14.3% (n=5)
Lawrence Heights Pathways Cohort 1, (N=73)	61.4% (n=27)	79.3% (n=23)	15.9% (n=7)	20.7% (n=6)	22.7% (n=10)	(n=0)
Lawrence Heights Pathways Cohort 2, (N=85)	66.7% (n=30)	75.0% (n=30)	13.3% (n=6)	12.5% (n=5)	20.0% (n=9)	12.5% (n=5)
REXDALE						
Rexdale Historical (N=89)	35.1% (n=13)	63.5% (n=33)	37.8% (n=14)	28.8% (n=15)	27.0% (n=10)	7.7% (n=4)
Rexdale Pathways Cohort 1, (N=77)	60.0% (n=21)	73.8% (n=31)	20.0% (n=7)	21.4% (n=9)	20.0% (n=7)	4.8% (n=2)
Rexdale Pathways Cohort 2 (N=88)	63.0% (n=20)	76.2% (n=32)	26.1% (n=12)	19.0% (n=8)	10.9% (n=5)	4.8% (n=2)
KITCHENER						
Kitchener Historical (N=98)	52.8% (n=28)	57.8% (n=26)	34.0% (n=18)	28.9% (n=13)	13.2% (n=7)	13.3% (n=6)
Kitchener Pathways Cohort 1, (N=111)	58.8% (n=30)	68.3% (n=41)	23.5% (n=12)	23.3% (n=14)	17.6% (n=9)	8.3% (n=5)
Kitchener Pathways Cohort 2 (N=130)	52.1% (n=38)	70.2% (n=40)	27.4% (n=20)	15.8% (n=9)	20.5% (n=15)	14.0% (n=8)
OTTAWA						
Ottawa Historical (N=82)	43.9% (n=18)	63.4% (n=26)	34.1% (n=14)	19.5% (n=8)	22.0% (n=9)	17.1% (n=7)
Ottawa Pathways Cohort 1, (N=68)	54.3% (n=19)	66.7% (n=22)	40.0% (n=14)	21.2% (n=7)	5.7% (n=2)	12.1% (n=4)
Ottawa Pathways Cohort 2 (N=74)	64.9% (n=24)	81.1% (n=30)	27.0% (n=10)	10.8% (n=4)	8.1% (n=3)	8.1% (n=3)

From Table 17, the individual cohort data shows five year rates that are approaching the range of averages for the City of Toronto as a whole. And the six and 6+ year rates (75% to nearly 80%) suggest that Regent Park young people may have needed somewhat longer to reach their goals. These strong results confirm a principal hypothesis behind the design of the Program; namely, that with the supports, the youth of Regent Park could indeed do as well as their more privileged peers across the City.11

The effect sizes for increases in the graduation rates of the individual Regent Park Pathways cohorts are, as might be expected, smaller when comparing four year graduation to pre-Pathways cohorts and considerably larger when comparing the proportions of five year and six year graduates. For four-year graduates (seven Regent Park cohorts) the effect sizes range from .33 to .71, while for five-year graduates (six cohorts), the effect sizes ranging from .60 to .77. For six year graduates, the effect sizes range from .61 to 1.06 (for the first four cohorts). The differences observed demonstrate that there are clear benefits of Pathways which are stronger for those who take longer to graduate. In total, more than 70% of over 1,200 Regent Park students have graduated, a significant increase

from the 42% prior to Pathways.

Table 17 also shows the first four year graduates from four second generation programs in other Ontario communities. These results show considerable variation with two communities (Rexdale and Ottawa) showing higher four year graduation rates than the other two (Lawrence Heights and Kitchener). Indeed, with nearly two-thirds of these initial cohorts in the Rexdale and Ottawa graduating after just four years, these communities are showing stronger results than any of the Regent Park cohorts. However, the proportions for the other two communities are similar to those seen in Regent Park. We would expect that the five year (and subsequent year) rates these latter communities would show significant increases, as would subsequent cohorts.

When the results for this first cohort in the four communities are compared to their respective pre-Pathways cohorts (Table 18), both Rexdale and Ottawa show significant differences: for Rexdale, 39% for those before Pathways graduated after four years compared to 63% for their first Pathways cohort (effect size .61); for Ottawa, 47% compared to 67.5% of Pathways first cohort (effect size .51). These effect sizes are somewhat smaller than for the Regent Park cohorts owing to the smaller proportion of the Regent Park pre-Pathways cohorts graduating after four years. As the four year graduation rates are somewhat lower in Lawrence Heights and Kitchener, the differences were not as great, with the Pathways cohort in each community showing proportions

Table 14a

Stream Differences in Credit Accumulation for Pathways Grade 9s.

Program Sites	7+ credits	5.5-6.5	5 or fewer	Mean & SD	
Academic Stream					
Regent Park (N=122)	91.0% (n=111)	4.1% (n=5)	4.9% (n=6)	7.74 (1.03)	
Lawrence Heights (N=49)	73.5% (n=36)	14.3% (n=7)	12.2% (n=6)	7.16 (1.39)	
Rexdale (N=40)	87.5% (n=35)	10.0% (n=4)	2.5% (n=1)	7.60 (0.87)	
Kitchener (N=41)	95.1% (n=39)	2.4% (n=1)	2.4% (n=1)	7.76 (0.92)	
Ottawa (N=40)	92.5% (n=37)	5.0% (n=2)	2.5% (n=1)	7.75 (0.81)	
Applied Stream				Mean & SD	Effect size
Regent Park (N=44)	68.2% (n=30)	9.1% (n=4)	22.7% (n=10)	6.74 (1.88)	.91
Lawrence Heights (N=39)	56.4% (n=22)	15.4% (n=6)	28.2% (n=11)	6.49 (1.87)	.59
Rexdale (N=28)	71.4% (n=20)	17.9% (n=5)	10.7% (n=3)	6.82 (1.66)	.72
Kitchener (N=44)	75.0% (n=33)	9.1% (n=4)	15.9% (n=7)	7.32 (1.58)	.97
Ottawa (N=22)	81.8% (n=18)	0	18.2% (n=4)	6.91 (1.93)	1.05

Table 14b

Stream Differences in Credit Accumulation for Pathways Grade 10s.

Program Sites	15+ credits	10.5-14.5	10 or fewer	Mean & SD	
Academic Stream					
Regent Park (N=116)	85.3% (n=99)	12.1% (n=14)	2.6% (n=3)	15.23 (1.82)	
Lawrence Heights (N=46)	78.3% (n=36)	19.6% (n=9)	2.2% (n=1)	15.12 (1.74)	
Rexdale (N=44)	77.3% (n=34)	15.9% (n=7)	6.8% (n=3)	15.25 (2.27)	
Kitchener (N=44)	84.1% (n=37)	11.4% (n=5)	4.5% (n=2)	15.36 (2.18)	
Ottawa (N=29)	75.9% (n=22)	24.1% (n=7)	0	15.40 (1.39)	
Applied Stream				Mean & SD	Effect size
Regent Park (N=42)	45.2% (n=19)	38.1% (n=16)	16.7% (n=7)	13.51 (3.00)	.98
Lawrence Heights (N=23)	52.2% (n=12)	17.4% (n=4)	30.4% (n=7)	12.67 (4.11)	1.51
Rexdale (N=19)	47.4% (n=9)	36.8% (n=7)	15.8% (n=3)	13.55 (3.83)	.49
Kitchener (N=45)	53.3% (n=24)	33.3% (n=15)	13.3% (n=6)	13.57 (3.15)	.58
Ottawa (N=26)	53.8% (n=14)	38.5% (n=10)	7.7% (n=2)	14.23 (2.16)	.39

just eight to ten percent higher than their pre-Pathways peers (effect sizes .21 and .20, respectively).12 The data on dropouts by cohort are also provided in Table 17.13

Among the more pronounced indicators is the continued decline in the dropout rate for Pathways students year over year and, most particularly, compared to Regent Park youth prior to Pathways and also to the TDSB average. As can be seen (and updated from the Boston Consulting Group study of Pathways in 2006), the dropout rates for Cohorts 1, 2 and 3 are now calculated at 13.5% ,15.8% and 11.4% respectively. The rate increased for Cohort 4 to 13.6% indicating a number of youth left school in their fifth year without obtaining a diploma. As well, the dropout rate for the most recent two cohorts are fourteen and nine percent, respectively. As with earlier cohorts, these rates will likely increase as a number of students will likely not graduate after their later years in secondary school.14

Therefore, it is likely that the rates for these first four cohorts in particular should be considered as somewhat higher; that is, there are additional students unlikely to graduate, though they are still enrolled according to school board data. If we assume that none of these students has either graduated or even actively returned to school, the dropout rates increase for each of these cohorts, marginally for the first two, more significantly for cohort 3 and especially cohort 4. As a result, the adjusted rates would range from 14.5% to nearly one quarter (24.4% for cohort 4); with the overall rate now 20.2% across the four cohorts.

While this rate is somewhat higher than the rate calculated for only those known to have dropped out (11%) it remains, under this most conservative assumption, will below the historical rate of 56% prior to the Program and 50% for the cohort immediately preceding the introduction of Pathways in Regent Park. As well, the rate, even at 20%, remains comparable to the provincial and city averages. It may be worth noting that this was the original hypothesis of the Program; that with the supports provided, Pathways youth would do as well as other students in the City. The data suggest that this has indeed been the case.

The magnitude of the reductions in dropouts attributable to Pathways can be seen from the effect sizes calculated for the first four cohorts (and which assume the higher dropout numbers to include those listed as "still in school") compared to the cohort immediately before the Program: 1.06 for Cohort 1, .88 for Cohort 2, .87 for Cohort 3, and .69 for Cohort 4. Overall, taking the cumulative rate across the first four cohorts, the effect size remains extremely positive (.85) when compared to the pre-Pathways Regent Park cohort. These effect sizes clearly indicate the strength of the statistical relationship between participation in Pathways and reductions in dropout rates compared to Regent Park youth prior to the Program, even when students are assumed to have dropped out, though they have not yet been designated so by the TDSB.

We have also analyzed Pathways' dropout and graduation patterns for those most academically at risk in comparison to City data provided by TDSB.15 These TDSB studies showed a consistent pattern of poor graduation for those grade 9 students most at-risk. Specifically (as shown in Table 18), fewer than one in five TDSB students with five or fewer grade 9 credits actually graduated in five years. While there has been a gradual increase in the proportions of these students graduating, it has been small and not equally realized by all groups; e.g. for the Fall 2002 TDSB grade 9 cohort, the proportion of those with five or fewer grade 9 credits who graduated (after five

Table 15

Aggregate Grade 9 & 10 Credit Accumulation Pre-Pathways & Pathways cohorts; 2009/10.

Categories	5 or less credits	6 or less credits	10 or less credits	12 or less credits
Pre-Pathways, all gr 9s (N=506)	29.4% (n=149)	36.2% (n=183)	n/a	n/a
All Pathways (08/09) (N=549)	12.6% (n=69)	19.9% (n=109)	n/a	n/a
Effect sizes	-.61	-.49		
Pre-Pathways, all gr 9s (N=718)	**27.2% (n=195)**	**33.0% (n=237)**	**n/a**	**n/a**
All Pathways (09/10) (N=756)	**11.6% (n=88)**	**16.8% (n=127)**	**n/a**	**n/a**
Effect size	**-.59**	**-.52**		
Pre-Pathways, all gr 10s (N=479)	n/a	n/a	22.5% (n=108)	32.8% (n=157)
All Pathways (08/09) (N=512)	n/a	n/a	11.7% (n=60)	17.6% (n=90)
Effect sizes			-.44	-.49
All Pathways (09/10) (N=570)			**12.1% (n=69)**	**20.2% (n=115)**
Effect sizes			**-.42**	**-.39**

Table 16

Proportion of students in three areas: IPRC, GLE/GLS and current grade 10s OSSLT achievement in 2008/09.

Communities	Cohorts	IPRC	GLE/GLS	OSSLT	Historical OSSLT
Kitchener	One	12.6% (14)	-	74.6% (50)	
	Two	11.6% (13)	-	n/a	71.4% (50)
Lawrence Heights	One	24.7% (18)	11.0% (8)	60.9% (42)	
	Two	25.0% (26)	44.2% (46)	n/a	52.9% (45)
Rexdale	One	29.9% (23)	22.1% (17)	62.7% (37)	
	Two	15.3% (13)	23.5% (20)	n/a	56.2% (50)
Ottawa	One	16.3% (8)	-	75.0% (42)	
	Two	15.9% (7)	7.4% (5)	n/a	74.8% (38)
Regent Park	Eight	23.6% (42)	17.4% (31)	n/a	
	Seven	18.6% (34)	10.9% (20)	56.8% (104)	
	Six	18.0% (29)	14.9% (24)	51.5% (86)	Not available
	Five	15.4% (23)	7.4% (11)	46.8% (65)	
	Four	2.1% (2)	6.3% (6)	52.6% (90)	
	Others	12.8% (5)	n/a		
Total (N=1505)		17.1% (257)	12.5% (188)	53.7% (275)	

years) was 13.3%. This is confirmed by the recent province-wide data (also from the 2002 cohort) which reported an 18% graduation rate for those failing 3 or more grade 9 courses.16 Among Regent Park Pathways students, however, the data clearly show that the majority have graduated – a significant difference, not only statistically (effect size 1.17), but a clear indication that the supports provided by Pathways are effective in retaining many of those students

who are struggling the most. In addition, nearly one-quarter of these most at-risk students are still in school (as of June 2010, the last data available for these youth). 17

Also evident in Table 17 are the figures for transitions among graduates to post-secondary education. Overall approximately three quarters of Regent Park Pathways graduates (656/873) are attending colleges and universities, sixty percent of whom are in universities, nearly

Table 17

Graduate, Dropout and Post-Secondary Participation (as of September 2011) for Seven Regent Park Cohorts and First Cohorts at Second Generation Sites

Categories	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	Cohort 6	Cohort 7	Total (RP)	Rexdale	Lawrence Heights	Ottawa	Kitchener	Total (gen2)	Grand total
(Cohort Start Year)	(01/02)	(02/03)	(03/04)	(04/05)	(05/06)	(06/07)	(07/08)		(07/08)	(07/08)	(07/08)	(07/08)		
Attributed Numbers*	96	177	210	213	167	178	181	**1222**	78	84	77	142	381	**1603**
								1041						
H.S. Drop-outs (to date)	13	28	24	29	24	16	0	**134**	0	0	0	0	0	**134**
% Drop-out	**13.50%**	**15.80%**	**11.40%**	**13.62%**	**14.37%**	**8.99%**		**134**						**8.36%**
% Coh 1-4 incl. "non-grads"	*14.58%*	*19.21%*	*19.52%*	*24.41%*				*20.26%*						
Non-grads (current)	1	6	17	23	24	38	99	**208**	29	41	26	85	181	389
% Non-grads	**1.00%**	**3.40%**	**8.10%**	**10.80%**	**14.37%**	**21.35%**	**54.70%**	**17.02%**	37.18%	48.81%	33.77%	59.86%	47.51%	24.27%
% Non-grads H.S. (mature)	**2.10%**													
Returning grads to H.S. (current)	0	0	0	0	1	6	15	**22**	15	8	4	18	45	67
% Returning to H.S.	**0.00%**	**0.00%**	**0.00%**	**0.00%**	0.88%	4.84%	18.29%	**2.52%**	30.61%	18.60%	7.84%	31.58%	22.50%	6.24%
H.S. Grads & Grad Rates														
4yr Grads	39	64	108	101	61	76	82	**531**	49	43	52	57	201	732
4yr Grad rates	40.60%	36.20%	51.40%	47.40%	36.50%	42.70%	45.30%	43.45%	62.82%	51.19%	67.53%	40.14%	52.76%	45.66%
5yr Grads	27	64	43	45	39	48		**266**						266
5yr Grad rates	68.70%	72.30%	71.90%	68.50%	59.9%	69.66%		68.68%						
6yr Grad	11	8	14	14	13			**60**						60
6yr Grad rates	80.20%	76.80%	78.60%	75.1%	67.66%			75.43%						
After 6 years	3	7	4	2				**16**						16
Grad rate after 6 years	83.30%	80.80%	80.5%	76.06%				79.60%						
Total H.S.Grads to date	80	143	169	162	113	124	82	**873**	49	43	51	57	**200**	**1074**
Post-Secondary Data														
Grads to University	34	67	79	71	58	51	28	388	20	15	15	15	65	453
Grads to College	35	53	44	53	28	32	15	260	12	18	20	8	57	318
Grads to Trades/Appren	0	6	2	0	0	0	0	8	0	0	1	0	1	9
Grads to Work	4	1	4	8	4	3	0	24	0	0	4	0	4	28
Grads undeclared	9	16	32	30	18	29	24	158	2	2	8	14	26	184
Grads to post-secondary	69	126	125	124	86	83	43	656	32	33	35	23	123	779
% grads to post-secondary	86.20%	88.10%	74.00%	77.50%	76.11%	66.94%	52.44%	**75.14%**	65.31%	76.74%	69.23%	40.35%	**61.50%**	**72.63%**

Note: "Attributed Numbers" are the number of students who participated for at least 2 years in the Pathways program.

forty percent in colleges, with the remainder in apprenticeships or trades programs. While nearly twenty percent are unknown (that is, Pathways has lost contact with these students) it is doubtful that they would be in post-secondary programs since they would likely retain contact for the purpose of securing Pathways' scholarships.

While the proportion of graduates going to post-secondary programs has varied, there has been a trend to smaller proportions (from over 85% of the cohorts 1 and 2 to just two-thirds of cohort 6). This decline in the most recent cohorts possibly reflects the increased competition for spaces at most if not all post-secondary institutions (a reaction to constricted labour mar-

ket opportunities for those with only a high school diploma), or perhaps reflects either (relatively) weaker academic performance or less effective processes for linking Pathways students to the most appropriate programs and post-secondary institutions, or both. In the absence of additional data and careful analysis, these explanations cannot be further assessed.

In looking at the initial post-secondary transitions for first graduates in the four second generation communities (also in Table 17) it is apparent that the lower proportion of graduates successfully moving to post-secondary programs in later Regent Park cohorts may become the prevailing pattern. Specifically,

graduates in Ottawa, Lawrence Heights and Rexdale have similar proportions moving on, ranging from 65% to 77%, with a much smaller proportion of Kitchener graduates (40%) going on to college or university. As well, unlike four year graduates in Regent Park (over many cohorts) who opted for university at a ratio of 2:1, graduates in both Ottawa and Lawrence Heights are more evenly divided.

Given the strong results outlined above, it is important to note that there remains a portion of Pathways students who continue to struggle academically (and, in some cases, in other ways) despite the provision of supports and their participation in the Program. Analysis conducted

Table 18:

Comparison of 4 Year Graduation Rates Pre-Pathways and Pathways Cohorts Regent Park and Second Generation Sites (As of September 2011)

Name of Sites	# of Grads	4-yr Grad Rate
Pre-Pathways Ottawa (N=87)	41	47.1%
Pathways Ottawa (N=77)	52	67.5%
Effect Size		0.53
Pre-Pathways LH (N=91)	39	42.9%
Pathways LH (N=84)	43	51.2%
Effect Size		0.21
Pre-Pathways REX (N=100)	39	39.0%
*Pathways REX (N=78)	49	62.8%
Effect Size		0.61
Pre-Pathways KIT (N= 105)	34	32.4%
Pathways KIT (N=142)	57	40.1%
Effect Size		0.20
Pre-Pathways Regent Park (2 cohorts; N=247)	66	26.7%
Pathways RP Cumulative (Coh 1-7; N=1222)	531	43.5%
Effect Size		0.46
Five-Year Grad Rate		
Pre-Pathways Regent Park (2 cohorts; N=247)	107	43.3%
Pathways RP Cumulative (Coh 1-6; N=1041)	715	68.7%
Effect Size		0.66

Note: The data reported is taken from data provided by the respective school boards.

several years ago over several cohorts in Regent Park indicates that these struggling students fall into particular categories. A first group of struggling students include those in "applied" level courses who also exhibit high absenteeism. It is possible that many of these students have "special needs" which have simply not been assessed. To the extent possible, advocacy by Program staff can support some of these students (through better course placement and in-school supports); however, there is also a systemic issue, namely, the availability of appropriate assess-

ment of possible special needs. Some of these students were supported by the project (reported in Cumming 2011) which provided additional tutoring for students with literacy challenges arranged through the Ontario Institute for Studies in Education (OISE) Modern Language Centre.

A second group of students struggling academically include those receiving special education supports. It is likely that these students are in need of more intense support, both at school and in the community; and some of these students were similarly among those supported by the OISE project.

Third, there is a group of students who continue to fall into the lowest credit categories but have, through the advocacy of Pathways' staff, begun to receive the supports needed through the schools. It is not yet clear how many of these students are likely to graduate, or whether they will remain in school for the additional years needed to "catch up", though many showed increased credit accumulation once supports were provided through their schools.

Fourth, a small group of students in Regent Park experienced, during the course of the

program, a specific trauma (e.g. death of a parent or sibling) which required additional and intensive support. Many of these students are unlikely to graduate.

Finally, there are some students whose attitudes and dispositions appear to be antithetical to their participation in either their high school or in Pathways. While these had comprised approximately five percent of early Pathways cohorts, it is possible that they represent a somewhat larger proportion (perhaps ten percent) of more recent Regent Park cohorts; and they are unlikely to graduate, despite the supports provided.

II.2   Discussion

The results reported above, based on nine cohorts of the Program in Regent Park, as well as four cohorts in each of four other Ontario communities, show largely consistent and positive differences between the attainments of Pathways to Education participants compared with their pre-Pathways peers in the same communities. The differences are statistically significant with especially large effect sizes evident in the Regent Park results.

As noted in Rowen 2011, when compared with other initiatives, these results are even more impressive. For example, a recent meta-analysis of U.S. dropout prevention programs (ICF International 2008) provides a comparison of results obtained from a range of programs. It should be noted that most of these programs are school-based, rather than community-based.

The study highlights several programs including Communities in Schools, Check and Connect, Project Grad, and Career Academies. When comparing the results obtained by each of these with Pathways, it is clear that Pathways' results for both dropout reduction and high school graduation far exceed those cited for these other programs. These data strongly suggest that Pathways is considerably more effective in producing the desired outcomes. [For dropout reduction, effect sizes for Check and Connect (.48), Career Academies (.46), and Communities in Schools (.29), fall well below effect sizes for Pathways (1.27 and 1.38 comparing Pathways Regent Park participants with each of two historical cohorts, respectively, .85 if those identified as "still in school" are assumed to have dropped out). Similarly, effect sizes for high school graduation for each of these programs – Check and Connect (-0.07), Career Academies (.11), Communities in Schools (.20) and Project Grad (-0.07) – are also considerably below Pathways' results (.33 to .71 for Pathways four-year graduation rate, and .60 to .77 for five year graduates).]

The "state of the art", not just at the time we developed Pathways, but generally today as well, is that it is one thing to invoke the need for comprehensive programming, quite another to determine the specific elements and deliver them effectively. Boston Consulting Group examined twelve Canadian initiatives (most Toronto-based) and found few points of comparison with Pathways. Not only are most school-based, no data on results or cost were available. They also looked at eight U.S. programs and noted one, Sponsor-a-Scholar, with similar elements. However, a major difference with Pathways is that Sponsor-a-Scholar is clearly selective in who participates, serving fewer students and at a higher cost. McKinsey and Company, in researching programs for the Action Group on Student Retention and Success in Quebec (Menard 2009) similarly examined a range of programs and concluded that aspects of Check and Connect were worthy of consideration in addition to recommending Pathways as a model with the most significant results and impact. With respect to the social returns on investment, a recent cost benefit analysis of Sponsor-a-Scholar (Harrison et al, 2008a) shows a per student net present value approximately one third of that calculated by Boston Consulting Group for each Pathways participant.18

Indeed, the need for a comprehensive approach which recognizes these factors to increase access to further education (and, perhaps a testimony to the influence of Pathways on the field, at least in Canada) is noted in the conclusion of the Canadian Millennium Scholarship Foundation in their recent report The Price of Knowledge which discussed the complexity of increasing post-secondary access for marginalized youth and concluded

Specific interventions designed to alleviate a narrow set of barriers—by targeting one kind of barrier, such as academic ability—will be limited in their effectiveness because they leave the other sources of the problem untouched. Without a comprehensive approach to overcoming these barriers, it is unlikely that Canada will gain the post-secondary achievement necessary to chart a successful course in the 21st century. (2007:34)19

If we examine some recent literature on "best practices" in youth development (rather than solely academically focused) programs, it is evident that Pathways to Education has in fact integrated what is now understood to be the standard for such programs.

The prevailing wisdom among academics, researchers and commentators– but was generally not available at the time of the Program's design nearly a decade ago – is that for programs to be effective in increasing the educational attainment of minority and low-income youth, some important characteristics must be incorporated. Several versions of such elements have been offered, for example, by the American Youth Policy Forum (Partee and Halprin 2006) and The Educational Resources Institute (Pathways to College Network 2007). In summarizing "Principles of Effective Youth Development Programs", Partee and Halprin note eight characteristics, not all of which were present even in the programs they cited as effective. Pathways to Education purposefully developed and clearly exemplifies six: implementation

quality, caring/knowledgeable adults, high standards and expectations, importance of community, a holistic approach, long-term services/support and follow-up20.

A key difference in orientation between Pathways and those programs frequently cited is Pathways' community-based character built on a deliberate process of community engagement which, in turn, flows from a commitment to community development. Therefore, as much as the Program's elements and delivery are central – and are exemplary of best practices – the operative assumption from design and inception has been that Pathways is neither predicated nor conditional on changes in schools. It may be that this is the simplest but most crucial of innovations; namely, that school-based reform efforts have proven, at least in Canada, unimpressive; and the single-minded focus on schools, rather than communities, as the unit of analysis has ill-served those most at-risk.

Pathways design may now be understood as obvious in ensuring comprehensive support. None of the four supports (academic, social, financial, and advocacy) is unique. What is perhaps innovative is the particular form, combination and integrated delivery of these supports, coupled with a commitment to ongoing research and program improvement. At the time, however, the idea of operationalizing supports which directly responded to the lived experience of young people and their parents was – and perhaps still is – impressively innovative; for example, the advocacy

function vested in a paid, full-time staff with overall responsibility for integrating the other program elements and for being "a constant adult presence".21

Further, it is clear that Pathways has innovated in the area of applying best practices. While the consensus of research into effective practice favours programs with similar comprehensive supports and strong community ties, there are precious few initiatives which have, in fact, proven they (a) are able to deliver programs incorporating such best practices, (b) are truly community-based, (c) include the entire community, (d) have produced significant, let alone comparable results to Pathways, (e) can deliver such programs for comparable or lower unit cost , and (f) have as significant rates of return on investment. This inability to easily implement best practices is a problem for education, no less than for medicine/health care or social services where "knowledge translation" is a major challenge for practitioners. Among the lessons of Pathways is that a disciplined process for doing so can successfully be developed and implemented when begun from a foundation of community development and action research, a driving need producing demonstrable results, and a clear commitment to program improvement.

II. 3 What the Numbers Don't Tell Us

In addition to our focus on demonstrable results and the need to collect and analyze the

quantitative metrics discussed above, Pathways' commitment to program improvement required that we pay attention to more qualitative data as well.

These and other learning's from the development and implementation of Pathways over the past decade are the subject of the final section of this paper which will appear in the next issue of the Journal. In Part III, we outline the variety of research which was built into Pathways from the outset. At this juncture, it is possibly useful to augment the quantitative results with some of the more qualitative data which informed the Program's development. The focus of these different types of data was to support the program improvement goals since the quantitative data by itself can point to particular challenges, while the additional data can, in the best of worlds, indicate the directions which might be pursued to address the challenges identified.

Very briefly, several sources of data were developed over the first years of the Program: a survey of all students; a survey of volunteer mentors and tutors; focus groups with each of students, mentors, tutors; focus groups with parents in each of several first languages; in addition to regular feedback from Program staff and students alike. These data were used primarily for program improvement and can be understood as a version of the action research approach which informed Pathways' development from the outset.

II.3.1 Focus Groups

In the development of Pathways, the use of focus groups was clearly key to gaining the perceptions of many different stakeholders in the community – particularly youth themselves, as well as parents, teachers and staff of the local schools and agencies. Having designed the Program to address several of the specific needs identified, the use of face-to-face groups continued the process of responding to the experiences of those involved. Eliciting these experiences can also be understood, in and of itself, as an indication of the level and quality of engagement of students and parents in particular.

The first evidence of this engagement was through focus groups conducted after the students' first semester of high school when six groups were convened by the program director to better understand what the Program was like for those students. Efforts were made to invite students who were struggling academically, or who were perceived to be among those youth who were less likely to be involved, as well as students who were clearly engaged. The value of these exchanges was immediately evident.

For example, in the first year of the Program, tutoring was available four nights a week in five core subjects, and it was voluntary. In discussing some of the challenges they faced in their first semester, many students spoke about a number of important differences between their grade 7 and 8 experiences and those in secondary school includ-

ing their relationships with their teachers, the overwhelming size of their high schools compared to their elementary schools, the structure of the school day and organization of their high schools, the ways in which expectations of student behaviour were communicated, the ways support was (and wasn't) provided, etc. Their experiences, and their willingness and honesty in conveying and reflecting on those experiences, made clear that the Program needed to sharpen its focus in a number of areas.

At a key point in one group's discussion of tutoring, a heretofore quiet student summarized the sentiment of the groups with stunning simplicity: "If you want us to come to tutoring," he said with a bit of exasperation, "you have to make us come to tutoring." He was not a strong student. He was attending a school known for having low expectations of students and, some thought, looking down on youth from Regent Park. He was also known as a bit of a "clown", rarely engaged by anything in his previous schooling; but not as a "bad" kid, just not a very bright or engaged one. And certainly not someone willing to put in more than minimal effort.

His pronouncement, however, was met with much agreement; from other students (in both that and other focus groups), from parents, from volunteer tutors and mentors, from many staff. What seemed in retrospect to be an obvious and important feature of the program as it developed, was far from obvious in that first year. It led to a series of

discussions among staff and, subsequently, among the Board and its Community Liaison Committee to determine both the best policy and how to implement it; what expectations were reasonable for the young people and how to ensure that its implementation would be understood as supportive and positive, rather than punitive.

In addition, planning for the subsequent year of Pathways required the Program to work practically on a number of challenges; for example, how to organize and staff the tutoring element, how to work with those students who had little interest in attending, but were now required to, how to best identify and support those struggling students without stigmatizing them, how to recruit and train tutors to better support those with more serious academic challenges, etc. These became ongoing challenges and responses have developed over the years following this key decision to articulate clear expectations. Focus groups with the tutors themselves provided important input into the evolution of Program practices and, over time, led to increased focus on special education students (both those formally identified and others not formally assessed), led to increased and specialized staffing to support this function, led to the evolution of the SPSW role, led to the development of systems to track not only attendance, but engagement at tutoring, and the ability to provide meaningful and "real time" feedback to students and parents, and to increased accountability along several dimensions.

As well, the Program's initial year had group mentoring delivered in monthly sessions organized by SPSWs (there were only two in the first year) and four of six groups were held at the schools with the largest proportions of Pathways students. The feedback from students and parents showed that the organization of these was a challenge for them. Many students had after-school responsibilities for siblings, while others had extracurricular interests and commitments; yet others, both students and parents, expressed concern about the length of the day and the expectations this entailed. However, many students also expressed the desire for more group mentoring, with a strong desire to see sessions held weekly and in the community.

Accommodating these perceptions posed several challenges to the Program. Space for programming in the community, particularly in the evening, was limited. Staffing the group mentoring element – both volunteers and paid staff – required considerable creativity and would involve yet additional changes to the role of SPSWs. And feedback suggested that a more structured group mentoring program, with some clear and consistent content across groups was preferred requiring the development and implementation of both the content and the training which would support its implementation. As with the changes to the tutoring function, these changes involved not only adaptations of staff and volunteers, but also the development of new and different staff roles, with the attendant

challenge of raising the funds necessary, and the development of systems for recruitment, training and support of volunteers. At the end of the day, the Program was able to offer group mentoring alternate weeks (rather than weekly) given material constraints, and to ensure that all groups met in the community. The complexity of these changes cannot be overstated, particularly when occurring at the same time as the number of students was set to more than double in the coming year.

As the Program model developed over the first five years, there were numerous other changes which were directly related to feedback from different groups. For example, staff feedback led directly to the development of the "specialty mentoring" component for the third and fourth year students; and "career mentoring" developed as a direct result of input first from students and subsequently from staff and parents; and the different types of "parent orientation" programs, particularly for grade 9 and 12 parents, were developed in direct response to their articulated needs for several types of information and support.

In addition to their direct role in the Program's development, these changes are also indicative of the ability of the Program to respond concretely to the challenges and perceptions offered by participants; by students, parents, volunteers, and staff. And this willingness to respond was an important indication of the commitment of the Program to address the very real

needs and desires of those most involved and, in particular, of the young people the Program was designed to serve. There is no shortcut, no pro forma response that will convey this commitment. Rather, there is the need, the absolute necessity, of demonstrating an authentic willingness to listen and act on the needs of participants. Over the years, and with multiple sites, the Program has tried to engage students in a variety of ways. When most successful, efforts at program improvement are the result of trusting relationships between program staff and participants; and, at the same time, are demonstrations of the trust and respect that participants deserve. And the credibility of the Program in the community is dependent on being able to demonstrate respect and engender such trust. The success of efforts to elicit the experiences and perceptions of young people (and their parents, and volunteers) are an important indicator of the level of engagement they have with the program and the relationships which make that possible. There is no formula for such relationships. It is a tribute to Pathways staff and volunteers, to the parents and students themselves that the model developed has proven, in practice, to be capable of supporting and sustaining such relationships.

II.3.2 Student Survey

The second year of the Program saw the introduction of an annual survey of students. As the program grew, it was increasingly difficult to ensure that the focus groups would provide a

range of feedback from all students on some common themes. It was also understood that anonymous surveys often provide respondents with the opportunity to express views that might not be easily offered in peer groupings. Thus, the survey was designed to enable the collection of some basic data from all students about their experiences of the Program.

The overall structure of the surveys asked students to respond to questions about each element of the program, along with providing opportunities for comments and suggestions for improvement; for example, their reactions to different kinds of group mentoring, specialty mentoring and career mentoring activities, and their experience of different organizational features of tutoring sites. As well, there were questions about related topics; for example, the extent to which students felt "safe" in school, family and community contexts. Some surveys asked about specific needs, such as the extent to which students had access to computers, and the extent to which they had other responsibilities for family, particularly siblings; and whether they had older siblings who had attended post-secondary programs.

For example, surveys found that large majorities of the students were satisfied with each of the components of the Program: 80% with tutoring, 75% with group mentoring, 90% with specialty and career mentoring, 95% with their SPSWs. However, the data also provided important information about those who were less than satisfied, in-

dicating important areas for improvement, whether it concerned specific activities which were less than successful, or concerns about the environment of tutoring (e.g. noise, or resources at the site, or the role and responsibility of site support staff). While the survey responses helped identify aspects to address, they also provided overwhelming support for the relationships which are the foundation of the Program; for example, over three quarters were pleased with the support they received at tutoring, and over ninety percent reported having positive relationships with their group mentors.

Since the relationship between students and SPSWs is among the key (and some have suggested unique) features of Pathways, it may be useful to cite a summary contained in one of the survey reports.

Overall Satisfaction with Support from SPSW: Just under ninety-five percent of the students were positive about the support they received from their SPSW. In fact, more than two thirds of these were students that said they were 'very satisfied.' … Students had many positive things to say about their SPSWs, for example: "The thing that I like most about my SPSW is that she still hasn't given up on me." and "I liked the fact that my SPSW shows a serious commitment towards making me the best I can be, both in school and in the community."

Frequency of Contact: Students were asked how often they talk to their SPSW one-

to-one (either on the phone or in person). Fully 87.5% said that they speak with their SPSW at least every two weeks, and over half (54.6%) of these actually talk with their SPSW at least once a week…

Support from the SPSW: In terms of support at school, a clear majority of students responding indicated that they felt that their SPSW helped them either very much or somewhat with the following issues in the order in which students ranked the support to be the strongest: school attendance, problems at school, communicating feedback from teachers, and selecting courses. In each of these areas, less than ten percent of students said their SPSW was not helpful.

Relationship with SPSW: Just under eighty-five percent of the students responding indicated that the statement 'My SPSW knows me well' to be somewhat or very true. Similarly, over eighty percent of the respondents indicate the statement 'I feel comfortable talking to my SPSW about almost anything' is somewhat true to very true. Many students described their relationship with their SPSW in glowing terms: *"She was not only a support worker she was a friend. She was very open- minded and helpful."[22]*

Among the frequently cited findings from the surveys are the responses to questions about the Program's impact on different aspects of students'

lives, and about their plans for the future.[23] Specifically, over 98% expected to graduate and three-quarters expected to continue to some form of further education (45% at university, 25% at a college, 5% through an apprenticeship). As the data presented earlier show, not all of these aspirations were realized. However, the very fact that the hopes of young people in Regent Park are this high suggests that one goal of the Program – to increase the aspirations of youth in the community and to end the expectations of failure which were so acutely felt prior to the Program – was indeed realized.

As well, the surveys helped identify some of the intervening dispositions which can help stimulate such aspirations, as well as some of the impacts students themselves feel as a result of their participation.

- 86.9% of the respondents stated that participation in Pathways helped them to get better grades at school.
- 84.0% said that Pathways helped them to know how to be able to ask for help when they need it.
- 81.0% said that Pathways helped them to believe that they can be successful at school.
- 72.3% stated that Pathways helped them to try new things
- 69.5% stated that Pathways helped them to stay in school.
- 65.9% stated that Pathways helped them feel proud of their community
- 60.1% stated that Pathways helped them get along better with teachers
- 59.4% stated that Pathways

helped them to solve a problem at school. [ibid.]

One example of the people and processes behind these data is illustrative in the following excerpt which demonstrates learning through role playing.[24]

"L" [Tutoring Facilitator, a staff position]: A lot of students don't know how to ask for help when they need it. An important thing we do, even with the tutors, we teach them how to role play with the kids at tutoring. So, if I don't understand this math question, how, tomorrow, am I going to ask the teacher that, okay "can you explain this to me?"

"M" [Male Pathways Student]: She ["L"] was acting like the teacher [role playing] and she said to do what I did and they showed me how. She was sitting there and I had my work and she showed me the right way, how to ask for help as opposed to just going up and saying "Sir, I can't do this." Saying "Excuse me sir. I'm having a bit of trouble with this. And it would be better if you kind of slowed it down and explained it to me, even it were after class." And it worked! It's encouraging if you have people helping you out every step of the way, 'cause some kids don't have it like that in their life...

It may be important to note that "M" is a black male who had struggled in school for many years. Indeed, he had great difficulty with basic literacy

when he entered Pathways in grade 9. He was never assessed for special education needs – or supports – and yet he responded extremely well to the support provided in tutoring. He, and a few of his close friends, developed a relationship with the tutoring facilitator, a young woman from a similar cultural background who was working on her PhD in biochemistry; an unusual combination at the time. She was a wonderful role model for many young people, as well as volunteer tutors.

[Note: "M" completed his high school course requirements, including the literacy requirement, and graduated in five years. He is an apprentice mechanic at the Toronto Transit Commission and has completed his classroom training through a Toronto community college.]

The excerpt above not only demonstrates the importance of supporting Pathways' students to develop some skills that more privileged youth take for granted, such as how to ask a teacher for help in a way most likely to have the desired effect. It also highlights two important features of the Program. First, that many young people in such communities have needs which are not immediately evident and cannot be determined by, for example, examining school records or looking at a registration form. They take time to become visible; and any program will only be successful with such young people if there is a commitment and a program structure, organization and research processes which facili-

tates their discovery.

Second, the situation eluded to above illustrates that the Program's ability to address such needs is a function of the relationships that are established with staff. In Pathways' experience, there was an assumption, validated countless times in the course of the Program's development, that it was impossible to predict all the circumstances and situations which could arise nor which staff might be the "right" person to engage with the student to address it. Therefore, it was important to ensure that there was a variety of staff and volunteers involved: male and female, from a variety of cultural and class backgrounds, with varied professional training, educational backgrounds and work experiences, and with varying "formal" roles, but who were capable and committed to developing the relationships which are so necessary to establishing the trust required. While the variety of staff may have created challenges in developing a common professional culture, it was a deliberate and purposeful approach which served the Program – and young people – well.

The development of the relationships identified above is a key element and its importance is beyond question. Equally important is the understanding that circumstances arise which are challenging, but which need to be addressed for the Program to have the credibility it requires to engage the young people it hopes to support. The willingness and ability to meet such challenges is a key feature of Pathways; and doing so demonstrates many

ways in which the hard data on results are inadequate to convey the importance of Pathways to the young people, their families, and the community as a whole.

II.3.3 Things come up

The above description by "M", of what seems a simple skill, is both typical and not typical. It is consistent with what many young people from such communities face. Rather than the stereotype of bravado (particularly for young men of colour) that is often attributed by the press or teachers or other experts, their actual presentation to those they trust is of young people who lack confidence, who struggle to be genuine, who fear failure and not living up to the expectations of those they respect, of feeling undeserving of support, and of lacking the skills to ask for it, when needed. They expect themselves to be, in some important ways, fully competent adults; and judging from the responsibilities they are often burdened with, they meet these adult responsibilities remarkably well. But they are, nonetheless, adolescents and, for the most part, "normal" adolescents, with normal anxieties, plus the added burdens of poverty, of their own histories and that of the community.

It is, however, a somewhat atypical description of a particular challenge in just how articulate this particular young man became over the course of five years in the Program. Indeed, at a weekend retreat with some of the young men, he offered what continues to be a most insightful comment about the

challenges being faced: "How do we not live down to the stereotypes of young black men in the community?" While many pontificate about the "obvious" answers they've come to, those practitioners on the ground know his question to be one version of how it feels to those living it, whose experiences are both complex and troubling.

And there are other experiences which Pathways staff were required to address; circumstances and situations that were neither wholly predictable, nor the solutions simple or obvious. As a new initiative, the roles of staff were evolving, as were the relationships with other practitioners, both in the schools and in the community. The processes and results of different interventions, both successes and failures, have offered lessons about how to work with the young people, their parents, and other institutions. Some of these circumstances were evident even in the first years of the Program, as outlined by the then program director (Rowen) in speaking to a group of potential funders in May of 2003. He spoke of the importance of Pathways in addressing situations that are simply not visible when looking only at the data on results; and he offered some examples.

Let me, perhaps, also mention some of the things the numbers can't tell you about the program.

The numbers can't tell you about the kid abandoned by his mother, living with an aunt with her own problems; how he

wasn't going to school, wouldn't talk to teachers or guidance or school social workers; who spoke to his Student/Parent Support Worker (our staff) and, over time, with much effort, started not only to go to school, but to our tutoring and mentoring as well.

Or about the kid who's struggling to learn because the grandmother who he lives with can't provide enough for him to have three meals a day - he's an active and growing young man - and how his SPSW pleaded with the school administration to include him in the breakfast program at one of our high schools.

No, the numbers, as impressive as they are, can't tell you about the young woman who confided in her SPSW about the abuse she's suffered at the hands of her brother-in-law; how afraid she's been to tell anyone because the family fears that immigration will become involved if she does. How we supported her after she's questioned by police and other authorities about what happened. How we work with her and the agencies involved to address her living situation so that she can continue at her school and have the confidence - and the safety - to move on with her life.

The data can't tell you about the 13 year old South Asian girl who entered grade 9 and was told she'd have to start in an ESL program for the first six weeks or so of school; how our

staff told me that she was an 'A' student through elementary school, but was to be placed in a program for new immigrants because they hadn't yet gotten her records; and how she'd worried about falling behind academically while they waited; how we worked with the school to ensure that she was correctly placed within two days - rather than six or more weeks - and how she's continued her academic achievement.

And the numbers can't tell you about the debating event [we] organized at Hart House last year; how the girls worked with mentors from the UofT Debating Club to understand what a formal debate is and how to participate; how those young women had never set foot in the university, let alone in Hart House, let alone in the Great Hall, let alone ever spoke aloud there. The numbers can't tell you how proud they were and how, afterwards, most told us they intended to go there; and to do that they knew they'd have to work hard.

No numbers can tell you what we need to do when a vice-principal or head of special ed tell us that "these kids will never amount to anything, that they're going to drop out anyway and so why bother with them at all." Or about the kid who says "I Love Mentoring", or the parents who know little about the new curriculum, report cards, or high school protocols; but who, with Pathways' support, traveled on cold winter nights, for the very first time, to

parent-teacher interviews at their child's high school so far from the community.

And the data, as impressive as it is, can't tell you how a 14 year old girl with little confidence a year ago, held the attention of the Minister of Training, Colleges and Universities, who was riveted by how this young woman now demonstrated her own worthiness and the importance of the what Pathways is trying to do.

So those numbers I mentioned about what the program has achieved are important, very important, because they represent the program as a whole and our commitment to demonstrable results and accountability. *But the numbers aren't the kids!*

Ten years and ten communities later, there are countless more situations and successes; some similar and, given the different communities, others very different. There is no shortage of such situations in each and every one of the communities Pathways has come to serve. And, as in Regent Park, it is commonly understood that it is impossible to quantify the impact of such episodes or the effect they have on both students and staff. But the overwhelming sense has remained of the effectiveness of the Program, of the central role it plays in many young people's lives, and of the relationships among students, families and staff which embody the values and commitments of the Program and without which the results,

which have come to characterize Pathways, would not be possible. While the ability to address many challenges faced by these young people has increased, and while there is still much to learn and much to improve, there is over the decade an agreement about what was then only a hope. Rowen noted this in concluding his comments to donors that evening ten years ago.

Let me conclude by reminding you of what you may already know. The challenge of youth dropouts has been an intractable one over many decades. The legion of past programs has, by and large, failed to address it. The costs of social assistance, of policing and jails, of hospitals and youth treatment, of remedial and job training for unemployed youth are expensive and perhaps foolish expenditures when compared to the cost of Pathways. And the cost of ineffective programs and the loss of tax revenue pale when compared to the lost potential of so many young people.

Our goals are indeed ambitious: nothing less than to dramatically improve the life chances of our young people; and to fundamentally change the community and ensure that these changes are sustained in a culture of achievement. We want to share what we learn with other communities and support them to do the same. We want to actually demonstrate (what Sondra Stein called) "results that matter", rather than merely offering more rhetoric. If we do it right, if we are successful,

if the program is effective for the kids and has the impact on the community which we all want, it will be a stunning achievement.

After a decade, however, it is increasingly possible for the young people themselves to give voice to their own experiences and perceptions, their struggles and successes. It is to some of these that we now turn.

II.3.4 Voices of Young People

As the Program continues be dependent on significant private funding, a number of Pathways graduates have volunteered to participate in various fundraising events, describing their experiences, the importance of the Program in their lives, and to reflect on what they learned from their experiences. Hearing these young people is an important moment for those who haven't had the pleasure of working directly with them and experiencing the value of the program directly. Here are a few of the young people in their own voices.

"N"

I am 20 years old, and I am the oldest of four children. My family came from Kenya when I was four, and we moved to the Regent Park area right away.
Two years ago, I went away to start my university life at Windsor, along with four of my friends. My first year at University was like no other - meals not prepared by my mom, hundred dollar textbooks,

learning the importance of budgeting (who thought cafeteria food could be so expensive) – and oh yah – lots of independence too!

I'll be honest with you - it was tough – everything was new.

I'm sure all of you would agree that the first year of University is not the first year of high school – and everything feels more intense because you're living in residence with people, going to classes with them, and eating all your meals together too.

There were many people around me who came alone - one thing I had that they envied was true friends! I was part of the Fab Five – I had people who stuck by my side and I by theirs, people who I could share my ups and downs with, and stay up until four o'clock in the morning laughing hysterically until our neighbours banged on our doors. I went through high school and Pathways with these four people.

I think the most important thing that we took from Pathways is a sense of community, advocacy and unconditional support for each other. We learned *that* every time we visited Pathways, spoke to our SPSW's, took part in mentoring, or solved an academic problem in tutoring. We learned it from the way the people around us behaved. We always felt welcome, and knew that everyone we spoke to cared about our interests, troubles and joys. Re-

gardless of who was in the office that day there was always an ear to listen, and a heart to welcome us. We never once felt, heard, or saw anyone discriminated against or stigmatized for who they were, where they came from, or what they wanted to be. This sense of community and cohesion definitely was reflective in the Fab Five at university.

Whenever any of us had a problem – be it a problem with a professor, running out of food money, or nursing a broken heart, the others were there to support us. (*Sometimes more than we might want*.) We had something called a 'Focus Group' – a meeting would be called where the troubles of one of us would be the 'focus' – and the rest of us would offer our support and counsel – the point was to help our friends when they were down. It's like the support meetings that Pathways offers all the time when students are in crisis. As funny as the whole notion of a focus group may sound – it really helped us survive our first year of university. We knew that no matter what – we would always be there to support each other – and we learned how to do this through Pathways.

The Pathways experience brought us together, and taught us to advocate for each other, and for ourselves. I see that in my own life in the experiences I have been able to create for myself in the last few months. This summer I went to Winnipeg as part of the Official

Languages Program funded by the federal government, and in January I will be going on exchange to Rouen in France to complete a semester studying business there. I knew from being part of Pathways that in order to develop and move forward as a person, I had to look for opportunities, seize them, and then they would manifest into reality. I learned to reach for my dreams.

["N" has now graduated from Windsor and completed an M.A. in Education from the University of British Columbia where he is employed in their student services department as an International Student Advisor, Special Populations & Programs. His comments were made in 2008 at a "gala" fundraising event.]

"P"

I am the first in my family to graduate from university. Last April, after two years of post-secondary study, I passed my exam to become a paramedic. Today, I have my dream job!

I've lived in Regent Park my entire life – I still do. My parents left China to come to Canada for a better life for their children. They spoke little English. They were hard-working, performing manual labour for minimum wage and working long hours. More than anything they wanted to see me and my sister succeed. Today, my job makes a difference to my community every day. But not long ago, I was on a very different path.

By the middle of Grade 10, I

was just skimming by in almost every subject. I didn't realize it at the time, but I was jeopardizing all my hopes for the future. And then something happened that turned everything around for me. During a routine meeting with my school guidance counselor, I was asked what I wanted to do with my life. I didn't even have to think about my answer. I wanted to be a paramedic. Her response stunned me. "With these grades, you're not going to make it." And that was it. She immediately moved on to discuss other career options. I realized in that moment that my dream was slipping away. Can you imagine being 15 years old and feeling like it's already too late to reach your goals? But for many students in communities like Regent Park, this is all-too-common. The fact is that these students don't have the same opportunities as students in more affluent neighbourhoods. Their families can't afford extra academic tutoring. Many are new to Canada and their parents find it hard to navigate an unfamiliar school system. And there simply aren't people in our social networks who can mentor us or provide career advice or give us a chance at that first job. Pathways to Education fills that gap**.** Pathways helps level the education playing field. They're providing everything from tutoring and mentoring to career counseling. They even give students the chance to earn bus tickets to get to school.

And luckily for me, I did have Pathways in my life**.** After that

meeting in the guidance counselor's office, I had somewhere to turn for help. My Pathways support worker knew I had potential. When she heard about my meeting, she simply said, "We can help get you there, ["P"]. But you have to be willing to put in the work." I had to get my act together fast, but there was hope! When someone believes in you, amazing things can happen. It wasn't easy, but with Pathways' help, I stayed focused on my goal. And by the end of high school, the failing grades that would have kept me out of university had soared. I was accepted to every university I applied to. My parents were over the moon – they still are today, even after all these years! I am so proud of my accomplishments. But I didn't get there alone. Pathways gave me the opportunity to succeed. I'm glad I took it. And I'm glad they were there when I needed someone to believe in me.

["P offered these comments in a letter to Pathways donors in 2012. He graduated from a joint college/university program in science and paramedic training. He is currently a first responder paramedic for the City of Toronto.]

"R"

I was with my friends on the subway and some violence occurred, a stabbing occurred. And me and my friends got arrested for it because we fit the profile of the person who did the crime. So, I spent, I don't know, an amount of time in "juvy", and just doing nothing.

They [Pathways staff] approached my family right away, wanting to help me and my family, help me get up and get back on track. They knew I was innocent. They knew I had nothing to do with it. I thanked them so much for doing that. And they came over to my house, talked to me, sat me down, told me everything I should know about what's going on about the legal actions. Stuff like that. And that's the biggest thing they did for me. I thought they saved my life.

My family, they just love Pathways. They just appreciate everything; from free [transit] tickets, all the tutoring, all the mentoring, helping me succeed in school. And especially at that time, they really needed someone to help me and the family, because we didn't know what to do at the time. And I was so lost. I didn't know what to do. And I thought I couldn't succeed in high school anymore; that my marks would just drop; that people would look at me differently. And that I would just go out and, I don't know, sell drugs, just live my life somehow and make money. But, Pathways, my family thanks them because they set me back on track, got me focused on school; got me not to think about it because nothing wrong was going to happen. They sat me down and made everything clear and they just helped me and my family. And my family's just in debt to them.

["R" was part of the first cohort

of Pathways in Regent Park. He attended Humber College in the "Radio, Television and Video Arts" program and, after graduation, established his own business doing videography for a variety of organizations in both the private and not-for-profit sectors. His comments are taken from the video "Pathways to Education: Facing the Challenges" (2006).]

"S"

I'm 19 years old, and I've lived in Regent Park for over 10 years. My family originally came from Bangladesh which is quite a conservative county in many ways. Figuring out who I am with one foot in Canadian culture and one foot in my home culture has been very hard – I often have felt torn between the two. But, Pathways to Education has been a key part of helping me navigate my teen years.

We've all been taught that in order to succeed, we must have an education. But – schools need to know that if we're overwhelmed with life, with what's going on at home – we can't sit in class and learn.   In my journey there are things you need to know: My parents want me to be 'cultural' as well as not forget my religion. Back home status is important – and we had the material things we needed, but it was dangerous for us there – the politics were very dirty, and we were being targeted. So - we came here for a better life… and my dad's credentials as a pharmacist were not recognized, and finan-

cially he couldn't afford to go back to school and support us all, and we had to live in public housing in Regent Park. This affected my parents very much – and caused a lot of stress in the family. This also affected me every day – instead of focusing on the big issues, they often would focus on me – on the clothes I was wearing, who my friends were, or being "too Canadian" – we were fighting all the time… For teenagers, a part of our identity comes from our parents, and when my parents' identity disappointed me, I felt hopeless. I didn't have a role model because I thought of them as a failure. I was in a kind of crisis – I did not know what to wear, or when to say what, or who I could be open with – I had to watch myself all the time because who I was as a Bengali, Muslim girl, and who I was as a "Canadian" girl were different and contradictory. My marks started to drop.

And this is where Pathways comes into my story. There were three key people who came into my life – they're like my family – and I can trust them with anything. I can talk to them about my relationships, my family, my financial needs, my dreams, and explore my goals for the future – and they will always listen, and give me information, and be honest with me – every single time. Many, many times they sat with me, and helped me work through my conflicts with my parents – I knew they were behind me, but at the same time, they never once criticized my parents.

Pathways has always motivated me to follow my dreams, express myself, in a positive way without ever conflicting with my parents. They've never told me "go against your parents" or "don't do what your parents are telling you to do." They've always respected my parents, and I respect that because I know that, even though my parents are wrong, I would never let anyone else say anything about my parents. So, I guess that's what motivates me. It makes me a better person. And Pathways, they're like my friend. Sometimes, it's very hard talking with my parents. But I can go and talk to them. They'll never tell me what to do; but, they'll talk from their experiences and make me understand.

Now I see that my parents had to be very strong to give up everything they had so I could have a better life – so I could be safe, and not have to live in fear. Pathways helped me realize my own dreams, and gain respect back for my parents - and through me respecting them, I got that same respect back for myself.

I am presently at York University with a full scholarship first year. I'm doing a bachelors of Social Work – and my goal is to do my masters degree so I can work with young women like me. - Who knows, maybe one day I'll be running one of the Pathways sites – if I can help other teenagers, half as much as they helped me I'll be leading a very meaningful life.

["S" completed her BSW at Ryerson University, and has gotten married. She now lives in New York where she is working part-time as a social worker in a junior school, and she completed her masters of social work at Columbia University in New York. She made these comments at a Gala fundraising event in 2007.]

"T"

I am one of the first Pathways students to graduate from Toronto's Rexdale neighbourhood. As far back as I can remember I've struggled in school. My family moved often and by the time I was fourteen, I'd already attended seven schools. With so many classrooms and so many teachers, I found it hard to keep up. Not surprisingly, I quickly fell behind.

In high school I was placed in the applied-level program – an academic stream that makes it almost impossible to transition to university. My parents could see I was struggling, but they worked unusual hours and weren't always available to help with my homework. Money was tight, so getting a tutor was simply out of the question. My academic future looked bleak. And then one afternoon someone visited my class to talk about the Pathways program. I knew then I'd found the help I needed. Pathways helps students like me from low-income communities across Canada overcome the barriers that can stand in the way of education. They deliver

after-school tutoring, group and career mentoring, short- and long-term financial assistance, and one-to-one support from a Student/Parent Support Worker – an amazing staff member who keeps students motivated. This support – particularly the academic support – made a world of difference to me. I became a regular face at Pathways. I attended tutoring three times a week. At the end of the school year, you could find me at Pathways every day preparing for my exams. And within the first year, things began to change. My grades improved. I found it easier to keep up with my work. I moved from the applied-level classes to an academic-level class – the first step in getting into university. And I'd found a family away from home who was supportive and encouraged me to reach for the stars. In my final year of high school, when the letter of acceptance arrived from my first-choice university, my parents couldn't have been prouder. I was the first person in my family to attend university. We worried about the cost, but Pathways was there again with the help I needed: a bursary towards my tuition. The financial support felt like a weight lifted from my shoulders.

It's been five years since I first walked through the doors at Pathways, and I'm still very involved. And I'm moving on. This fall I've entered my second year at the University of Guelph-Humber, where I'm studying criminal justice. My

goal is to become a lawyer, something I never could have imagined without Pathways. Because of Pathways' support, I truly feel my future is bright.

[As she notes, "T" is among the first graduates from Pathways in Rexdale. She is continuing her studies at the University of Guelph-Humber. These comments are part of a letter to donors in 2012.]

"V"

Tonight, I have been given the honour and privilege to tell you my story in order to illustrate what a truly remarkable program Pathways to Education is. It has helped shape the futures and lives of many students living in Regent Park, including mine. Before Pathways existed – the possibilities were very different.

I was born in Mogadishu, the capital city of Somalia and when I was three years old a civil war broke out, scattering my family all over the world. My parents and six siblings including myself escaped to Kenya, while my oldest brother, … who was 16 at the time, came to Canada. Instead of going to high school, he started working immediately, doing labour jobs – construction, driving taxis, and eventually trucks. He put a hold on his education so he could send us money to survive and one day get us all to Canada.

Since, I was the youngest in the family my mother decided that

I should be the first one to be sent ahead. Even though I was young at the time, I was very excited about coming to Canada and seeing my oldest brother. When I first arrived in Canada it was winter and it was the first time I ever saw snow.

Imagine this little African girl arriving at the Toronto airport, and stepping outside into a swirl of snowflakes – you might think I'd be afraid of all the new things, but I was excited! Driving into the city along the highway, I was ecstatic and overwhelmed – I had never seen so many lights in all my life.

Living with my brother was hard on both of us, but a year later the rest of my family arrived and we settled into Regent Park. Soon after I started grade one and my older brother and sister entered high school. This new experience was overwhelming for them, because they had to overcome language and cultural barriers while trying to maintain their own culture. In addition, at that time there was no support network like Pathways available to them to help them envision a future which could include post-secondary education – my sister says it didn't even occur to her that there was an option, because she had no role models.

For me however, this was different, because when I graduated from grade 8 at [school name], the Pathways to Education Program was established, and welcomed me in with open

arms. One could wonder how a programme could drastically change a life... there are so many different levels, it's almost impossible to express. At home I didn't have anyone to sit down with me and help me with all the details so I could flourish in school – Pathways was there to fill that crucial gap. They help me academically through tutoring: and because of that I was on the honour role in high school for all four years. They helped me financially by giving me bus tickets to go to school every day and provided me with a bursary to assist with the costs of post-secondary education. My SPSW (Student Parent Support Worker) was there to support and guide me through the challenges of high school and applying for university.

Pathways not only helped me financially or academically but socially as well; they gave me the opportunity to experience new possibilities that I would never have had otherwise. I fell in love with Shakespeare – and got to participate in a two week intensive in Stratford of all places – I would have never known that I was good at drama, and that I enjoyed it, and that I had something to say.... I was also offered the opportunity to work with scientists, doing research as part of a summer internship, and I got to take a university course while still in high school. These are but a few of the things Pathways has helped me to experience – and I really feel that the people at Pathways who care so

much for me – for us - who go way above and beyond their 'job' helped me to succeed and see the possibilities. I am now a 3rd year University of Toronto student and I am doing a double major in neuroscience and health studies – and, oh yeah, I'm doing some drama too! I know that Pathways to Education changed the course of my life. I am thankful for the continual support Pathways receives so that other students in my community, and others across Canada can have the same amazing opportunities.

["V" offered these comments at a 2008 Pathways fundraising gala. She has since graduated from the University of Toronto with a B.Sc. and is currently employed by the Ontario Ministry of Health.]

The voices of these young people are but a few of the thousands who have now benefited from Pathways and who have taught many lessons which informed the Program and its development. In Part III (to be published in the next issue of the Journal), we offer some of what we have learned, both about Pathways and about community-based social innovations more generally. We hope that our understandings will resonate with practitioners across a range of human service programs, especially but not only, for youth.

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End Notes

[1] It should be noted that both attendance and credit accumulation have been consistently related to secondary school graduation and remain important predictors of the likelihood of graduation. These relationships have been discussed in numerous works by Dr. Robert S. Brown, researcher at the TDSB dating from his tenure with the former Board of Education for the City of Toronto. See, for example, Brown (1999). Of course, among the strongest predictors is family income which is highly correlated with school success and is among the most robust and longest standing findings in educational research and which has frequently and consistently been confirmed through Toronto school board data. Students from the lowest income decile are four to six times more likely to drop out than students from the highest income decile.

[2] It should be noted that there have been considerable challenges in securing data for the program in Verdun, Quebec. While data on attendance and credit accumulation for Pathways participants has been available, school board data for historical cohorts has been not.

[3] The t-test results: LH: $t(187) = -1.27$, p=.21, ns; REX: $t(171) = 1.40$, p= 1.64, ns; KIT: $t(214) =-1.14$, p=.26, ns ; OTT: $t(155) = .93$, p=.36, ns

[4] Two exceptions are Ottawa which (in 2009/10) experienced a transit strike and Kitchener, where an increase in the proportions with poor attendance was noted compared to their first cohorts.

[5] The data presented in the tables on "stream" are for 2008/09, as 2009/10 data were not analyzed by Pathways Canada.

[6] Table 7 also shows the proportion of grade 9 students with six or fewer credits, considered by some (e.g. TDSB) to be the more appropriate indicator of risk. Here we can note that the Cohort 8 proportion in Regent Park continues to show a significant decline in this proportion, as do the comparisons between the historical cohort and Pathways participants in Ottawa where it can be noted that the proportion of their second cohort with less than six credits was half the proportion of their first cohort and just over a third of the pre-Pathways grade 9s in the community. Similarly, the proportions for Pathways cohorts in Rexdale and Kitchener show a dramatic reduction compared to their historical counterparts, though there are more marginal reductions from first to second cohorts and a more significant reduction for Rexdale's third cohort. In Lawrence Heights, their second cohort of grade 9s was not as successful as the first, though still below the historical cohort. The effect sizes for the differences ranged from .16 (Lawrence Heights), to more than .7 (Regent Park and Ottawa), clearly somewhat smaller than when comparing those at-risk by virtue of five or fewer credits, but significant nonetheless.

[7] As there is no obvious consensus on the number of credits after grade 10 which would constitute "risk", if we use the more familiar 12 credits as the definition, the results are equally consistent and, perhaps, more striking. In particular, as shown in Table 8, each of the Pathways programs show significant reductions from the historical proportions of grade 10 students at risk, with the exception of the most recent grade 10 cohort in Kitchener, including a reduction of fully two-thirds for Regent Park's seventh cohort of Grade 10 students, and less than half the historical proportion in Rexdale and Ottawa. The effect sizes for these differences range from .19 (Kitchener) to .90 (Regent Park).

[8] The row marked "12+" reflect those students in their fifth year of secondary school.

[9] As with attendance data reported above, the data presented in the table on "stream" are for 2008/09 as comparable data were not analyzed

by Pathways Canada for 2009/10.

[10] Toronto District School Board special tabulation.

[11] Brown (2010) reports increasing five year rates from 69% to 76% for the 2000 through 2004 cohorts in the TDSB. A custom tabulation by Brown of the 2000 City averages showed a six year rate of 71%, a few percent less than Pathways six year rate perhaps further reinforcing the view that, with the supports, Pathways Regent Park youth have simply needed a bit longer to graduate than their peers across the City.

[12] The authors wish to especially thank Petrona Eccleston at Pathways Canada for her specific assistance in gathering and the analyses of all the data, particularly for the pre-Pathways data, for these second generation sites, as well as the years of Regent Park data. Her support for Pathways, and her data management and analysis skills, are much appreciated by the authors and the many Pathways communities, without which the development of Pathways would have been impossible.

[13] It should be noted that there are no dropouts recorded for any of the second generation communities, nor for the most recent cohort in Regent Park since the school board data requires Pathways to consider that students have dropped out who have no increase in credits from their fourth to fifth year. While other procedures were used in prior years for Regent Park data, this process would appear to provide a consistent approach across the several school boards when considering who has dropped out among both Pathways and historical cohorts in each community. Therefore, the data reported here are for Regent Park's first six cohorts.

[14] It should be noted that, following the approach used by BCG, those attributed to Pathways are those who have participated in the Program for at least half their high school career. However, if we consider the princi-

pal that, to be effective, students should participate for the duration of their high school years – a principal which was enunciated by the community and which has underpinned the Program from its inception – it could be argued that those attributed to Pathways should be limited those who participated for all their high school years. Following this approach, the dropout rate would most certainly be even lower. However, we have concurred with their view that the attribution to Pathways of those youth participating for at least half their high school careers is a reasonable, if cautious, assumption by which to gauge the program's effectiveness.

[15] See, for example, Brown (2006, 2008) both of which provide aggregate TDSB data. We are appreciative to Rob Brown for also providing the disaggregation of these data by income (deciles/quartiles) which, combined with the cited studies, forms the basis of the analysis presented here.

[16] It should be noted that an additional twenty percent of these highly at-risk students were still registered in the TDSB, though the proportion of these likely to graduate is small. See Brown (2008) and King et al (2009). The proportion graduating from the lowest income decile is similar (18%) suggesting that the determining characteristic for these at risk students is their poor credit accumulation, rather than their family income. However, it should be noted that the proportion of at risk students from the highest income families is but a fraction of those from the lowest, suggesting that income has played a strong role in creating the risk from which these students are so unlikely to recover. (Personal communication, Robert Brown).

[17] Brown (2008:10-11) and custom tabulation. The custom tabulation suggested that there were no differ-

ences in the TDSB data by income (either decile or quintile) suggesting that the effect of income is in the far higher proportions of low income students who are likely to be struggling, rather than their ultimate achievements. Pathways is clearly an exception to this; and, while the numbers are small, the differences identified are indeed important in assessing the impact of the Program. Thanks are due to Rob Brown for clarifying the important understanding with respect to how the effect of income plays out for such students.

[18] Harrison, Nia, Nikola Juris, Dori Stern, and Steven Stern (2008a) shows a net benefit of $13,000 under one assumption and only $5,600 under second, compared to BCGs estimate of $49,000 per participant. See also Harrison, Nia, Nikola Juris, Dori Stern, and Steven Stern (2008b).

[19] Three of the four supports provided by Pathways are also cited in Martinez and Klopott (2003).

[20] The two not present in Pathways are related to "service learning" and "work-based learning"

[21] See, for example, Long (1996) which notes four characteristics of successful youth program: sustained adult contact, financial incentives, support for achievement, and early intervention.

[22] Rootham, Esther *Pathways to Education Student Survey Report* Regent Park Community Health Centre (Unpublished Internal Program Document; August 2005).

[23] It may be important to note that there was, at the time of the surveys, no baseline data from which to compare Pathways' student responses.

[24] The following is an excerpt from a video produced by Sheena Robertson entitled "Pathways to Education: Facing the Challenges" (Pathways to Education, 2006).

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