The Motivate to Explore Career Intervention: Design and Investigation of a Career Counselling Group for Disengaged Adolescent Males

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Abstract

Disengaged students are at risk for failing to complete high school. When youth drop out they not only risk facing unemployment and poverty, they also lose access to crucial supports and services that could smooth the transition from school to work. As these students are likely to seek work directly after high school, they need skills for adjusting and adapting to the world of work. To date, few studies have investigated how to engage at-risk youth in the process of career exploration and how to provide them with effective tools for navigating the school-to-work transition. This program of research focused on designing a group career exploration intervention to support the development of self-determination and career adaptability for disengaged adolescent males. The literature review summarizes key constructs in the theoretical framework (a multidimensional view of career exploration that integrates motivation and vocational development). The first manuscript details a Scientist-Practitioner Design Framework (SPDF). The SPDF is a methodological approach to designing an intervention and exploring its outcomes that uses the scientist-practitioner's clinical orientation as a guide. Manuscript two is a qualitative study that explores the experiences of participants' development of self-determination and career adaptability as a function of their group experience. Fourteen adolescent males, comprising two intervention groups, were interviewed about their group experiences. The interview transcripts were analyzed using a grounded theory method. The analysis yielded a model of *Developing a Work Identity*, characterized as a trajectory of development starting from lacking self-knowledge prior to the group to, after the group, knowing more about the self as it relates to work. This trajectory took two different pathways.

One was influenced by active help-seeking and planning, as well as seeing career as a calling. This resulted in independent exploration and a global sense of agency. Participants who described the other trajectory did not engage in behaviours to advance their development. This trajectory was influenced by seeing career as a means to an end. It resulted in depending on others for ongoing exploration and a local sense of agency. Study two was conducted in order to learn more about how the group influenced the first trajectory. It is a case study of one participant's experience of developing a work identity and the impact of the group on his development. Results of this study suggested that structure, support from peers and the facilitator, experiential activities, and opportunities to engage in identity construction dialogue were all crucial mechanisms of change. Overall, this research program presents 1) a new methodological approach with potential for bridging science and practice, 2) an innovative career intervention for disengaged youth, and 3) preliminary insight into the contextual factors and mechanisms of change that contribute to successful career development of this population. Taken together, this work advances theory, research, and practice in vocational psychology, and gives voice to an underserved population.

Résumé

Les étudiants désengagés sont en danger de ne pas compléter leur secondaire. Lorsque les jeunes décrochent, ils courent non seulement le risque de se trouver en situation de chômage et de pauvreté, mais ils perdent aussi leur accès à des soutiens et à des services cruciaux qui pourraient aplanir la période de transition entre l'école et le marché du travail. Comme ces étudiants tendent à se chercher du travail après le secondaire, ils ont besoin des connaissances nécessaires en vue de s'ajuster et de s'adapter au monde du travail. À ce jour, peu d'études se sont penchées sur la façon d'engager ces jeunes à risque dans le processus de recherche de carrière et de leur fournir des outils efficaces pour bien vivre cette transition allant de l'école au travail. Le présent programme de recherche mettait l'accent sur une série d'interventions d'exploration de carrières en groupe visant à soutenir l'élaboration de l'autodétermination et de l'adaptabilité de carrière pour les adolescents désengagés de sexe masculin. Le premier manuscrit présente en détail un modèle de cadre de conception pour le chercheur-praticien. C'est une approche méthodologique visant à concevoir une intervention et à en explorer les résultantes en utilisant l'orientation clinique du chercheur-praticien à titre de guide. Le deuxième manuscrit est une étude qualitative qui explore l'expérience menant au développement de l'autodétermination et de l'adaptabilité de carrière des participants comme fonction de leur expérience de groupe. Quatorze adolescents de sexe masculin formant deux groupes d'intervention furent interviewés quant à leurs expériences de groupe. Les transcriptions de ces entrevues furent ensuite analysées au moyen de la méthode de théorie à base empirique. L'analyse a donné un modèle en vue du *Développement d'une Identité*

de Travail caractérisée comme une trajectoire de développement débutant par un manque de connaissance de soi, avant la formation du groupe, et se terminant, après le travail de groupe, par une meilleure connaissance de soi en relation au travail. Cette trajectoire a pris deux voies distinctes. La première fut influencée par la planification et la recherche d'aide active de même que le fait de voir la carrière comme une vocation. Il en a résulté une exploration indépendante et un sens global de responsabilisation. Les participants qui ont décrit l'autre trajectoire ne se sont pas engagés dans des comportements pour faire avancer leur développement. Cette seconde trajectoire fut plutôt influencée par le fait de voir la carrière comme un moyen d'atteindre un but. Il en a résulté une dépendance envers les autres pour une exploration continue et un sens local de responsabilisation. La deuxième étude fut effectuée pour en savoir davantage sur la façon dont le groupe avait influencé la première trajectoire. C'est une étude de cas de l'expérience d'un participant dans son développement d'une identité de travail et de l'impact du groupe sur son développement. Les résultats de cette étude suggèrent que la structure et le soutien apportés par les pairs et l'animateur, les activités expérientielles et les occasions de s'engager dans un dialogue de construction identitaire furent tous des mécanismes cruciaux de changement. En général, ce programme de recherche amène 1) une nouvelle approche méthodologique ayant un potentiel visant à jeter un pont entre la science et la pratique, 2) une intervention novatrice en matière de recherche de carrière chez les jeunes désengagés, et 3) un aperçu préliminaire dans les facteurs et les mécanismes contextuels de changement qui contribuent au succès en matière de développement de carrière auprès de ce segment de la population. Dans son

ensemble, ce travail présente des théories, de la recherche et de la pratique dans le domaine de la psychologie professionnelle tout en donnant une voix à une population mal desservie.

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Contribution of Authors

The three manuscripts that comprise this dissertation are co-authored. I am the primary author on each, having reviewed the literature, conceptualized the methodology and resulting studies (design of the methodological approach, generation of research questions, selection of measures, development of interview protocols, and analysis of data), and written this dissertation in its entirety. The first manuscript, detailing the methodological approach, was co-authored by Dr. Marilyn Fitzpatrick and Dr. Susanne Lajoie. The second manuscript, summarizing a grounded theory analysis, is co-authored by Dr. Fitzpatrick. The third manuscript is a case study, and is co-authored by Dr. Fitzpatrick, and two research assistants, Heidi Hutman and Karolina Rozworska (Konieczna).

My doctoral supervisor, Dr. Marilyn Fitzpatrick, served in an advisory capacity throughout the conceptualization and implementation of this research program. During the data collection phase, Dr. Fitzpatrick served as consultant and advisor. She also supervised the writing of all three manuscripts. Dr. Lajoie offered her expertise in using design-based research methods, which aided in the conceptualization of the methodology developed for this research program. Ms. Heidi Hutman and Ms. Karolina Rozworska contributed a substantial amount of time and energy during the data collection process. They were integral to this phase of the research, through attending sessions of the group intervention (each research assistant attended all sessions of one of two intervention groups and watched videotapes of the sessions of the group they did not attend), recording their observations, participating in lengthy discussion between sessions, and contributing ideas and suggestions for intervention activities.

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Introduction

Quebec has one of the lowest rates of high school completion across Canada, and males in particular are most at risk of dropping out (Action Group on Student Retention and Success in Quebec, 2010; Lefebvre & Milligan, 2009). Quebec remains one of the only provinces whose students fail to complete high school at rates similar to 20 years ago (Action Group on Student Retention and Success in Quebec, 2010). In recent studies on the graduation rates of Canadian students, Quebec was shown to graduate only 66% of its male students, in comparison to 74% of females (Lefebvre & Merrigan, 2009). Therefore, by the age of 20, over 30% of male adolescents have no high school diploma in the province of Quebec.

Quebec is not alone in its low rates of high school completion. A recent U.S. report shows that in 2000, only 69.9% of American adolescents graduated from high school (Educational Testing Services, 2005). This report also highlighted the drop in earning power for individuals without a high school diploma, suggesting that in 2002 these individuals earned, adjusted for inflation, 35% less than their 1971 counterparts. In Quebec, it has been suggested that dropping out can cost the government up to $120,000 in uncollected sales and income taxes, and additional social spending, per individual who drops out (Action Group on Student Retention and Success in Quebec, 2010). The risk factors for those who drop out include health problems, criminal behaviour, and unemployment (Martin, Tobin, & Sugai, 2002). To prevent drop outs and the risk of negative developmental outcomes, disengaged youth need support in making a successful transition from school to work.

There is increased pressure from the job market for adolescents to remain in school and achieve higher levels of education (Schoon, McCulloch, Joshi, Wiggins, & Bynner, 2001). However, few youth who achieve poorly in school are likely to seek further academic opportunities. Instead, these youth choose to enter the labour force right out of high school (Patton, Creed, & Muller, 2002). As a result, they are likely to be poorly informed about the world of work and have poor decision-making skills (Patton, et al., 2002). Therefore, not only are these youth marginalized at school, but they leave school lacking the necessary skills to effectively and continually navigate the world of work. Without the skills to adapt to changes in the labour force, these youth are at risk for future unemployment, poverty, and a range of psychological and physical health concerns (Action Group on Student Retention and Success in Quebec, 2010; Martin, et al., 2002).

To address the growing need for improved services to support the school-to-work transition of marginalized youth, this program of research was aimed at developing a career exploration intervention for adolescent males at risk of dropping out of high school. This work sought to give voice to these marginalized students, identify their needs, and support their successful school-to-work transition. As such, the program had two central goals. The first goal was to develop a career intervention to address the needs of male students who had previously failed a career exploration class. One objective for the development of this intervention was to explore what motivates these particular youth to engage in identity and vocational exploration. A second objective was to use the intervention to facilitate growth and successful career development, and to

understand in what ways the group contributed to this process. The second major goal of the research program was to develop and propose a research methodology for use by scientist-practitioners in the field of counselling psychology. This methodology was central in allowing the participants and their experiences to guide the research, and is proposed relative to its potential for bridging research and practice.

This dissertation was prepared in accordance with the guidelines set forth by the Faculty of Graduate and Postdoctoral Studies at McGill University. It includes three manuscripts that comprise a program of research investigating the design of an intervention to facilitate a group of academically disengaged adolescent males' successful career exploration. Together, the manuscripts detail an original methodological approach, and two qualitative studies exploring the influence of the group intervention on the youth's career development experiences.

Chapter 1 begins this document and presents a focused review of the literature. This review summarizes and explains the theoretical framework used to conceptualize the program of research. Chapter 2 consists of Manuscript 1 and describes the methodological approach that guides the studies conducted. This manuscript proposes a *Scientist-Practitioner Design Framework* (SPDF), and details how this method was used to carry out the investigative work. This methodological framework was adapted from a design-based research approach typically used in the learning sciences. In Manuscript 1, the approach and its adaptation are reviewed, presenting the use of the SPDF in designing and investigating the *Motivate to Explore Career Intervention*. This manuscript

suggests the potential of the SPDF to provide a method of studying counselling that is informed by practice and thus accessible to practitioners.

Chapter 3 of this dissertation presents Manuscript 2. Manuscript 2 is the first in a series of qualitative studies exploring participants' experiences of the Motivate to Explore Career Intervention. This paper presents a grounded theory model of the experience of developing a work identity as a result of the group intervention. The focus of this study was on understanding the youth's process of developing motivation for career exploration and how the group contributed to this experience. Participants detailed an intricate process that included group influences, parental influences, their own actions and behaviours in and out of the group, and the school climate, and how these factors encouraged or undermined their career exploration. Manuscript 2 briefly summarizes the intervention, the data collection procedures, the process of the grounded theory analysis, its findings, as well as a discussion, limitations of the work, and implications for theory, research, and practice.

Chapter 4 consists of Manuscript 3. Manuscript 3 presents study two. This manuscript consists of a case study of one participant's experience of development as a function of the group. The purpose of this study was to expand on the grounded theory model and specifically explore the intervention's mechanisms of change. Through a detailed exploration of one exemplary case, this study focused on how the group activities and group process contributed to the participant's development of initiative, self-awareness, and competence. Results highlighted the positive impact of structure, support, experiential activities, and identity construction dialogue on the development of a work

identity for this one participant. This manuscript presents a case narrative, contextualizes it within the theoretical framework, describes the participant and the intervention, situates the overall case within the existing literature and identifies the intervention's mechanisms of change, reviews limitations, and suggests implications of the findings and future directions.

Finally, chapter 5 summarizes the work in the previous chapters, reviews the dissertation's overall contributions to knowledge across the domains of theory, research, and practice, and proposes directions for future work as suggested by the entire program of research. Tables and figures are presented by manuscript, while appendices are included in one section at the end. Additionally, all references have been compiled into one comprehensive bibliography, presented immediately following chapter 5.

CHAPTER 1

Review of Literature

Adolescence is a crucial developmental period in which individuals encounter significant changes in biological, cognitive, emotional, social, moral, and vocational functioning (W. A. Collins & Steinberg, 2007). This period of dramatic transition includes self-discovery and the development of autonomy that is likely to shape an individual's life course (Helwig & McNeil, 2011). One of the major tasks of adolescence is constructing a vocational identity (Blustein, 1994; Kroger, 2007; Super, 1994), defined as one's self-perceived vocational interests, values, abilities, self-efficacy beliefs, and aspirations (Vondracek & Skorikov, 1997). A vocational identity is a representation of the self in relation to work, and as an active agent in the process of career development. To achieve this identity and make a commitment in late adolescence to pursue certain career directions, adolescents must engage in exploratory activities and work towards the formulation of future goals (Lapan, 2004). However, some youth may feel a lack of motivation to explore, which can leave them at risk for not developing a strong sense of self.

This review summarizes and describes the key constructs in career development theory, including the importance of exploration to the developmental process. A particular perspective that integrates motivation and exploration is discussed, followed by a brief critique of current career interventions relative to their attendance to motivational factors. Self-determination theory (Deci & Ryan, 1985), one theory of motivation, is then presented as a perspective from which to conceptualize the development of effective career interventions for youth who are

disengaged at school and at-risk of dropping out. The review concludes with a summary of the literature across these two theoretical perspectives, and situates the current research program within this framework.

Career Development: Historical and Contemporary Perspectives

Career development theory was originally conceptualized by Donald Super (1957) as a way to understand how individuals construct and negotiate their work lives over time. At the core of this theory was a developmental perspective that attended to how individuals negotiate their work roles over the course of their lives. Super eventually refined his theory, honing in on the development of a vocational self-concept and the role of context in influencing its development (Savickas, 1997). This resulted in the life-span, life-space theory of career development, which views career as a combination of negotiating developmental tasks over the life course and managing life roles in various contexts (Super, 1990). The cornerstone of this theory is life-role salience, and attendance to the way in which work plays one of many roles in an individual's life (Savickas, 1997).

The life-span, life-space approach to career development integrates theoretical perspectives from various domains of psychology, creating a "segmental theory" (Super, 1990, p. 199) to explain the life-long process of self-concept development. This integrated model argues that across ages and developmental stages individuals occupy a variety of life roles, and that within each stage they cycle through tasks of growth, exploration, establishment, maintenance, and decline. In general, *growth* denotes childhood, *exploration* most often occurs during adolescence, during young adulthood individuals engage

in the *establishment* stage, *maintenance* is characteristic of middle adulthood, and *decline* is descriptive of old age (Super, 1990).

While individuals move through the stages in a somewhat linear fashion, each transition can also involve a recycling through the stages. For instance, as a young adult enters a job for the first time she may need to go through some growth in her new position, and then possibly further explore her occupational role as a result of this growth. Although relative to her age she is most likely in the establishment stage, her new role necessitates a recycling through earlier stages in order to navigate her new situation and work role effectively. Career development is thus an ongoing task that involves the growth, exploration, establishment, maintenance, and decline of different roles across the lifespan. At each life stage, individuals negotiate a set of developmental tasks, and successful coping with the task at one age is essential for progressing to the next stage (Super, 1969). Roles such as child, student, worker, or parent, emerge as the result of various life, or developmental stages (Super, 1994). Individuals may test out these roles through fantasy activities such as role playing in a counselling setting or in real-life situations, such as in classes, clubs, or part-time work (Super, 1990).

Relative to adolescents, Super (1990) argued that vocational goals become crystallized through the process of exploration. He describes a particular model of person-environment interaction and its facilitation of career development, suggesting that exploratory behaviour starts with curiosity (Super, 1990, 1991). The model argues that if exploration does not yield helpful outcomes, individuals will experience conflict and withdrawal. However, if rewarded, exploration leads

to an increase in information and further exploration. Satisfying exploration then leads to productive activities, such as identifying key figures who can serve as role models, which in turn increases one's sense of autonomy, self-esteem, and perspective with regards to the ability to plan for the future and make career decisions. This is what Super (1979) termed vocational maturity, or readiness to make educational and vocational choices. In sum, two central components of the life-span, life-space theory are developing a self-concept and developing vocational maturity. Exploration is the process through which these outcomes are facilitated.

Savickas (2002; 2005) updated the life-span, life-space theory to attend to the complex interaction between self and environment. In this contemporary perspective, career is understood as a reflection on developmental behaviour, rather than on the behaviour itself (Savickas, 2002). In recent years, Savickas and his colleagues further expanded the approach to conceptualize career development as a process of *life-design* (Savickas, et al., 2009). The life-design perspective addresses the interplay between the individual and his or her context, viewing the process of creating a life trajectory as one of adapting to changes in the social and work environment (Savickas, 2011). Constructing and developing a career is not only about reflecting on one's occupation, but on the meaning of that occupation within the context of one's life. In other words, Savickas and his colleagues view career as an ongoing process of interacting with the environment, and creating meaning about work and life through interactions. Savickas (2002) has suggested that both the environment and the individual change over time; therefore, rather than understanding development as a process of maturation, the contemporary

perspective argues that growth and self-concept development is about adapting to ongoing internal and external changes. Drawing from both the life-span, life-space approach and the life-design perspective, the theoretical constructs of vocational self-concepts and career adaptability are reviewed next.

Self-concept. A self-concept is characterized by personality, needs, values, and interests, and is central to career development (Ireh, 1999; Super, 1990). At the core of the experience of career is exploring, defining, and refining one's conception of self in relation to work. The self-concept is believed to be refined through experiences, vicarious learning, and feedback from others (Super, 1990). It becomes increasingly articulated as individuals resolve their developmental tasks (Solberg, Howard, Blustein, & Close, 2002; Super, 1990). Context, in the form of social, historical, and relational influences, largely shapes the process and outcome of self-concept development (Super, 1994).

Savickas (2002) has articulated the interplay between self and context in the development of career self-concepts, arguing that the self-concept is more than a set of personality traits that are enacted in relation to others. A self-concept also comprises the *subjective* experience of self (Savickas, 2005). This provides individuals with a sense of purpose within the context of work and life. Elaborating the construct of a self-concept, the career construction and life-design perspectives attends to the ways in which work supports identity and is itself a context for further growth (Savickas, 2005; Savickas, et al., 2009). Individuals not only choose occupations that fit their self-concepts, but they continue to develop their understanding of self through work.

Research has shown that self-concept development is correlated to self-esteem in that individuals who feel competent are more likely to engage in career planning and decision-making (Wallace-Broscious, Serafica, & Osipow, 1994). In addition, when youth have an internally derived self-concept, characterized by connection to self and an understanding of self in the world, they tend to engage in more purposeful and broad exploration, have a clearer sense of their career path, and are flexible in their thinking about the future (Usinger & Smith, 2010). By contrast, both foreclosed and less stable identities have been shown to correlate with less openness to exploration, a greater need for occupational information, and the perception of barriers to attaining career goals (Ladany, Melincoff, Constantine, & Love, 1997). The development of a clear and coherent self-concept is thus necessary for adolescents to successfully navigate their future planning and decision-making. When individuals develop this positive sense of self they become more adaptable and productive in their work and life roles.

Career adaptability. Successful career development consists not only of developing a self-concept, but of using this identity to engage in planning, decision-making, and ongoing exploration. While Super introduced career maturity to denote one's thoughtful planning, desire to explore careers, and knowledge about the world of work (Schnorr & Ware, 2001), Savickas (2005) has suggested *career adaptability* as a more appropriate and contemporary construct. Career adaptability is the way in which individuals use their attitudes, competencies, and behaviours to fit themselves to work (Savickas, 2005). It is defined as "the readiness to cope with predictable tasks of preparing for and participating in the work role, and with the predictable adjustments prompted by

changes in work and working conditions" (Savickas, 1997, p. 254). Career adaptability has been conceptualized to include readiness, exploration, planning, and feelings of competence (Hirschi, 2009). Others have added exploration, self-exploration, decision-making, and self-regulation (Creed, Fallon, & Hood, 2009). Most recently, Savickas and Porfeli (2011) have operationalized career adaptability along the dimensions of concern, curiosity, and confidence. Essentially, career adaptability refers to the ability to adjust to new or changed occupational circumstances across the lifespan. It requires readiness to seek out information, feeling competent to do so, and using the information obtained to make informed career decisions over time.

Research on career adaptability has shown that when individuals anticipate career change plan-fully and realistically, they feel more capable of negotiating transitions from one job to the next and are more optimistic about their ability to cope with transitions (Ebberwein, Krieshok, Ulven, & Prosser, 2004). A study with adolescents found that career adaptability predicts greater life satisfaction and the development of a personal sense of power, characterized by self-efficacy and an internal sense of control (Hirschi, 2009). In addition, poorer career adaptability, characterized by poorer decision-making and lower levels of exploration has been shown to contribute to concern about career-related issues, such as finances, opportunities, and the capacity to achieve (Creed, et al., 2009). The combination of these findings suggests that career adaptability can increase a person's sense of self and personal competence, that a lack of adaptability is detrimental, and that exploration is closely tied to the extent to which one develops and experiences adaptability. In sum, successful career development in

adolescence is characterized by a coherent self-concept paired with readiness to engage in planning, decision-making, and negotiating work and life roles. Exploration can enhance and facilitate these developmental outcomes.

Career Exploration

Exploration is the process that facilitates discovery or acquisition of new knowledge; it involves experimentation, investigation, trial, search, or hypothesis testing (Jordaan, 1963). Exploration has been characterized by flexibility in thinking, openness to the ebb and flow of experience, and a supple way of relating to the world (Blustein & Flum, 1999). Such an approach to the world is indicative of health, and generates continued positive growth (Blustein & Flum, 1999; Flum & Kaplan, 2006). Through this flexibility in thinking and broadened mindset individuals come to develop intellectual, personal, social, and physical resources (Fredrickson, 1998).

According to Super (1983), exploration involves asking questions about the self and evaluating one's situation. This evaluation includes exploring roles as a function of life stage. During this exploration individuals also seek to understand their attitudes about the available resources, their awareness of such resources, their willingness to use them, and their beliefs about the usefulness of the resources (Super, 1983). For exploration to be vocational, its purpose must be related to choosing, entering, adjusting to, or progressing in an occupation (Jordaan, 1963). Therefore, career exploration includes activities of investigation and information gathering about the environment, and facilitates the vocational decision-making process and the establishment of a career path (Flum & Kaplan, 2006).

Stumpf, Colarelli, and Hartman (1983) developed and validated a measure of career exploration, which offered an early definition of the construct. This definition included three general groupings of factors: *exploration process*, *reactions to exploration*, and *beliefs* about the instrumentality and outcomes of the exploratory process. Recently, self-exploration has been added to the conceptualization of the process (Flum & Blustein, 2000). As Blustein (1997) has suggested, exploration is more than information-seeking behaviours and beliefs about these behaviours; it also encompasses the intra-psychic and psychosocial antecedents and consequences of exploratory activities (Blustein & Flum, 1999). To attend to this, Flum and Blustein (2000) have suggested that exploration be understood as a *process*, rather than a set of behaviours or activities. According to these authors, the exploration process includes *activities* that are directed toward enhancing knowledge of both one's self and the environment, an *attitude* of motivation for engaging in and sustaining exploration, and *skills* and exploratory competence that are likely to develop during exploratory activities.

This multidimensional view of exploration integrates concepts of identity development, motivation, and cognitive processes, to conceptualize exploration as a comprehensive developmental experience. It attends to factors, such as motivation, that may impede or enhance the exploratory process. Flum and Blustein (2000) suggest links between identity, motivation, and exploration, arguing that individuals with diffuse identities (a lack of coherent self) tend to not know who they are and be unmotivated to explore. Those with conferred identities (adopted by following rigid norms or conventions) are unlikely to explore and see exploration as a potential threat to their concept of self. Self-

constructed identities, by contrast, are characterized by deliberate seeking out of opportunities to explore, grow, and develop (Flum & Blustein, 2000). This perspective provides a more nuanced understanding of the ways in which exploration, self-concept development, and career adaptability converge. Exploratory actions that are self-determined and in line with one's values are theorized to incite ongoing exploration and thus the development of a self-constructed identity. An assumption of this model is that when individuals experience exploration as intrinsically interesting, or when they value its purpose, they are likely to readily explore when and if necessary.

Flum and Blustein's (2000) model of exploration thus suggests that the process can promote identity integration and a sense of agency when it is engaged in for reasons that are self-determined; however, when individuals lack motivation to explore they may also have little interest in self-definition. Without exploration, these individuals are unlikely to develop interest, nor a strong sense of self. From this perspective, motivation to explore is a key component of developing career self-concepts and career adaptability. It should therefore be a considered a critical component of career interventions, particularly for youth.

Career Interventions

A recent meta-analysis has concluded that across career choice interventions there are a set of critical ingredients that contribute to positive outcomes (S. D. Brown et al., 2003). Data from 62 studies indicates that there are five critical factors for effective career intervention: the use of workbooks and written exercises, individualized interpretations and feedback, provision of world of work information, modeling, and attention to building support. Through

further exploration of these factors, S.D. Brown et al. derived several ways that practitioners can increase the effectiveness of their interventions: 1) help clients develop written goals for their future, 2) provide opportunities to gather and process occupational information, 3) promote the search and use of occupational information between sessions, 4) provide opportunities to compare occupations, in writing, or career fields and consider the support available for those options, 5) provide individual consultation around problematic career assessment results, and 6) introduce role models of those who have successfully coped with career exploration and difficult decision-making.

While the results of this study provide an excellent foundation from which to understand and evaluate the effectiveness of career interventions, the study did not examine the extent to which these activities are considered engaging or motivating for the participants. The meta-analysis provides information about critical factors, but less about how to engage adolescents who may be unlikely or unwilling to engage on their own. In addition, few studies exist identifying the specific critical ingredients of career interventions for adolescents. However, those studies that have been published have shown some effect of various career development activities on youth's self-efficacy, planning, work readiness, and broadening of career interests.

One study developed an intervention that took ninth and tenth grade students through self-awareness activities (e.g. teacher modelling and class discussion), exploring a range of career options through a card-sorting exercise, and matching people with jobs using a checklist (Hutchinson, Freeman, Downey, & Kilbreath, 1992). Results of the efficacy of this intervention showed that the

latter two parts of the program had positive effects, while students did not increase their self-awareness. A separate study investigated a career intervention with at-risk seventh grade students (O'Brien, Dukstein, Jackson, Tomlinson, & Kamatuka, 1999). The intervention program comprised three different classes, each consisting of approximately nine students. These three classes addressed exploration, self-awareness, and discussion of math and science careers. Courses across the various classes involved exploring factors that impact career decisions, education about how interests, values, skills, and personalities inform career decisions, guided imagery, creating a success box, and a scavenger hunt to discover career resources available to them. The results of this study showed that the youth increased their planning and exploration self-efficacy, vocational and educational efficacy, the number of careers they were considering, and congruence between their interests and career choices. However, again, no effects were found for increases in self-awareness or the development of a vocational identity.

The results of these two studies suggest that some of the existing career interventions may be useful in helping youth acquire knowledge about occupations and the world of work, and increasing exploratory self-efficacy, but are less successful in engaging adolescents to develop a strong sense of vocational self. Recently, Hirschi and Lage (2008) developed a career intervention for non-college bound youth and included a measure of vocational identity to explore the outcomes of the group. The authors used an experimental design, comparing an intervention group to a control group who received no formal intervention. The intervention group engaged in activities aimed at knowing one's interests and

skills as they relate to various career options, and then selecting several specific careers to explore in more depth. The intervention incorporated several of S. D. Brown et al.'s (2003) critical ingredients, such as giving individualized feedback, using writing to compare career options, and presenting role models of individuals who have successfully navigated similar challenges. Two to three weeks following the intervention, participants in the study showed significant increases in their career decidedness, career planning, career exploration, and vocational identity in comparison to the control group. At a 12-week follow up, the differences in exploration and vocational identity remained significant.

The results of this study are promising results in that, compared with the previous studies on adolescent career interventions, participants experienced a significant increase in their sense of self in relation to work. While the authors do not address this explicitly, it may be the case that the use of the critical ingredients enhanced the effectiveness of the intervention over time. However, the intervention itself was manualized, and the authors caution that it was designed to address a broad range of students rather than at-risk populations. Addressing this issue, Turner and Conkel (2010) developed an intervention based on a model of career development that acknowledges the importance of providing at-risk youth with self-regulatory and career development skills. These authors compared their intervention to one framed by a more traditional model of career counselling (characterized by a focus on exploration, person-environment fit, and goal setting). The new intervention consisted of a combination of identifying academic challenges and social support, exploring work readiness, and developing social and prosocial skills. Results demonstrated that the youth in this

intervention showed greater person-environment fit skills, greater social, prosocial, and work readiness skills, greater efficacy beliefs, and greater emotional and instrumental support, compared with those in the traditional intervention and youth who did not participate in any group. These results show that when interventions are aimed at developing life skills and internal resources, in addition to engaging in career decision-making and exploration, at-risk adolescents learn more about themselves and acquire broader and more diverse skills. These youth are thus more likely to be better equipped to select a career *and* continually navigate and adapt to the world of work. Turner and Conkel's study thus highlights the need for career interventions that do more than help at-risk youth make career decisions and explore occupations. Interventions are more successful when they provide these youth with a broader and more holistic developmental experience. However, research is still needed that explicitly addresses the kind of interventions and supports most likely to facilitate the development of youth who are amotivated for the career exploration process.

As Flum and Blustein (2000) have suggested, the theory of self-determination offers an understanding of the contexts and processes most likely to increase motivation for activities in all populations. Self-determination theory may thus provide a framework for designing interventions that incorporate the critical ingredients, help youth develop broader life skills, *and* attend to motivational factors that may keep the youth from engaging in their own positive development. Therefore, interventions designed from the perspective of self-determination theory may readily engage unmotivated youth, with diffuse identities, in the process of exploration and self-concept development.

Self-Determination Theory

Self-determination theory (SDT) is an approach to understanding human development relative to people's growth tendencies and innate psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000b). Autonomy refers to the desire for choice, relatedness is the need to feel close and connected to others, and competence relates to wanting to engage in activities that present optimal challenges and to feel effective while doing so (Ryan & Deci, 2002). Research has shown that satisfying these basic psychological needs contributes to growth, well-being, and a feeling of self-determination (Ryan, 1995; Ryan & Deci, 2000a). Motivation can be intrinsic or extrinsic, with subtypes of the latter varying in the degree to which they are considered autonomous or controlled (Ryan & Deci, 2000b). The crucial quality of intrinsic motivation is that individuals engage in activities for the pleasure and enjoyment they receive from the activity itself; the activity is the reward (Deci, 1975). Extrinsic motivation refers to performing an activity in order to obtain a result that is not intrinsically defined or for reasons that are external to the self (Ryan & Deci, 2000b). Within SDT, all motivation is characterized along a continuum, with each type of motivation differing in the extent to which it is self-regulated.

Self-regulation. Self-regulation refers to thoughts, feelings, and actions that are self-generated and oriented toward attaining personal goals (Schunk & Zimmerman, 1994). It is a broad field that addresses motivation for and engagement in learning (Zimmerman, 2000). However, self-determination theory approaches self-regulation from the perspective of perceived autonomy, choice, and volition (Ryan & Deci, 2006) and addresses engagement in any type of

activity. According to SDT, autonomous motivation occurs when individuals feel that their actions and choices are self-regulated, and when they feel in control of their situations and choices (Ryan & Deci, 2000b). Intrinsic motivation and several internalized subtypes of extrinsic motivation are considered autonomous or self-determined. Other subtypes of extrinsic motivation are characterized as controlled, in that individuals experience their internal or external environments as exercising particular demands. When individuals are amotivated, they feel little control over their environments and lack feelings of competence (Ryan & Deci, 2002). These are the individuals characterized by Flum and Blustein (2000) as having diffuse identities.

At the autonomous end of the self-determination continuum is intrinsic motivation, which is characterized by a natural tendency to seek out new and challenging situations, to engage in learning activities, and to extend and exercise capacities (Ryan & Deci, 2000b). Extrinsic motivation can take one of four forms, *external regulation*, *introjected regulation*, *identified regulation*, and *integrated regulation* (Deci & Ryan, 2008; Ryan & Deci, 2000b). External regulation is prompted by external contingencies, such as rewards, punishments, threats, or deadlines (Deci & Ryan, 2008; Vansteenkiste, Lens, & Deci, 2006). Within this type of motivation individuals act in order to avoid a negative consequence. Introjected regulation occurs when an individual engages in an activity to comply with internal pressure. An example might be that a student in a career class completes an exploration activity on teaching in order to please his teacher. Introjected regulation is considered controlled; in this example, teaching is explored to gain approval and to maintain a particular appearance.

Identified regulation refers to motivation that is based on a personal identification with the value in the activity, and is thus considered an autonomous form of extrinsic motivation. For instance, students might explore career and job options on the internet, because they know this will be helpful when it comes time to make a decision about what to do after high school. This type of regulation is considered self-determined, because the reason for engaging in the activity satisfies the individual's need for autonomy. Finally, integrated regulation occurs when an individual assimilates identified regulations with their own values, needs, and self-perception (Deci & Ryan, 2008). An example of integrated regulation might be when an adolescent researches educational prospects at small liberal arts colleges, because she knows that this type of academic environment will maximize her opportunity to engage in critical thinking and writing during her undergraduate studies.

Amotivation. In addition to autonomous and controlled motivation, SDT addresses amotivation, or a lack of intention to act. Amotivation results from not valuing an activity, not feeling competent to do it, or feeling helpless to change a situation (Ryan & Deci, 2000b; Ryan, Lynch, Vansteenkiste, & Deci, 2011). Amotivated individuals cannot predict the outcomes of their actions, they often feel detached from their behaviour, and therefore expend little effort or energy when engaging in an activity (Legault, Green-Demers, & Pelletier, 2006). Amotivation in adolescence has been linked to feelings of learned helplessness (Ntoumanis, Pensgaard, Martin, & Pipe, 2004), boredom (Ntoumanis, 2002) and dropping out of school (Vallerand, Fortier, & Guay, 1997). Other theories of motivation connect a lack of motivation to beliefs about intelligence; when

individuals perceive themselves to have a fixed amount of intelligence, they are less likely to work hard towards goals they see as unattainable (Dweck, 2000). However, according to SDT, amotivation is about more than beliefs about intelligence; it takes into account one's perception of the task and its value to the individual. From this perspective, a lack of motivation occurs both when the individual holds low effort and ability beliefs, and when they are unable to personally connect to the characteristics and value of the activity (Green-Demers, Legault, Pelletier, & Pelletier, 2008; Legault, et al., 2006).

In SDT, ability beliefs refer to low perceived competence; amotivated students expect themselves to fail or struggle. Adolescents, for example, might feel that because they are failing all of their classes, they are not capable of finding a satisfying career. Effort beliefs are related to the individual's desire and capacity to invest energy in a given activity. It seems logical that if amotivated individuals do not believe they can succeed, they will be less likely to put energy into an academic task. For instance, students in a career class might enlist the teacher to do their research on the internet for them, because the students do not think they will be able to carry out the task properly. The value placed on a task refers to the importance of a particular activity to the individual (Green-Demers, et al., 2008). Some adolescents, may not see the value of career exploration; it means little to them. Finally, individuals can be amotivated as a result of the particular characteristics of a given task. For instance, the activities of career exploration may be considered boring. Certain adolescents may not find self-exploration an interesting or engaging task.

Internalization. The defining characteristic of self-determined, or autonomous types of motivation is that activities are undertaken for reasons that are in some way connected to individuals and their values. They are able to regulate the reasons for engaging in the activity, and can identify with it on a personal level; they act autonomously. Organismic integration theory (OIT), a sub-theory within SDT, posits that as individuals develop and experience the world around them, they work to understand and distinguish between their internal and external environments (Ryan & Deci, 2002). In doing so, they integrate what they see and learn into their existing cognitive structures, thereby internalizing their experiences and understanding of the world (Deci & Ryan, 1985). Internalization refers to "the process through which an individual acquires an attitude, belief, or behavioural regulation and progressively transforms it into a personal value, goal, or organization…it is the developmental process by which a child integrates the demand and values of the socializing environment" (Deci & Ryan, 1985, p. 130). The theory argues that in order for individuals to act in self-determined ways they must internalize, or integrate, their reasons for acting. Internalization is what moves individuals from controlled to autonomous motivation, and is what Flum and Blustein (2000) have suggested contributes to engaged and more purposive exploration.

Empirical Support for SDT

Research on SDT has identified three specific factors that contribute to perceived self-determination and self-regulated behaviours. Across a variety of settings, such as educational (Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005), familial and social (Soenens & Vansteenkiste, 2005), occupational (Baard,

Deci, & Ryan, 2004), and athletic (Amorose & Anderson-Butcher, 2007), self-determination has been shown to emerge when a) contexts or people within the contexts are autonomy-supportive, b) the individual's needs for autonomy, competence, and relatedness are satisfied, or c) the reason for engaging is to obtain an intrinsic goal.

Autonomy-supportive contexts. Recent research has investigated the concept of self-determination and the impact of various motivational situations on participants' experiences of autonomy. Specifically, Burgess, Enzle, and Schmaltz (2004) examined the relation of autonomous versus externally-imposed tasks on participants' perceived control, the speed at which they worked, and their level of interest in the task. Participants in this study were assigned to either a self-imposed deadline condition in which participants established their own deadline for an assignment, or the externally-imposed condition. The control condition consisted of two groups, one in which participants were asked to work on the task without a deadline, and one in which they were asked to work as quickly as possible. Participants' work was then scored for its quality, and they were asked to rate the degree to which they felt they had personal control over the deadline. The results of this study demonstrated that participants in the self-imposed deadline group completed the task in less time than those who had been assigned a deadline. In addition, participants in all groups spent more free-choice time engaged in the task and reported greater interest than participants in the externally-imposed deadline group. A separate study found similar results, such that participants in a controlled-choice condition persisted less, and performed worse at a variety of cognitive and problem-solving tasks (Moller, Deci, & Ryan,

2006). These studies demonstrate that when given choice, individuals are more likely to readily and autonomously engage in an activity.

Relative to job search, research has supported the importance of autonomy-support in enhancing motivation to search. Soenens and Vansteenkiste (2005) examined relationships between parental and teacher autonomy-support and adolescents' self-determination for job search, their actual job search behaviour, and their vocational identity. For this study, self-determination in job search was operationalized as reasons why someone would engage in searching. Each reason represented one of five types of self-regulation (i.e. amotivation, external regulation, introjection, identification, and intrinsic motivation). To indicate their job search behaviour, the adolescents reported on their intentions to engage in job search activities after graduation. Vocational identity was measured using a scale that tapped adolescents' commitment to and confidence about their career choices, and the degree to which they would actively engage in exploring their future job. The results of this study showed that self-determination in job search was positively related to adolescents' vocational identity and to their intention to engage in occupational exploration, and that teacher autonomy support predicted the degree of adolescent self-determination in both the job search and vocational identity domains. Therefore, the provision of an autonomy-supportive context by significant adults appears to play an important role in adolescents' career related activities, such as exploration, commitment, and job search behaviour.

Need satisfaction. Another contributing factor to the experience of self-determination is the opportunity for individuals to satisfy three basic

psychological needs (i.e. autonomy, competence, and relatedness) identified by SDT (Ryan & Deci, 2000a). Meeting these needs facilitates self-determination and effective functioning (Ryan, 1995). Supporting this claim, a recent study exploring the impact of need satisfaction on performance, demonstrated differential positive effects of need satisfaction on a variety of outcomes (Sheldon & Filak, 2008). This study found that for individuals engaged in playing a word game, satisfaction of competence improved intrinsic motivation, positive affect, performance, and whether or not the activity was recommended to others. In addition, competence decreased negative affect. Satisfaction of the need for relatedness had positive effects on all outcomes except performance, and satisfaction of autonomy contributed to intrinsic motivation and recommending the activity to others.

In a separate study on the relation between need satisfaction and well-being, child and adolescent participants were administered a scale to assess their perceived level of intrinsic need satisfaction at home, at school, and with friends (Veronneau, Koestner, & Abela, 2005). Scores from this scale were used to predict participants' positive or negative affect, both concurrent and long-term. Results demonstrated that satisfaction of the needs for autonomy and competence were negatively related to concurrent levels of negative affect, such as depressive symptoms, and satisfaction of the need for relatedness was connected to future levels of positive affect. In addition, this study found that satisfaction of the need for competence was the most important predictor of concurrent well-being. Others have shown that relatedness, in particular, is highly influential in encouraging positive emotional experiences (Reis, Sheldon, Gable, Roscoe, &

Ryan, 2000). Therefore, not only does satisfying basic psychological needs lead to self-determination in the immediate context, it can also influence one's inner experience, which may be crucial to the process of self-concept development.

Intrinsic and extrinsic goals. One of the other major components of SDT is the relation between autonomous motivation and intrinsic or extrinsic goals. Intrinsic and extrinsic goals are conceptually related to, but different from, autonomous and controlled motivation. Intrinsic goals are those that are fulfilling in their own right and provide direct satisfaction of basic needs (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). When individuals are focused on extrinsic goals they are more likely to make interpersonal comparisons and seek approval from external sources (Vansteenkiste, et al., 2006). Examples of intrinsic goals are community contribution, personal growth, and health; fame, financial success, and physical appearance are extrinsic goals.

Research on goals and self-determination has found that when individuals work towards intrinsic goals, the outcomes are substantial. A recent study investigated the effects of intrinsic versus extrinsic goals on adolescents' conceptual and rote learning over time (Vansteenkiste, et al., 2005). In this study, obese adolescents were asked to read a story pertaining to healthy living and eating. Participants were either told that the story would help them achieve the intrinsic goal of physical health or the extrinsic goal of increased physical attractiveness. Results showed that an autonomy-supportive context coupled with the intrinsic goal contributed to participants' higher levels of immediate and long-term conceptual learning, while participants in the extrinsic goals and internal control condition had the lowest scores on this measure. This suggests that

perhaps the development of a self-concept or plan-fullness, two abstract outcomes, may be facilitated through attendance to intrinsic rather than extrinsic goals.

In fact, research exploring intrinsic versus extrinsic goals relative to life aspirations has demonstrated that when individuals achieved intrinsic life aspirations, such as relationships, community involvement, personal growth, and physical health, they were more likely to experience greater well-being and life satisfaction (Niemiec, Ryan, & Deci, 2009). By contrast, extrinsic aspirations, or money, fame, and an appealing image, were negatively related to psychological health. In addition, these extrinsic life goals were unrelated to basic need satisfaction, suggesting that these goals do not stem from feeling competent, autonomous, or related to others. Overall, the research on goals suggests that autonomous motivation and life satisfaction can be enhanced and supported through encouraging individuals to focus on, develop, and achieve intrinsic goals.

Summary and Implications for the Current Research Program

The literature on SDT has highlighted several important factors that contribute to the development of autonomous motivation for a variety of activities. In particular, individuals feel more self-determined when they are given choice and a sense of control, when they are provided opportunities to feel competent and effective, when they feel connected to others, and when they are encouraged to achieve goals that will hold lasting and ongoing personal value. Self-determination theory and its broad empirical support suggest great potential for encouraging a context facilitative of autonomous engagement in career exploration activities. In fact, it has been suggested that self-determination is an

integral part of an adolescents' education, and that helping youth to develop autonomous motivation can smooth the school-to-adult-life transition (Eisenman & Chamberlin, 2001).

While the benefits of this theory are numerous and widely studied, the field of career development has yet to explicitly integrate this perspective into studies on adolescent exploration and identity construction. In particular, those youth who lack motivation to explore are believed to be at most risk, as they may already lack a coherent self-concept and are unlikely to willingly engage in activities that could facilitate growth (Flum & Blustein, 2000; Usinger & Smith, 2010; Wallace-Broscious, et al., 1994). The current research on career development has not addressed these youth, and therefore little is known about what they need or how to support their development. In fact, career development theory has been critiqued for representing development as a linear and homogeneous process (Leong & Serafica, 2001) that fails to attend to the vocational development of individuals from non-majority groups (Leong & Brown, 1995). For instance, much of the current literature focuses on the career development of college students with less attention paid to the experiences of youth who seek employment directly out of high school.

This is an important disctinction, because research has shown that in comparison to youth who attend higher education, work-bound youth are more likely to have lower school achievement, and be from lower socioeconomic groups (Creed, Patton, & Hood, 2010). This population thus enters the workforce with little to no formal training or preparation for the world of work (Creed, et al., 2010), and they are more likely to face difficulties, such as delinquency and

unemployment (Martin, et al., 2002). These youth are a heterogeneous group, characterized by diversity in race and ethnicity; however, the majority are male (Juntunen & Brita Wettersten, 2005). They face significant challenges, including having fewer options for jobs and competing for jobs against individuals with college degrees (Juntunen & Brita Wettersten, 2005). This population also tends to experience lower school engagement and they often find it difficult to connect their aspirations to their academic work (Blustein, et al., 1997).

These work-bound youth are hypothesized to be amotivated to explore, possess a diffuse sense of self, feel marginalized at school, and disengage academically (Flum & Blustein, 2000). Youth who disengage from school tend to experience the dominant academic discourse, that of book smarts and intellectual achievement, as undermining their strengths and marginalizing their abilities (Hatt, 2007). Academic disengagement may be particularly problematic in classes designed to facilitate career exploration, as youth who fail to explore have been shown to lack future thinking and planning (Usinger & Smith, 2010), lack an interest in work, and feel low self-efficacy (Vondracek & Skorikov, 1997).

This review has argued that in order for these at-risk youth to develop positive identities and readiness for the world of work, they must first engage in exploration that is initiated by, and continues to facilitate, their autonomous motivation. Through attendance to these factors, the developmental perspective on career and career interventions could become more inclusive of and directed at the experience of youth who lack motivation to explore. Research is needed that identifies the reasons why some youth fail to explore and develops methods of engaging these youth in exploration. The program of research that follows this

review sought to address this need and give voice to these at-risk youth. The central research questions that guided the research were: 1) what is the trajectory through which disengaged youth develop self-determined career exploration, and 2) what are the means of supporting this trajectory? Through the design of a group career exploration intervention, and through facilitating the intervention with disengaged, amotivated youth, this research sought to explore these questions and understand how to increase autonomous engagement in the career development process.

Bridging the Literature Review and Manuscript 1

The literature review summarized the key constructs in career development theory and suggested that self-determination theory may be a useful perspective from which to design career interventions to engage amotivated youth in career exploration. The review highlighted self-concept and career adaptability as two central components of career development theory, as well as the importance of exploration in facilitating these outcomes. While these constructs have been widely researched, the literature has yet to explore how to encourage autonomous engagement in exploration for youth who are unlikely to engage on their own. Self-determination theory suggests that providing support for autonomy, satisfying needs for autonomy, competence, and relatedness, and working towards intrinsic goals are all ways in which to facilitate autonomous motivation for an activity. Therefore, providing these conditions may be the key to supporting successful career exploration of amotivated youth.

This program of research sought to explore this hypothesis and understand both the trajectory through which amotivated youth develop self-determination for career exploration and the factors that support this development. In order to study the trajectory, we needed to design a context that could facilitate the youth's self-determination and then to explore the context and its impact on development. We could then explore the process of development and how it occurred. However, to achieve these goals we needed a method that could structure the design of the intervention and the exploration of its contribution to the developmental trajectory. Manuscript 1 details this method.

CHAPTER 2

The Scientist-Practitioner Design Framework: Bridging Research and Practice through the Process of Design

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Abstract

The recent push towards evidence-based practice in psychology has led to calls for new scientific methods that can bridge research and practice. This is particularly important within the context of the scientist-practitioner model of training in counselling psychology. While this is the gold standard for training, students and professionals trained from this perspective still struggle to integrate their two professional roles. To address this issue, and advance the field of scientist-practitioner integration, this paper puts forth an innovative and rigorous scientific approach that is grounded in a philosophy of clinical practice. The Scientist-Practitioner Design Framework (SPDF) suggests a scientific method in which research is conducted through the lens of practice. Guided by the scientist-practitioner's clinical orientation, a theoretical framework is identified, a clinical or practice-based intervention is designed, and methods of data collection and analysis are selected. The method integrates theory, design, research, and practice into a comprehensive framework. This paper summarizes the approach, reviews its process though an example of the development of a career exploration intervention for at-risk adolescent males, and evaluates the approach relative to its credibility as a research method.

Keywords: design, scientist-practitioner, method, evidence-based practice

The Scientist-Practitioner Design Framework: Bridging Research and Practice through the Process of Design

With the recent publication of the American Psychological Association's (2006) report on evidence-based practice, and with current calls to bridge the gap between research and practice (Murdock, 2006), the time is ripe for new concepts of the nature of science in counselling psychology. The field is moving to redefine evidence and how it can be used to guide clinical practice, thereby expanding the definition of evidence to include not only findings from experimental studies, but information and participant perspectives gained through qualitative and participatory methods (Chwalisz, 2003). These new definitions have contributed to a broadened view of how to conduct research, as well as how to develop evidence-based practice. Presently, the majority of applied, clinical research has focused on developing *evidence-based treatments*, or interventions and techniques shown to contribute to therapeutic change (Kazdin, 2008). While these treatments lend themselves well to empirical investigation, their attention to issues of internal validity often render them less adaptable to the nuances of day-to-day clinical practice. As a result, the field has begun to address the need for *evidence-based practice*; however, little research has been conducted in this area to date (Kazdin, 2008).

Evidence-based practice refers to clinicians' informed use of evidence to select interventions and to use expertise in individualizing care based on a client's needs, values, and preferences (Kazdin, 2008). The goal of evidence-based practice is to improve the benefits of psychological interventions with evidence (Wampold, Goodheart, & Levant, 2007). Evidence characterizes the inferences

we make about data. Data become evidence when they are understood with regard to the phenomena investigated, the model used to generate the data, previous knowledge, theory, the methodologies employed, and the human actors involved (Wampold, et al., 2007). Evidence-based practice in psychology starts with the client and then seeks what evidence may assist the clinician in supporting the best therapeutic outcomes (APA, 2006). This involves a process of decision-making to integrate into the intervention process a variety of research evidence. Good evidence-based practice stems from using clinical expertise and listening to what clients value and need (Levant & Hasan, 2008).

Evidence-based practice is a cornerstone of the scientist-practitioner model of training and the gold standard for doctoral-level training in counselling psychology (Chwalisz, 2003). The model was developed at the Boulder Conference, which focused on integrating science and art in the training of doctoral students (Myers, 2007). Scientist-practitioners are trained to conduct research and to engage in applied, psychological practice with clients. The goal of the model is to produce counselling psychologists who can integrate their applied and theoretical knowledge to diagnose, treat, and conduct research (Peterson, 2000). The model posits that scientific thinking must permeate all areas of the professional role, including learning, practice, research, and supervision (Blair, 2010). In other words, scientist-practitioners use research to guide their practice and attend to issues of practice when conducting research. Some have argued, however, that the scientist-practitioner model dichotomizes research and practice (Anderson, 2000) and others have suggested that researchers rarely integrate research into practice (Rennie, 1994). In addition, there is little

guidance for counselling psychologists on how to effectively integrate these two professional roles (Murdock, 2006).

We believe that the field of counselling psychology is in need of new, systematic ways for scientist-practitioners to truly integrate their two roles and produce evidence that is directly applicable and transferrable to clinical practice (Murdock, 2006). Practitioners working from an evidence-based model need to hold scientific and humanistic perspectives simultaneously (Wampold, et al., 2007). This means they should engage in a genuine, supportive, empathic relationship with the client and ground their work in science. We propose that researchers can also adopt this approach, allowing both science and a clinical philosophy to inform the development of research questions and the methods of exploring them. In the same way that a practicing psychologist assesses, interprets, and develops a treatment plan, we suggest that researchers draw from their clinical expertise to assess research problems, collect data, interpret the data, and develop a plan for improving the problem.

Recently, others have also called for a greater diversity of scientist-practitioner methods that lead to evidence-based practice in counselling psychology. Bernes, Bardick, and Orr (2007) suggest that career counselling research in particular is in need of better methods that link theory to practice. They recommend that collaborative and interdiscplinary work, mixed-methods approaches, descriptive field studies, and longitudinal research, in addition to the traditional experimental approach can lead to better evidence-based career counselling practices. They argue that by expanding our methods, counselling interventions will more adequately address the scientist-practitioner nature of the

field. Similarly, Carey, Dimmitt, Hatch, Lapan, and Whiston (2008) have articulated the need for stronger evidence-based practice in school counselling. To address this issue, these authors have developed a protocol for evaluating school counselling practices and determining the extent to which the interventions are effective. The protocol thus allows for the identification and selection of the best-practices for schools.

One of the most clearly delineated attempts at structuring the research process to produce evidence-based practice comes from The Canadian Research Working Group for Evidence-Based Practice in Career Development (Baudouin, et al., 2007). This group has developed a unique framework for developing evidence-based career interventions that connects outcomes (e.g. changes in attitudes), processes (e.g. specific interventions) and inputs (e.g. staff, funding, facilities). Specifically, Baudouin et al. (2007) suggest that research should start by identifying the desired outcomes, then developing the processes that can best produce those outcomes, and finally selecting the inputs that will lead to the desired processes. Research efforts could thus focus explicitly on one of these areas while acknowledging and exploring the interconnectedness between these three central components of career intervention.

Within this mandate to advance evidence-based practice, and with the explicit goal of integrating research and practice, we propose an innovative, rigorous approach to research that can directly produce useful and relevant practice-based evidence. Our approach explicitly links theory, research, and practice, with a focus on using all three to design counselling interventions. Adapted from design-based research in education (A. L. Brown, 1992), we

present a *Scientist-Practitioner Design Framework* (SPDF). In this paper, we review the SPDF as we have conceived it, and then discuss how we have used it to design and explore a vocational intervention (the *Motivate to Explore Career Intervention*). We will explain the development of the research program, as well as highlight future directions for the SPDF. We also review potential challenges faced by researchers who might use this approach, and suggest ways to ensure scientific rigour when using the method. Prior to detailing the framework, we ground it in its origins: design-based research (A. L. Brown, 1992; Cobb, Confrey, diSessa, Lehrer, & Schauble, 2003).

Design as Research: Creating Developmental Contexts

Design-Based Research in Education

In 1992, A. L. Brown argued that in order to study learning it is necessary to understand the context in which the learning occurs. She highlighted that isolating an aspect of learning in order to study it ignores the nuances of how context influences the learning process. From this perspective, learning is considered dependent on context, and therefore research methods should capture the learning process as it unfolds in its naturalistic setting. By understanding the contextual factors that contribute to learning, we more effectively and realistically explore the process through which knowledge is acquired. A. L. Brown (1992) termed this type of research "design experiments" wherein the learning context is both designed and studied simultaneously. She modeled this approach on procedures of design sciences, drawn from fields, such as engineering, aeronautics, and computer science. In these fields, research focuses on developing and continually refining a product that will carry out a particular,

unique, and marketable function. The broad field of design aims to create functional, innovative, and efficient products that are of relevance and utility to users (Verganti, 2009).

Design research in education extends the design philosophy to the study of teaching practices, and the development of optimal learning environments. In general, design seeks to determine how its artefacts perform in different situations and under various conditions; educational design research investigates how different designed learning environments affect teaching and learning (A. Collins, Joseph, & Bielaczyc, 2004). As with products in other design fields, educational design "prototypes" are utilized in the world to see how they work. Based on findings from investigation and evaluation of the initial version, design researchers continually revise and improve upon the prototype, gradually building a better and more targeted "product". In order to sustain a product, it must be studied over time and across various settings (Design-Based Research Collective, 2003). The underlying goal of design research in education is to develop innovative teaching practices, through a process of implementation, evaluation, and revision. The cornerstone of this approach is the investigation of teaching and learning in real-world, naturalistic settings (A. Collins, et al., 2004). When studying student learning in its context, the theories and practices developed can be more relevant and applicable to actual practice.

Cobb and colleagues (2003) contend that design-based research seeks to develop a greater understanding of the *ecology of learning*, and that this process is characterized by a series of distinguishing features. The first feature is that the purpose of design research is to develop theories about the process of the intended

learning as well as the means of supporting that learning. The second feature is that design research is highly intervention-focused. A design is placed in the world, and its impact on learning is then explored and tested out in that setting. The third feature is that the method creates the conditions for testing theories, while at the same time subjecting the theory to evaluation. Researchers investigate theory in practice and understand that the value of a theory lies in its ability to produce and facilitate change (Barab & Squire, 2004). In order to explore theory in this way, design research is necessarily iterative. The iterative nature of design is the fourth feature. The process requires cycles of invention and revision as researchers seek to develop increasingly focused designs and progressively refined theoretical propositions about the effect of the designs on learning. The fifth feature of design research is that theories developed during the experimental process are often specific and intermediate in scope; they are rarely grand theories of social or cognitive processes (diSessa & Cobb, 2004). Theories in this type of research attend to the specifics of the design (i.e. how and why it works), and offer a direct understanding of the potential issues and problems faced by practitioners. Design researchers are therefore responsible not only for demonstrating that a design works, or explaining how and why it works, but also for reflecting on how the design itself contributes to and advances existing theories about the learning the design supports (Barab & Squire, 2004). Often, the design itself raises new questions for research, and following the directions the design takes is a significant part of the design-based research process (Joseph, 2004).

Design-Based Research as Method

Design-based research differs from the experimental approach to intervention research (i.e. randomized controlled trials) in that design research includes several additional steps (Middleton, Gorard, Taylor, & Bannan-Ritland, 2008). Rather than testing hypotheses based on a theoretical belief, design researchers start by collecting and analyzing data to first conceptualize the problem as it occurs in the world. Prior to developing hypotheses, design researchers explore practice and its context to better understand what theories to employ and what types of hypotheses to develop. At this stage, hypotheses are local and practice-based rather than derived from testable theories (Bannan-Ritland, 2003). Out of these local hypotheses, researchers develop an initial design, which they then explore, typically using qualitative methods, to identify what aspects of the design may work and what could be improved (Middleton, et al., 2008). The third phase in this process is developing a feasibility study, wherein the intervention is implemented and tested for its applicability with its intended users (e.g. teachers, students; Lamberg & Middleton, 2009; Middleton et al., 2008). Following this phase, the intervention is refined and can then be subjected to experimental and controlled studies that test causal relationships using quantitative methods.

With the addition of these design stages, design-based research can rarely be conducted in one or even a few studies. This type of research typically comprises an ongoing research program, wherein a number of studies are conducted to gradually and systematically refine the design, and to explore, and eventually test, theory (Bannan-Ritland, 2003). Design-based research thus involves a series of investigations aimed at *design*, prior to evaluation. As such,

design research typically occurs over a series of years as researchers work toward the formulation of a model that can be tested, evaluated, and validated in future studies (Middleton, et al., 2008; Sloane & Gorard, 2003). Multiple sources of data are often collected, including ethnographic data. This wealth of data enables study of the variables of interest, as well as of the context in which the variables are situated (Cobb, et al., 2003). For instance, a design study investigating the impact of a computer-assisted learning program on the development of reading skills in students with a learning disability may seek to understand how interactions among students influences the way in which the program is used. Observation data and field notes may be recorded, and interviews with the students may be conducted, all to explore the context in which the computer program is used. By understanding the classroom context, the computer program can be further refined to account for how, as well as what, students learn when using it.

The Scientist-Practitioner Design Framework

Our adaptation of design-based research is grounded in Bannan-Ritland's (2003) Integrative Learning Design framework (ILD) and Middleton and colleagues' (2008) description of the design cycle. Both of these perspectives start by conceptualizing the problem as it occurs in the world, and then focus on designing an initial intervention, exploring its utility by placing it in a naturalistic context, and refining the design gradually through ongoing investigations. We have adapted the process to make it relevant to scientist-practitioners in the field of counselling psychology. We have derived the SPDF through infusing a scientist-practitioner perspective into the process of design. Our research has

focused on using design principles to develop a vocational intervention to support and facilitate the successful career development of academically disengaged youth. An important goal for this research has been the development of an intervention that is both feasible in the high school context and transformative for the youth participants.

The design-based research framework starts with recognition of specific values and beliefs about clinical practice. A philosophy of practice (e.g. cognitive-behavioural, interpersonal) informs the research process, including identifying the problem, selecting a theory, developing an initial design, and defining research procedures. In other words, the scientist-practitioner's clinical orientation should guide the choice of theory, design, and research methods. For instance, the first and second authors of this paper are practitioners who approach their clinical work from an integration of interpersonal/relational and feminist perspectives. As we would with our clients, we chose to engage participants as collaborators in the process of designing activities for the career exploration group. We framed our research approach within the participatory philosophy of human inquiry research (Heron, 1981a; Reason, 1994), in order to develop our initial design *with* our adolescent participants. We selected a philosophy of science that matched our clinical beliefs about change.

As clinicians, we believe in the centrality of the relationship, and that therapeutic change occurs through attendance to and challenge of interpersonal and relational dynamics that occur between client and therapist. We also believe in collaboration and balancing the power between client and therapist. The human inquiry approach to science similarly suggests that knowledge is generated

from and through interpersonal interactions with participants (Heron, 1981b). Researchers not only observe or interview, but are also participants in the research process. Empirical knowledge is generated through the human encounter (Reason, 1981), and all participants engage as active co-researchers. It was our belief that by framing the research process within the human inquiry paradigm, the resulting design would be transferrable to our practice. While this was the philosophical approach we selected, other scientist-practitioners engaging in design should carefully choose a research paradigm that fits the practice-based goals of their research. In the SPDF, this paradigmatic, practice-oriented perspective guides and informs all design and research decisions made. In the following sections, we detail our design-based research process as conducted to develop the Motivate to Explore Career Intervention.

The Process of Design: An Example of a Vocational Intervention

The process of developing our intervention comprised the initial stages of design-based research. The work we have completed to date has focused on conceptualizing the target problem, developing an initial design, and conducting a series of qualitative studies to explore the feasibility of the design. This section details the design of the intervention, including our theoretical, design, and methodological decisions. Using detailed examples from our investigations, we explain our decision-making processes and ground them in the SPDF. Figure 1 outlines this process and the questions that guide it. Next to each question, we have identified the specific goal (i.e. theory, research, design, practice) to be carried out by addressing that question. For instance, the question "what theory addresses this problem?" is asked with the goal of selecting a particular

theoretical perspective that will frame the design process. The research questions that have guided our research program are how do at-risk youth develop motivation for career exploration (i.e. what is this process and how does it unfold?) and how can a group intervention contribute to the process?

From Practice to Theory: Conceptualizing the Problem

The initial idea for this research grew out of the first author's clinical work with underprivileged and marginalized adolescents. While training as a graduate student at both an inner city high school and an adolescent outpatient psychiatry clinic, she was struck by the resilience her clients demonstrated. They faced a range of social, economic, familial, and educational barriers, yet persevered and showed significant strength in less than optimal circumstances. While they struggled, they also maintained an optimistic outlook and a desire to grow and thrive. However, many of these youth did not feel supported by their environments, and seemed to crave authentic connection with adults who noticed and encouraged their strengths. At the same time, the first author had been reading about positive youth development (Larson, 2000) and became inspired to investigate how counselling could be used to facilitate and enhance optimal development for at-risk youth. Her main interest was in developing a strength-based intervention for an at-risk group of adolescents.

The initial stage of the SPDF process involved linking this clinical interest to a theoretical perspective and identifying the local need for an intervention of this kind. It was crucial to our research team to develop an intervention that not only addressed a research-identified need, but a need in practice as well. The first step thus included a thorough review of the literature *and* a needs assessment in

the field.

Selecting a theoretical perspective. To identify a theoretical framework, the first author reviewed literature on counselling psychology, psychotherapy process research, guidance counselling, adolescent development, and career development, as well as the more specific theories of positive youth development, self-determination, strength-based counselling, and positive emotions. She then began sifting through and selecting those areas that she believed could lend themselves to designing an intervention to promote adolescents' optimal development. This stage of the process involved reading the literature through the lens of design (Joseph, 2004). As she reviewed the literature, she asked herself: "how can this theory/research help to *design* a strength-based intervention for at-risk youth?" This question helped to select the theories that were well developed and could structure an intervention, and rule out theories that seemed too broad or too local, or those that did not yet have a well-developed empirical foundation. In other words, selecting a theoretical perspective involved careful review of previous theory and research to identify gaps in the literature and operationalize our variables: a strength-based context, at-risk youth, and positive development.

This review resulted in identifying Flum and Blustein's (2000) perspective on career exploration as a useful overarching, orienting framework for conceptualizing the intervention goals. This perspective integrates theories of motivation, career exploration, and identity development, and suggests that interest and engagement in exploration is closely linked to identity styles. Specifically, the model argues that motivation to explore is connected to an openness to developing and growing. These individuals are self-explorers and

thus construct their own identities through the process of open exploration. By contrast, individuals who either lack a coherent sense of self, or those who have adopted a rigid identity are unlikely to explore either for lack of motivation or for fear of change. When individuals lack motivation altogether, they are disengaged from the exploration process. This disengagement is connected to a lack of growth and a diffuse or undefined identity (Flum & Blustein, 2000). This view of exploration suggested a beginning and an end to a developmental process (career identity development), and highlighted factors that contribute to or impede that process (diffuse identity, disengagement, lack of motivation). The theory was used to focus our design.

Grounding the problem in the field. Prior to designing an intervention using this theoretical perspective, we assessed the need for such an intervention. We researched existing career development programs in local area schools and found out that many of the schools had recently implemented a mandatory career exploration course taken by students in the ninth grade. To address the needs of an at-risk population, we were interested in finding out more about why certain students might achieve minimal competency in the course (i.e. why they require guidance and external structure, or why they do not explore widely), and how to structure the research around counselling these individuals to more readily engage in exploration.

We interviewed several teachers and asked them to describe a typical profile of a student who struggles in the course. (See Appendix A for the protocol used to interview the teachers). We also asked the teachers to indicate how they have tried to help these students, what works for those students who do well in the

class, and to speculate about what additional help or services they believe the at-risk students might need. In addition, the first author met with one of the teachers and compared assignments completed by motivated and amotivated students in the class. The interviews with the teachers revealed that motivation and a lack of future-orientation were major determinants of the lack of success for some students. Review of the assignment materials showed more depth, clarity, and organization from motivated students. In the interviews, several teachers stated that the amotivated students do not seem to care, they "don't get it", and many of them do not see how their work in the class has relevance to the future. A few of the teachers also reported that the students who were failing that course tended to be the students who were failing most of their classes. These youth were not the students with learning disabilities or other special needs. They were consistently identified as capable learners, but described as disengaged and apathetic towards school. Many of the teachers stated that they had attempted one-on-one time and the teaching of organization skills to help these students. However, these strategies had not generally increased student motivation for the course. When asked what they believed could be done to help these students, all of the teachers agreed that some additional services prior to or after the course might improve the students' performances.

Defining the problem. Based on our interviews with the teachers and our reading of the literature, we hypothesized a series of factors that may have contributed to student failure in the course. These factors included lack of motivation for career exploration, lack of motivation for school in general, feelings of apathy towards the exploration process, confusion as to the definition

of career exploration, feelings of low self-esteem and self-efficacy, and little outside encouragement or support for career exploration from peers and family. We also considered the possibility that the methods of teaching were inadequate or ineffective for these particular youth, but chose to explore the problem at the level of the students. This decision was due to our interest in and investment in facilitating youth development rather than exploring teaching practices.

As is typical with design-based research, selecting a particular focus for the design means addressing some hypotheses and knowingly failing to address others (Joseph, 2004). Our hypotheses about student motivation provided us with a foundation and focus for our intervention. However, in order to design activities, we needed a more defined and empirically-supported perspective, as a design must be systematically articulated in order for it to be studied and revised (Bannan-Ritland, 2003). Therefore, our next step, and the next stage in the SPDF, is to use empirically-supported theories to operationally define the constructs of interest.

From Theory to Design: Developing the Prototype

Defining the constructs. Operational definitions make data transportable across design settings by establishing a common understanding of the constructs under study (McCandliss, Kalchman, & Bryant, 2003). By grounding the design in existing theoretical constructs, it allows for use and study of the design across contexts. In our work, this meant honing in on specific aspects of the multidimensional view of career exploration, and structuring our design around empirically-validated principles within the theories. Situating our research within the human inquiry paradigm, we sought to create a design that attended to both

process and content elements. Content refers to *what* individuals talk about in counselling groups, while process captures *how, when*, and sometimes *why* the content is discussed (Yalom, 1995). To operationally define the content and process, we drew from two specific theories housed within our conceptual framework. Self-determination theory (Deci & Ryan, 1985) was used to structure our understanding of how to design the counselling process, while Super's (1990) life-span, life space approach to career development provided a set of constructs from which to design the content. In other words, we sought to design career development activities that would occur within an environment that promoted self-determined action to engage in those activities.

Self-determination theory is a widely researched approach to understand human motivation. Its principles have been investigated and substantiated across a variety of fields, including education (Vansteenkiste, et al., 2005), environment and sustainability (Osbaldiston & Sheldon, 2003), occupation and work (Gagne, Chemolli, Forest, & Koestner, 2008), sports (Amorose & Anderson-Butcher, 2007), and health care (G. Williams, Niemiec, Patrick, Ryan, & Deci, 2009). Self-determination theory conceptualizes motivation along a continuum. Along the continuum the types of motivation differ relative to the extent to which they are experienced as autonomous. Amotivation is characterized by a lack of intention to act, extrinsic motivation occurs when individuals act to achieve a particular goal, and intrinsic motivation defines actions that are engaged in for the pleasure they provide (Deci & Ryan, 2008). The theory further differentiates types of extrinsic motivation, some of which are perceived as controlled (i.e. originating from a source outside of the self, such as pressure from a parent) and

others perceived as autonomous (i.e. originating from an internal source, such as a personal value). Motivation becomes autonomous when actions are internalized; that is, when individuals assimilate their actions with their own personal values, beliefs, and goals (Ryan & Deci, 2002). Therefore, individuals are likely to feel autonomous when their actions are connected to or integrated with who they are. Research on SDT and autonomous motivation has shown that internalization occurs when the basic psychological needs of autonomy (volition and control), competence (effectance and feelings of success), and relatedness (connection to others) are fulfilled (Deci, Eghrari, Patrick, & Leone, 1994) and when the focus is on intrinsic goals, such as personal growth (Vansteenkiste, et al., 2006).

The life-span, life-space approach to career development argues that individuals develop career self-concepts across the lifespan through negotiating various life roles, such as child, sibling, spouse, and employee (Super, 1969). Through exploration of and connection to the social environment, youth learn about themselves and the world of work (Savickas, 2002). Successful career development is characterized by career adaptability (Savickas, 1997), which denotes flexibility in negotiating ongoing internal (self-concept) and external (occupational) changes. Career adaptability includes readiness, exploration, planning, and feelings of competence (Hirschi, 2009). When youth have successfully engaged in career exploration, they are more likely to develop a well-developed self-concept (Blustein, 1994) and to possess greater adaptability (Savickas, 2005).

Preparing the design. Using these two empirically-validated theoretical perspectives, we decided to develop a group intervention that could facilitate the

career adaptability of disengaged youth through promoting their autonomous motivation for career exploration. We wanted the group to fulfill the youth's needs for autonomy, competence, and relatedness, to help them work towards intrinsic goals (e.g. self-discovery), to facilitate their information gathering about the world of work, and to help them connect their self-knowledge to knowledge of work environments. Figure 2 outlines our use of the various theories to design the process and content of the intervention. To begin our design process, we created activities for the first three group sessions. Drawing from our collaborative, human inquiry perspective, we wanted the youth to be involved in the design process beyond the first three sessions. By designing the beginning of the intervention, we allowed for ongoing input from the youth. Our first three sessions were designed to introduce the youth to the group, engage them in exploring the reasons for their lack of motivation in their career class, and help them identify their interests and sources of motivation. Once we had these first sessions clearly outlined, we recruited participants.

The first group of participants was involved in designing the first version of the intervention. As is typical of design-based research, we engaged in both prospective and retrospective phases of analysis (Cobb, et al., 2003). The prospective phase included exploring ethnographic data (i.e. observation notes and videorecordings of sessions) between sessions in order to design and refine activities. The retrospective phase consisted of the formal data analysis and interpretation, conducted after all sessions were complete and all data had been collected. The retrospective analysis will be discussed in a later section of this paper.

Prospective analysis. The prospective analysis consisted of weekly research team meetings. These meetings were held between sessions and typically lasted between one and two hours. Two research assistants took field and observation notes (one researcher attended the sessions, the other watched videorecordings), and the first author, who facilitated the groups, recorded her impressions and observations following the sessions. These three sets of perspectives provided the foundation for the team discussions. We used a set of questions to focus our observations of the designed activities, the participants' responses to the activities, and contextual factors influencing participants' experiences. The guiding questions were: 1) how did the interventions facilitate or not facilitate the intended self-determination outcome for that session? 2) How did the interventions facilitate or not facilitate the intended career exploration outcome for that session? 3) How do the observations from the session change or modify our thinking about the intended self-determination/career exploration outcomes? 4) How do the observations from the session change or modify our thinking about the proposed interventions? 5) What needs to happen in the next session in order to further facilitate the intended self-determination/career exploration outcomes?

The activities for the first version of the intervention were designed primarily through our team discussions, based on our observational data, and with input from the participants. At the end of every session, participants were asked about their experiences in the session and what they liked and did not like about the activity. We considered this feedback during our team discussions, and used it to guide the design of the following session. This process resulted in a 10-session

intervention that combined experiential group activities, filling a career "toolbox" with the youth's personal attributes (e.g. personal characteristics, skills, and career values), identifying barriers and obstacles to successful career development, group discussion around sources of motivation and amotivation, and integrating learning through completing a "profile sheet" to record personal attributes, career values, and the connection between these and various work environments. Our next step was to refine the intervention and explore its feasibility with a different set of youth. This characterized the third phase of the SPDF process, wherein the design guides further investigation.

From Design to Research: Feasibility Studies

Using design to guide research. The goal of the third phase of the SPDF process is to move from design to research (i.e. investigation of the design). In doing so, the design and the change it is intended to produce is refined. This contributes to development of a local theory about how the design contributes to participants' development. The theory that emerges from the first version of the design is then explored through a second iteration. Design is thus the vehicle through which the theory is developed, explored, and eventually tested (Joseph, 2004). In our research, we interviewed the first group of participants one week after the final group session. We asked them about their experiences of developing autonomous motivation for career exploration through the group. The goal of the interviews was to obtain information about the developmental process and to elaborate our understanding of how the design contributed to the process.

In these interviews, the participants highlighted the importance of feeling comfortable, validated, and supported in the group. They also talked about how

the group activities motivated them to take action outside the group, in the form of asking parents or mentors for help in making career decisions. One central theme that emerged from the interviews was that participants appreciated having learned more about themselves and about matching their personal qualities to work environments. We then used this information to start planning for revisions to the design that could more directly facilitate this outcome. We developed an interview protocol that we could administer both before and after the next group intervention to explore changes in self-knowledge as a result of the group. Therefore the pre-group interview for the second group was an innovation supported by the outcomes of the first group. This protocol was designed to identify differences in participants' help seeking, self-awareness, and initiative from pre- to post-group.

With the data from the first group about how the group process contributed to development, and what kind of development it facilitated, we refined the session activities to more purposefully address the self-awareness aspect that the first group had highlighted. We chose this aspect because we understood it as the most transformative and beneficial outcome of the first version of the intervention. By following up on this aspect, we sought to learn more about how our design could target the development of career self-awareness. This demonstrates how, within the SPDF, design drives the decisions researchers make. We made specific revisions to the design based on data and evidence yielded from the prospective analysis (A. Collins, et al., 2004). This guided the development of the next version of the intervention. We also sought to develop our theoretical understanding of how the design contributed to the development of

career self-awareness for this population of at-risk youth. This helped to focus the design as well as the research methods. We developed a new interview protocol in order to understand particular aspects of the developmental process, and we revised the intervention in order to illuminate those aspects. (Appendix B outlines and compares the two initial versions of the intervention).

An example of this is our revision of the career "toolbox" activity. With the first group, we gave each participant a plastic toolbox, and asked them to complete the sentence "I am___" with six different personal attributes. We then asked them to place these in the toolbox. This was followed by a discussion with the youth about their identified attributes, and about what "tools" they wish they had in their toolboxes. While the youth engaged in the activity it ended with them getting off track, losing focus, and identifying inappropriate external factors, such as alcohol. As a result of this, we decided to structure the toolbox activity differently for the second group. We also expanded it to include more than just personal characteristics. This time, prior to the session we filled each toolbox with six empty envelopes labelled "me", "interests", "skills", "values", "needs", and "supports". The facilitator also prepared her own toolbox with two examples for each envelope, so she could model the activity for the youth. In the session, she guided the participants through filling each envelope one by one. She started with the "me" envelope. To increase the youth's competence in completing the activity, we provided pre-written personal characteristics (e.g. creative, organized, funny) from which they were asked to choose three to four. Once the youth understood the purpose and process of the toolbox activity, the facilitator led them through supplying the remainder of their toolbox without the pre-written prompts.

This led to almost all of the participants identifying in the post-group interviews that this activity was the most useful and central to their learning.

Retrospective analysis. Once we had refined the entire design and facilitated it with a second group of youth (who had failed the same kind of career class), we conducted two qualitative studies to explore 1) the process of career development as a function of the group experience and 2) the design's mechanisms of change. Our goals for analysis were to develop a theoretical explanation about the developmental process and how the design contributed to this. We conducted a grounded theory analysis (Corbin & Strauss, 2008; Glaser & Strauss, 1967) from participants' interview transcripts (Kerner & Fitzpatrick, 2011), and then followed this with a case study (Stake, 1995; Yin, 2009) exploring the intervention's mechanisms of change (i.e. how the group contributed to one participant's change process; Kerner, Fitzpatrick, Rozworska, & Hutman, 2011). The purpose of grounded theory is to develop a theoretical explanation of a process that is grounded in participants' experiences. Our analysis, from the interviews with both groups of participants, resulted in a model of *Developing a Work Identity*, characterized by a process of learning more about the self and how to connect this to work. We then honed in on one aspect of this model, the group influences, and explored the process of one exemplary participant. This case study helped us to elaborate our model, particularly with regard to the role of the design in influencing the process of developing a work identity. The data analysis therefore led to a more detailed understanding of the design and to its impact on the self-determined career development of amotivated and disengaged youth.

From Research to Practice and Beyond: Future Directions

To summarize, the research described above originated from a clinical interest in facilitating the positive development of at-risk youth. This guided our selection of a theoretical framework, which we used to structure the development of an initial version of an intervention. We then implemented, refined, and explored the design relative to its contribution to the self-determined career exploration for the youth in the studies. Refining and exploring the design using specific data collection and analytic methods resulted in an intervention *and* a theoretical explanation about how this intervention contributed to a particular developmental process. This process constitutes what we have proposed as the Scientist-Practitioner Design Framework, a research process framed by clinical considerations.

We have presented the framework as one that is based in both practice and science, and thus guided by both roles played by the scientist-practitioner. We believe that the results of the SPDF process can be easily integrated into clinical practice, and that clinical practice heavily informs the ongoing development of the research. Our findings have direct applicability to practice, as they were derived out of practice-based, participant-driven methods of data collection. For instance, we could see guidance counsellors in high school settings offering our intervention to those youth who fail to engage in career exploration in the classroom. We could also imagine practitioners who work with disengaged youth integrating into counselling sessions some of the techniques we have designed. On the science side, we see our next step in the research process as testing the intervention model and continuing to refine the theory of *Developing a Work*

Identity. This may be done through developing new outcome measures and testing the theory in a variety of contexts. Through testing the theory, we will also be refining the intervention. The end result will be a design that is closely tied to a theory explaining its direct impact on practice.

Addressing Challenges to the Rigour of the SPDF

While we have outlined the potential benefits and opportunities afforded by the SPDF, we also acknowledge the challenges of maintaining the kind of rigour necessary for a scientific approach. In this section we attempt to address some of the issues relative to methodological rigour and the use of the SPDF. As our work to date has been primarily qualitative in nature, we will review the standards of research quality from this perspective in order to allow the reader to critique and understand the research process as we have presented it here. We do not suggest that quantitative methods cannot be used in this framework, but due to the exploratory nature of the early stages of the process, qualitative methods might be most appropriate at the start. However, we could also imagine others using a mixed-methods approach, such as explanatory case studies (Yin, 2009) or single-case experimental designs (Kazdin, 1982).

In 1985, Lincoln and Guba identified a specific set of standards by which qualitative research could be evaluated in order to determine and assess its scientific and methodological rigour. These authors suggested that the trustworthiness of qualitative research be examined relative to its credibility, transferability, dependability, and confirmability. Credibility refers to ensuring and communicating rigour; transferability is the extent to which the findings can be generalized beyond the study; dependability deals with the consistency or

reliability of the methods; and confirmability refers to demonstrating that the findings have been derived from the data rather than from researcher biases or beliefs (Morrow, 2005).

One of the major challenges we see in conducting scientist-practitioner design research is communicating a credible process, and demonstrating to others that reliable methods of data collection and analysis have been used. Meyrick (2006) argues that good qualitative research should establish systematicity through the use of an explicit analytic framework. According to Morrow (2005), this analytic framework should stem from the research design that was selected at the beginning of a study. Therefore, across the scientific process researchers should explicitly demonstrate how they selected participants, and collected, recorded, and analyzed data. We believe that the use of a clear and well articulated theoretical framework at the start of the SPDF process can provide this structure. The theoretical perspective is the foundation upon which the remainder of the research is conducted. We suggest that users of this research approach clearly delineate their theoretical framework at the outset of the study and then refer any and all research decisions back to the theory. For instance, SDT provided us with an operational definition from which to select our population: adolescents who were amotivated in their career class. Detailing research decisions within the context of the theoretical framework can allow readers to critique the process and decide whether they believe it maintains rigour. This can also provide a particular context for understanding the transferability of results.

In our own work, another challenge has been conducting the procedures from an integrative scientist-practitioner standpoint. For instance, one issue that

frequently arose for the first author during data collection was how to be involved in the design process and also analyze the data retrospectively. The first author, who both facilitated the groups and conducted the analysis, often felt enmeshed in the data. She frequently wondered if the human inquiry approach would slur the qualitative analyses and interpretation, as she had intimate knowledge of the constructs through working closely with the participants. To substantiate our process, we used multiple records to show the dependability and confirmability of our methods (Creswell, 2007). We kept detailed notes about the process, the first author's experiences as a co-participant, and the design and analysis decisions made. The team meetings between sessions served as opportunities to debrief, explore, and understand reactions to and involvement with the participants. Written and audio records documented the systematic process through which we made methodological and analytic decisions, such as the use of memos (Corbin & Strauss, 2008) to track the first author's thinking about emerging themes during the grounded theory analysis. We suggest any researchers adopting the SPDF approach should also take steps to carefully record and document all decisions, discussions, and actions. However, we also argue that the research is more credible when it is flexible and when it adapts to the dynamic context of the study and its phenomenon (Whittemore, Chase, & Mandle, 2001). This allows others to evaluate the quality of the research and interpretation of results, as they emerge over the course of the study. A combination of structured documentation and openness to the process is most likely to result in a highly credible process that is also applicable to practice.

While we are eager to argue for the utility of the SPDF, we also recognize

how time-consuming, complex, and ultimately challenging doing this kind of research can be. We do see this as a drawback for its use by scientist-practitioners who already struggle to find time for their various professional activities and passions. However, we also hope that those interested in bridging research and practice will be enthusiastic about the potential for this framework to contribute to the field. With the SPDF, we aim to inspire practitioners to engage in research, and to suggest new, practical methods of invigorating the research process for scientists.

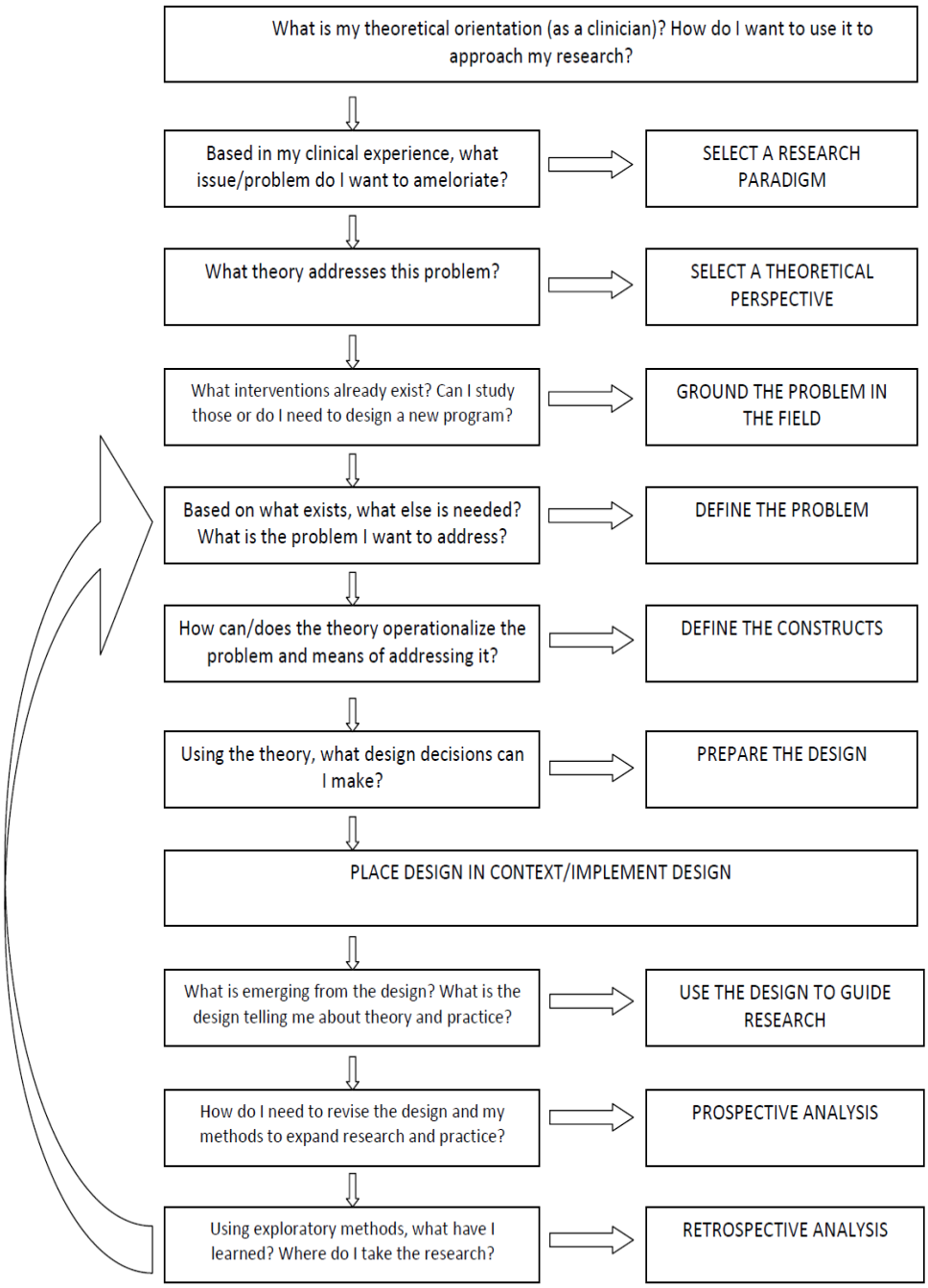

Figure 1. Methodological Decisions in the SPDF Process.

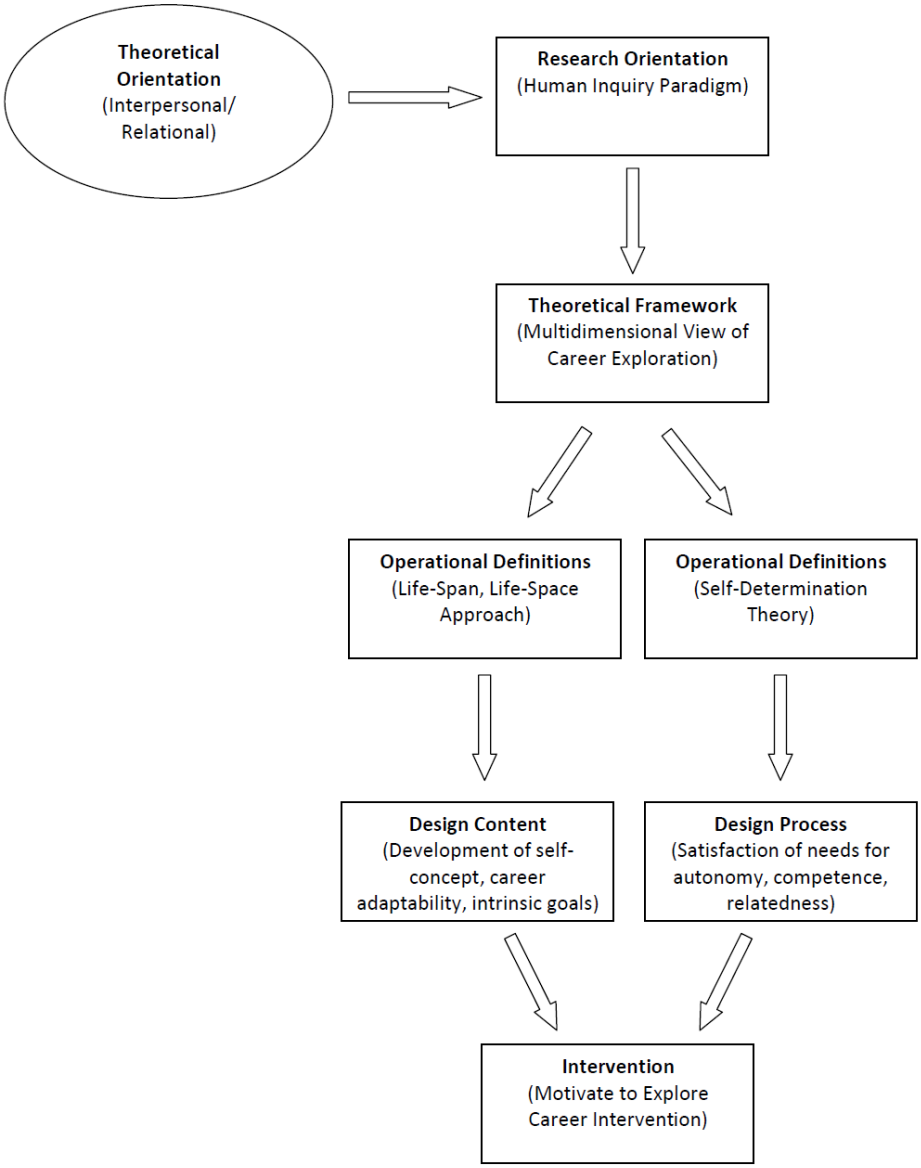

Figure 2. Theoretical Framework for the Motivate to Explore Career Intervention

Bridging Manuscripts 1 and 2

Manuscript 1 reviewed the design-based approach to research and suggested a version of the method conceptualized from within the discipline of counselling psychology. In particular, the manuscript highlighted how the SPDF method was used to develop a vocational intervention for youth who had failed a mandatory career exploration class. The detailed research process involves selecting a philosophical approach to science, clarifying a specific theoretical framework, designing an intervention using this framework, and then placing the intervention in the real world to explore its impact on development. The final stage of the SPDF, as presented in Manuscript 1, is the retrospective analysis. In this stage, the design is explored and local theories are developed to suggest what kind of development occurred and how the design contributed to this.

Manuscript 2 presents the first of two studies that explore the design. The manuscript focuses on study one and the development of an initial theoretical explanation about the process through which amotivated youth develop self-determination for career exploration. Fourteen youth participated in two versions of the intervention design and were interviewed about their experiences. Using qualitative methods, the interviews were analyzed to discover how the process of self-determination for career exploration unfolds, what factors contribute to the process, and what outcomes emerge as a result. Manuscript 2 summarizes the intervention design and presents the results of a grounded theory analysis of participants' interview data.

CHAPTER 3

Developing a Work Identity: A Trajectory toward Self-Determined Career Exploration for Disengaged Youth

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Abstract

The present study explored the career development trajectory of 14 youth following their participation in a group intervention. The intervention focused on increasing their self-determination for career exploration. Participants were adolescent males, aged 15 to 17, from European-Canadian backgrounds. All had failed a mandatory career exploration course in the year prior to the study. The youth were interviewed about their experience of change as a result of the intervention. The authors used grounded theory principles to analyze the interview data and develop a model of the developmental trajectory. The results explain a model of Developing a Work Identity for disengaged youth as a result of the Motivate to Explore Career Intervention. The youth gained a greater understanding of both self and work across the course of the intervention, which led to increased agency, self-awareness, and initiative for career exploration. Participants described negative academic experiences, emotional and instrumental support from parents, the group facilitator's provision of guidance and structure, and their own readiness for career exploration as influencing factors. Overall, the youth expressed the need for more support and guidance around the group activities, but more autonomy relative to the content explored.

Keywords: career, adolescents, self-determination, work identity

Developing a Work Identity: A Trajectory toward Self-Determined Career Exploration for Disengaged Youth

The rapid pace at which technology is advancing and creating new opportunities for global communication is vastly changing the face of the current job market (Savickas, 2011). With these advances comes pressure for individuals to adapt their employment seeking strategies, job-skill acquisition, and mindset about the meaning of job and career (Savickas et al., 2009). This requires flexibility and a commitment to engaging in ongoing exploration of self and occupations (Savickas, 2005). However, not all individuals possess the initiative, interest, or motivation to explore (Flum & Blustein, 2000). In particular, students with low levels of learning achievement struggle to take initiative to advance their own career development (Kuijpers, Meijers, & Gundy, 2011). Additionally, those who lack motivation for school are at increased risk of dropping out (Ratelle, Guay, Vallerand, Larose, & Senécal, 2007) and therefore losing access to services that could promote their education and growth. This population of youth is at a double disadvantage: they lack the motivation to engage in their own development and, as a result, are at-risk for unemployment, poverty, health problems, and delinquent behaviour when they transition from school to work (Martin, et al., 2002).

Youth who drop out of school earn less money (Educational Testing Services, 2005), and can cost the government more in uncollected sales and income taxes (Action Group on Student Retention and Success in Quebec, 2010). By dropping out, these youth miss opportunities to develop crucial decision-making skills and to increase their knowledge about the world of work (Patton, et

al., 2002). Poor decision-making and a lack of exploration can impact disengaged youth's beliefs about their ability to succeed and the opportunities available to them (Creed, et al., 2009). It can also lead to a lack of interest in work (Vondracek & Skorikov, 1997), which contributes to a decrease in one's quality of life and overall well-being. With these strikes against them, these at-risk youth likely require services that can support their development and connection to school, and encourage adaptive and engaged exploration. Services, such as career interventions, that facilitate and support productive exploration can help to smooth the school-to-work transition for these youth.

In order for career practitioners, and the field of career guidance, to meet the needs of clients, more information is needed about current challenges faced by youth who are disengaged at school. To address this issue, the present study was designed to learn from a sample of disengaged youth about the career exploration challenges they are currently experiencing and those they expect to face in the future. Additionally, this research sought to understand what contributes to engaged, self-determined exploration for this population of adolescent males.

Theoretical Framework

The theoretical perspective that frames this study is an integration of career development theory (Savickas, 2002; Super, 1969) and self-determination theory (Ryan & Deci, 2002). This framework was extracted from Flum and Blustein's (2000) multidimensional view of career exploration, which suggests that self-determination is a crucial component of the career exploratory process; without self-determination, these authors argue, individuals are less likely to fully and readily engage in productive and ongoing exploration (Blustein & Flum,

1999). As a result, they are also less likely to develop identities that are self-constructed and authentic (Flum & Blustein, 2000). From this perspective, we were interested in exploring how self-determination theory can help contribute to a broader understanding of the career exploration challenges and needs of youth who are amotivated and disengaged at school. This section briefly reviews the two theories that comprise the conceptual framework.

Super's seminal work on the life-span, life-space approach has provided a foundation for the study of career development since the introduction of the theory in 1957 (Savickas, 1997; Super, 1957). The theory integrates theoretical perspectives from various domains of psychology, creating a "segmental theory" (Super, 1990, p. 199) that explains how individuals create a self-concept across the lifespan. This integrated model argues that across ages and developmental stages individuals occupy a variety of life roles. Within each stage, individuals cycle through tasks of growth, exploration, establishment, maintenance, and decline. These tasks are also characteristic of particular stages of life, so that career maturity and adaptability is a readiness to cope with the developmental tasks of a life stage, as defined by age, social development, and societal expectations (Savickas, 1997; Super, 1990). Exploration is considered the most salient developmental task of adolescence.

Savickas (2002; 2005) has expanded Super's theory to conceptualize career development as a process of construction. According to Savickas (2002), career is "the development of vocational behaviour over time" (p. 151). In recent years, Savickas et al. (2009) have discussed career development as a life-long process of designing and building one's life and work. This life-design

perspective acknowledges the interplay between individual development and the ways in which the context contributes to and influences this process. Individuals are believed to construct their careers through interaction with the social environment, and by assigning meaning to their past and present experiences and future aspirations (Savickas, 2005). Individuals make choices that express their self-concepts and work-related goals, and through this process develop a narrative about their identities within the world of work. A self-concept is characterized by personality, needs, values, and interests (Super, 1990). Through exploration, experiences, and interaction with the environment, the self-concept becomes increasingly crystallized and refined (Savickas, 2005; Super, 1990). Individuals are active participants in this process, as they develop their self-concepts through continually navigating and adapting to changes in the landscape of work (Savickas, 2011). Research has shown that self-concept development is correlated to self-esteem in that individuals who feel competent are more likely to engage in career planning and decision-making (Wallace-Broscious, et al., 1994). Engaging in these behaviours is considered a sign of good career adaptability (Savickas, 1997, 2011).

The second theoretical perspective taken from the multidimensional view of career exploration is self-determination theory (SDT; Ryan & Deci, 2002), an approach to understanding human development relative to people's tendencies towards growth and their psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000). The SDT perspective characterizes motivation along a continuum. At one end is amotivation, and at the other is intrinsic motivation. Amotivated individuals lack motivation; they cannot predict the

outcomes of their actions, often feel detached from them, and therefore expend little effort or energy on the activity (Legault, et al., 2006). Individuals who are intrinsically motivated act for the pleasure and enjoyment they receive from the activity itself (Deci, 1975). Between these two poles are four types of extrinsic motivation: *external regulation*, *introjected regulation*, *identified regulation*, and *integrated regulation* (Ryan & Deci, 2000). These types of motivation differ relative to the extent to which they are experienced as autonomous. The first two types are considered controlled, because they are engaged in for reasons that do not originate from a sense of personal choice or volition. The latter two types of extrinsic motivation are autonomous, because they represent actions that are self-regulated.

The central experience that distinguishes autonomous and controlled motivation is internalization. Internalization is the process through which an individual acquires an attitude, belief, or action and turns it into a personal value or goal (Deci & Ryan, 1985). Individuals act in self-determined ways when they have internalized the reasons for their behaviour (Ryan & Deci, 2000). Research has shown that in order for internalization to occur, individuals' needs for autonomy, competence, and relatedness must be met (e.g. Baard, Deci, & Ryan, 2004; Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005). Contexts that support individuals' choice and personal volition (autonomy), and that facilitate their need to feel effective (competence) and connected to others (relatedness) contribute to internalization and the development of autonomous motivation (Deci, et al., 1994; Reis, et al., 2000; Ryan, 1995). In addition, working towards intrinsic versus extrinsic goals can contribute to the development of autonomous

motivation (Vansteenkiste, et al., 2006). Intrinsic goals include personal growth and health, while extrinsic goals are focused on external rewards such as fame or money. In the career domain, Blustein (2006) has suggested that satisfying needs for autonomy, competence, and relatedness, and acting in accordance with one's values can lead to more personal connections to work.

The Present Study

The present study is part of a program of research investigating what engages amotivated adolescent males in career exploration, and how this knowledge can be used to improve the school-to-work transition. Framed by Flum and Blustein's (2000) motivational perspective on career exploration, and using a participatory methodology, we have designed a preliminary group intervention and have begun to explore the career development process that results from the group. In this manuscript, we summarize the *Motivate to Explore Career Intervention* and present a developmental trajectory described by participants as a function of the intervention. The research was guided by the following questions: what is the developmental trajectory that occurs for disengaged youth as a result of their participation in a group career exploration intervention, and how does this process unfold?

Method

Participants

Participants were 14 adolescent males, ranging in age from 15 to 17 years (*M* = 15.93, *SD* = .88*)* at the outset of the study. All participants were identified by their school principals as either having failed or achieved minimal competency in a mandatory career exploration course, called the Personal Orientation Project

(POP), in the academic year prior to the study. Participants were from two different high schools; one in a semi-rural area (approximately 30 minutes from a large, predominantly Francophone, metropolitan city), the other in a suburban location. They comprised two different intervention groups, run consecutively. For a detailed description of the methodology used to design the intervention, please see Kerner, Fitzpatrick, and Lajoie (2011). Of the 40 students approached, 16 agreed to participate. One of the 16 decided not to continue her participation following completion of pre-test questionnaires; a second dropped out of school during the course of the study. Of those who reported their ethnic and/or cultural background (N = 10), all identified themselves as Canadian of European or British descent (e.g. Irish, Scottish, Italian, British, French, Dutch, Greek, and Polish). Seven participants had failed one grade and one had failed two grades. The most common grade failed was the eighth (N = 5). None of the participants had been diagnosed with a learning disability. None had previously received an official diagnosis of an emotional or behavioural problem, although one participant stated that he had been in counselling for behavioural difficulties as a child, and another stated he was frequently in trouble at school in the seventh grade. The most common occupation of participants' mothers was work in retail (e.g. department or grocery store) and homemaker. Three participants stated they were unsure of their mothers' occupations. Participants' father's occupations ranged from teacher, military and/or police work, managerial positions in retail or service work, construction, and janitorial work. One participant identified his father as unemployed.

Instruments

A semi-structured interview protocol was designed to tap participants' experiences at the end of the group intervention. Participants in the first group were asked to describe their experience as a trajectory (beginning, middle, end of the group). In the interviews, the participants were prompted by comic book drawings, that they completed after each session to depict their experience in that session. In addition to describing the trajectory using the drawings, they were asked about an important event that occurred in the group, the activities that helped them learn the most about themselves, and an important person for them in the group. The goal of these questions was to explore the process, critical events, contextual and intervening factors, and consequences related to the process of developing self-determination for career exploration. Informed by preliminary findings from the first set of interviews, the protocol was revised for use with the second group of participants. The revised interview protocol was more structured and included a pre- and post-group interview. (See Appendix C for the interview protocols). The pre-group interview asked about participants' help-seeking behaviour, their self-knowledge, their career exploration activities, and their current career interests. The post-group interview focused on the same four areas, as well as on participants' experiences of learning and motivational change over the course of the intervention. Drawings were not used as prompts with this group, as the participants did not complete drawings each week. This group repeatedly expressed confusion about the drawing tasks during the sessions and eventually refused to draw altogether.

Procedure

Intervention. The group intervention was designed to satisfy the youth's needs for autonomy, competence, and relatedness, help them work towards intrinsic career goals, and increase their awareness of the connection between self and work. The overall intervention had the same goals for both groups; however, the activities were modified based on data and feedback from group one. The second group focused more explicitly on increasing self-awareness and career adaptability. The first author facilitated both groups.

Group one. In the first session, the youth discussed their reasons for disengagement in POP and selected adjectives from a group to describe how they felt. Using these adjectives, they drew a picture of a character that represented this negative experience. Session two and three took them through identifying activities that feel intrinsically motivating (through storytelling and positioning themselves along an imaginary line from amotivation to intrinsic motivation for a variety of activities), selecting adjectives, and drawing a character to depict this positive feeling. Session four introduced the Career Toolbox, wherein the youth completed six "I am ___" statements and discussed these as "tools" to aid in successful exploration. Sessions five, six, and seven focused on a group activity. The youth worked together to create an activity that could improve POP. They selected a job fair as the activity. They gathered career information, and designed how they would carry out the fair. In session five, they took on various pre-determined roles and reflected on this experience; in session six, they were not given roles, and in session seven they worked individually on separate aspects of the task. Session eight was a group discussion about negative messages the youth receive about their abilities and effort.

In session nine, the youth were provided with a "profile sheet" on which to record their strengths, interests, personal characteristics, style of working in a group, and challenges of working in a group. They also reviewed a list of career values (e.g. financial stability) and work environment preferences (e.g. I prefer to work alone), and circled the ones with which they felt most aligned. The session alternated between the individuals completing a page of the worksheet and discussing their responses as a group. In session ten, the youth reflected on the intervention as a whole, as well as on their individual experiences and learning.

Group two. The first two sessions focused on helping the youth get to know each other and connect to the purpose of the group. They engaged in team building tasks, such as developing a group contract, naming their group, sharing stories about their previous career exploration experiences, and brainstorming possible activities for later sessions. For session three, the youth were given the entire session to research their careers of interest. They were given a worksheet on which to structure their search and record their findings (e.g. training programs, salary). Session four focused on increasing self-awareness through working on a hands-on task in a group. This type of task was requested by the youth, due to their interests in "learning-by-doing". The youth were divided into two small groups, and each group was given a small model "car" (i.e. a small construction toy). Group members were assigned roles to mirror positions they may encounter in a large business setting (e.g. boss, supervisor, labourer, scribe/note-taker). They were asked to remain in their roles for the entire exercise, and then group discussion focused on reactions to playing these roles. Session five gave the youth the opportunity to complete the toy model without

having to take on pre-determined roles. Group discussion focused on comparing the two sessions and on identifying self-learning.

Session six was designed to give the youth the opportunity to evaluate the intervention to date. They were provided with a list of the session objectives and activities and asked to rate and discuss in pairs how well the activities were meeting the objectives. The next two sessions focused on helping the youth identify their strengths, protective factors that could enable successful career decision-making, and risk factors that act as barriers to attaining their goals. Session seven was the Career Toolbox activity. Each group member was given a plastic toolbox with empty envelopes. Envelopes were labelled: "me", "interests", "skills", "values", "needs", and "supports". The activity took the youth through filling their envelopes one at a time, with the facilitator leading a discussion about what each envelope signified. In session the youth completed their Career Garbage Bag, once again filling envelopes by writing on cue cards. These envelopes addressed qualities and supports they wished they had, negative messages they have received from others, and feelings they experienced in response to these negative messages. The purpose of this activity was to explore obstacles and barriers to the career exploration process. Sessions nine and ten were the same activities as in group one.

Data collection. ***Group one.*** In the two weeks following session ten, individual interviews were conducted and audiotaped. The interviews ranged from 35 to 45 minutes. Following preliminary coding (Saldana, 2009) of these interviews, the first author's understanding of the emerging concepts was presented back to the participants and their feedback was solicited. Using this

feedback, the intervention was revised for group two. For instance, participants identified learning a lot about themselves through taking on roles while working in a group; however, they did not enjoy planning a job fair. Therefore, this activity was revised to focus on a hands-on task instead.

Group two. The pre-group interviews with participants from group two were conducted one week prior to the first group session, and ranged from 11 to 28 minutes (M = 18.56, SD = 5.90). One to two weeks following the final group session, participants were individually interviewed again for between 18 to 43 minutes (M =28.25, SD = 9.05). For all the interviews, the length depended on the detail provided by the individual participant, and it was noted that some of the participants had difficulty articulating their ideas and elaborating on their responses. This remained true even with repeated prompting and encouragement from the interviewer.

Data Analysis

The first author conducted the analysis using a grounded theory approach (Glaser & Strauss, 1967). She used open, axial, and selective coding (Corbin & Strauss, 2008) to develop a theoretical model of the developmental process experienced by participants from beginning to end of the interventions.

Open coding. For each of the first three interviews, the first author read the entire transcript and recorded her initial impressions. She then subjected the transcript to line-by-line coding, in which descriptive labels were given to units of meaning. These units were determined by reading and re-reading participant statements and segmenting the statements based on ideas. Throughout this process the first author explored the statements and the ideas contained within

them using memos (Corbin & Strauss, 2008). The memos were used to ask questions of the data and explore, debate, and make sense of what participants were communicating, as well as when they moved from one idea to the next. The conceptual themes that emerged became higher-order categories, with the initial codes representing properties and dimensions of those categories. Properties give definition to a category, and refer to the characteristics or components of an object, event, or action (Corbin & Strauss, 2008). A dimension defines a property along a range or continuum. For instance, career planning would be a property that characterizes career adaptability. Individuals may engage in no planning, some planning, or a lot of planning, which would define the property along three dimensions. In our data, when dimensions were not available, but a descriptive code still applied, a sub-property was assigned.

Throughout the open coding process, the first author used the constant comparison method (Corbin & Strauss, 2008). This involves coding an incident and then comparing it, based on its properties and dimensions, with all other coded incidents in the same category (Glaser & Strauss, 1967). In the present analysis, theoretical aspects of the categories were generated through the process of comparing similar and different incidences across and within participants' interview data. Once an initial set of categories was developed out of the first three interviews, these labels were used to segment the remaining interviews from participants in both groups. However, if new ideas emerged, new category labels were created, and earlier transcripts were re-coded accordingly.

Axial and selective coding. Once the conceptual categories were created based on their properties and dimensions, relationships between the categories

were explored. This step brought the segmented data back together, and sought to understand how the categories fit with one another to explain participants' experiences. The axial coding process included exploring the categories as possible *contextual factors*, *causal conditions*, *intervening conditions*, *action strategies*, and *consequences* (Strauss & Corbin, 1998) of the experience. During this step, one central theme consistently emerged, and eventually became the core category, or phenomenon, around which all other categories were arranged. The core category was explored in detail, and challenged against other categories to ensure its breadth, coherence, and ability to capture the centrality of participants' experiences (Corbin & Strauss, 2008; Fassinger, 2005). The first author then wrote a narrative describing the core phenomenon and its relation to all other categories, and created a concept map to visually depict the process as it emerged out of the participants' stated experiences.

Trustworthiness

Validity

Several important measures were taken to ensure the trustworthiness (Lincoln & Guba, 1985) of the data. These measures included: prolonged engagement, researcher memos, auditing, and member checking (Creswell, 2007). First, through working closely with the youth across the course of the intervention, the first author became intensively involved with the participants and their experiences. This provided a unique, insider perspective into the data, which adds credibility to the interpretations of the findings (Creswell, 2007). Second, the first author kept detailed memos throughout the process of analysis, in order to record her thinking about the data (Corbin & Strauss, 2008). This also provided

an opportunity to explore how first-hand experience of facilitating the groups was reflected or not reflected in how participants described their experiences. The memos served both as the avenue for exploring and recording analytic ideas, and as a forum for illuminating the first author's biases and assumptions about the emerging phenomenon.

Third, member checking (Creswell, 2007) consisted of conducting a group meeting with participants from the first group following the preliminary analysis of the data. The initial codes and emerging ideas were shared with participants, and their feedback was elicited relative to the ability of the codes to capture the participants' experiences. The feedback obtained from this meeting then served to facilitate the development of the second group intervention, thereby providing an opportunity to more intentionally explore and build on the emerging categories. Due to timing (end of the school year), a final member check could not be conducted with the second group of participants. Finally, an external auditor was sent a document of participant quotations and open coding categories and asked to match quotations to categories. The external auditor was a fourth year doctoral student in educational psychology who had no prior knowledge of the study. Once she had completed the matching, she and the first author met and compared their coding. When there was disagreement about the quotations in a category or about its label, these were argued until consensus was reached. In addition to this auditing process, the second author served as an inquiry auditor (Fassinger, 2005) who provided on-going feedback on the emerging theoretical ideas and on their clarity in explaining participants' experiences.

Researcher Biases

The first author is a 32 year old, Caucasian, Jewish, female doctoral student in counselling psychology. She has lived for 26 years with Alopecia Universalis, a chronic autoimmune condition that causes total hair loss. Living with this condition has contributed to some experiences of marginalization, which has led to her belief that context and environment largely shape experience. As a result, she practices counselling from an integration of interpersonal/relational and family systems approaches, which centralize the therapeutic relationship and the contribution of relational dynamics to client's presenting concerns. As the facilitator of the group intervention, she focused on helping the group members create new meanings around self and career, while attending to the social forces that may have been impeding development. In her interactions with the youth, she emphasized collaboration and equality, and encouraged participants to relate to one another in the same way. Relative to motivation and career exploration her pre-study biases were that career exploration is an act of optimal development, or a step towards self-actualization; although barriers exist, all individuals have the privilege and desire to obtain a satisfying career.

The second author is a white, female, 3rd-generation Canadian, associate professor in a counselling psychology program. She was the research supervisor of the first author. She conducts psychotherapy exclusively with adults, and practices from a perspective that includes emphasis on therapeutic relatedness, client emotional involvement, and mindful-awareness. She was not directly involved with the youth in the sessions or interviews, but approached the coding and interpretation tasks from a perspective that was sensitive to issues of

relatedness and of the abilities of the participants to be aware of their situations and their needs.

Results

The open coding process resulted in 91 codes that were eventually conceptualized as 14 higher-order categories with various properties and dimensions or sub-properties. Table 1 provides a breakdown of the categories and subcategories yielded from the open coding process. During the axial coding phase, these categories were further conceptualized as the core phenomenon, context, contributing conditions, action strategies, intervening conditions, and outcomes. We present the results by axial code with descriptions of the categories and sub-categories (i.e. properties, dimensions/sub-properties) when available. Participant quotations are included to provide rich description and to ground the categories in the data. The group in which participants were a member is indicated by G1 for group one and G2 for group two. The quotations have sometimes been modified or shortened to exclude mumbling or rambling that made it difficult to understand what the participant was communicating when reading it as text. The words were never changed, but some quotations were truncated to be more succinct. In addition, although the model presented here might suggest that all participants' experiences followed a similar trajectory, there was in fact some variability. When it is stated that *most* participants discussed a particular category, it means that all but one or two reported this experience; *many* indicates half or more of the participants, while *a few* or *several* refers to two to five individuals.

Overall, the results suggest one common trajectory of development experienced by all 14 of the participants. However, the data also yielded two distinct pathways through which the trajectory occurred. The findings are presented in order to represent the common experience and to interpret the differential pathways. In Appendix D, we present a figure depicting the individual participants along the trajectory, and in Appendix E, we present a table comparing each participant's unique pathway. The general trajectory is summarized first, followed by a description of the contextual factors that framed the trajectory for all participants. The categories that distinguished the two qualities of the trajectory are explained in the final section.

Core Phenomenon: Developing a Work Identity

The central experience that all participants described was the trajectory of *Developing a Work Identity*, a process that involved developing a greater level of coherence around an identity as it relates to the world of work. As the participants described it, their process of developing a work identity took place gradually from before the group to after the last session. The trajectory started with *realizing I don't know myself*, moved through *finding out who I am*, and ended with *knowing myself better*. The youth described not knowing themselves well prior to entering the group; as Julien (G1) explained, "I learned [the first session] that I didn't know who I was." Mathieu (G1) provided a description of his experience of the trajectory from start to finish relative to looking for and finding a job:

> …and then, in the end, I wrote things have changed. I actually found out skills that I didn't know I had…like I didn't know I worked better in a

> team, and I liked more taking orders from people than actually figuring it out on my own. Which is how I got my job now…during the interview I told them I work better as a team sometimes…and they found that as a really good skill, so they accepted me…In the other interviews [prior to the group], I didn't know what my skills were so I would always like stutter, try to figure out what to tell them. But this time it was a lot simpler, I knew what to tell them, and, it was just a lot simpler.

Mathieu's experience summarizes the point in the process that all, but one, of the participants reached. At the beginning of the group, Mathieu did not know himself well, during the group he learned about his skills and personal qualities, and by the end of the group he had new self-knowledge and was better able to articulate this to others.

While all participants experienced the trajectory, they did not describe *knowing myself better* in the same way. Six participants from both intervention groups (Julien, Michel, Mathieu, Jean, Bryan, Jason) described the endpoint as an increase in *knowing who I am*, while seven of the participants (Damien, Alain, Sebastien, Nathan, Karl, Marc, Jesse) described their new work identity as *knowing what I'm good at*. Sam reported having fun in the group, but not learning anything new about himself.

Those participants who described *knowing who I am* demonstrated an internal and more integrated focus to their new identities. For example, Michel (G1) explained how at the end of the group, he felt proud of his progress in career-decision making, planning ahead, and taking initiative to set career goals:

> Well, I felt like more proud, 'cause before it was like only thinking about the job. But now it's actually like you feel like you're already starting to be one - a fireman- 'cause you're already starting to do what you need to be one. Like I'm doubling my year just to be one, and…I'm opening doors for if I don't get accepted. So I actually feel like I'm taking my own decisions and making my own choices to get into something I like…further on….It's pretty like weird to do that on my own…. it was kind of special.

As demonstrated by Michel, *knowing who I am* encompassed more than the career exploration process, it contributed to a sense of agency in life in general.

The experience of developing a work identity characterized by *knowing what I'm good at* was less integrated, and focused on more practical learning. Nathan (G2) knew more about himself at the end of the group, but instead of using this knowledge to plan ahead and begin setting long-term goals, he focused on being able to use the new information in a job interview: "like I know what I'm good at, was important to me…And uh, in like an interview or something when they ask you what are my qualities, like now I know." The participants who described a process similar to Nathan's acquired new tools to use in navigating the world of work, but conveyed less well-developed internal growth as a result of having new information.

While all but one participant experienced the process as the development of a new identity relative to work, the learning was more integrated for some than for others. The two qualities of the experience were further distinguished by various factors (to be discussed later); however, all participants situated their

trajectories within the same contextual factors and contributing conditions. Figures 1 and 2 depict the two trajectories comprising the core phenomenon. As we present the remaining results, we refer the reader to these figures and explain how the factors that emerged from the analysis contribute to or relate to the trajectories.

Context

The factors that contextualized the process across both trajectories were *personal characteristics*, *relationship to parents*, and s*chool climate*. These three categories indirectly influenced the experiences in the group, and were understood as providing the backdrop for the trajectory. As such, they are depicted behind the trajectories in both Figure 1 and 2. These categories are descriptive of the larger context within which the process of development occurred. In terms of *personal characteristics*, participants described themselves as having difficulty remembering (especially conversations), they often struggled to answer questions that asked them to think abstractly, and they described themselves as preferring hands-on work. They also reported getting easily distracted, especially in classes. Many of them held part-time jobs, and described their lives as busy; some discussed this as a reason why they had not engaged in career exploration outside of the group.

Participants who talked about their relationships with their parents talked in terms of *closeness*, although most described the relationships as not very close. Several participants described these relationships as either *encouraging* or *putting me down*. Sebastien (G2) described how his parents encourage him; "no one really cares what I want to be, except my parents. They said [fireman] is a good

job, you should go for it." Finally, many participants described their parents as providing a *career role model*. For instance, Damien (G1) was interested in a military job, because "my dad's ex-military, my mom's still in it."

The *school climate* also provided further context for the process of developing a work identity. In particular, participants expressed feeling like they do not belong in school, and that the teachers often did not help them out in classes. Mathieu reflected on how educational reform and the move to self-directed learning did not suit him,

> … now it's all situational problems. And not many people are good at that, so it was just a lot harder. Plus, they don't actually teach us, we have to teach ourselves, so that's even harder. That's probably another reason why I think I'm just wasting my time in school, 'cause I'm just not learning if I teach myself.

Like Mathieu, all participants discussed feeling marginal at school, and many talked about it as feelings of *not belonging*.

Contributing Conditions

While the contextual factors indirectly framed the process, the analysis yielded five factors described as direct contributions to developing a work identity. These included *negative experiences in POP*, and four group/intervention influences: *activities*, *facilitator*, *group members*, and *group climate*. All of these factors were understood as influencing the common trajectory: the negative experiences led to feelings of marginalization and negative self-beliefs, while the group factors encouraged changed and facilitated the

developmental trajectory. In the two figures, these conditions are represented by large block arrows feeding in to the beginning and middle of the trajectory.

Negative experiences in POP. Prior to entering the group, all the youth described having had a negative experience in their POP class. This category had properties of *external* and *personal* factors. External factors were described as the large class size, the teacher, and the class work, while personal factors included needing more guidance, not paying attention, feeling disconnected from the work, and not doing the assignments. The following quotation from Sam (G1) represents how POP contributed to his feeling marginal and frustrated.

> When I first saw my schedule, I thought like 'personal orientation project' that must be cool and then I get there and teacher was like do this da-da-da-da, and walks out of class. And then we don't know what to do, we don't do it, 'cause we can't understand anything, and then he like flips out on us and gives us like a 20%...and he goes out of class, I go out to find him and ask him a question, he like yells at me and gives me a detention. So it's like nevermind, I'm never asking you a question ever again.

As with their experiences in school in general, all of the youth expressed feeling marginal in their previous career class. This contributed to a lack of motivation and to disengagement in the career exploration process, which the youth described as confusing and frustrating with regard to making a firm career decision.

Group activities. Of the participants who experienced change (n=13) all indicated that the group intervention contributed to their process of developing a work identity. In particular, they identified the *activities* and *interventions* as helpful in the process. Specific activities, such as group discussion and hands-on

tasks, and interventions, such as informal provision of career information by the facilitator, were described by many as helpful along the dimensions of *focusing on self*, *focusing on work*, and *focusing on building skills*. Julien focused on how the group discussion (*activities*) encouraged him to attend to his own ideas and beliefs, which he felt contributed to his development of a work identity; "you really had to think instead of actually doing things, you had to think about what you like, what you want." The activities were thus seen as helpful in facilitating the development of a work identity when they encouraged learning about self and work, and when they helped the youth develop new skills.

Facilitator. Another contributing condition of the group was the *facilitator*. Several of the youth explained how the facilitator was helpful. Michel's explanation summarizes this well:

> The students weren't really teaching me something, but you and your assistant, like when I didn't understand, your assistant came and helped me, or you kind of guided me where I had problems and all that…that's how I see that you guys helped me, because you were the ones who guided me through like the problems I had in the course or all of what the course gave me. It wasn't the students that gave it to me, it was the teachers.

The facilitator's contribution was described based on the sub-properties of *structure*, *openness*, and *emotional* support or guidance; structure was when the facilitator kept the youth on task, openness described the facilitator's willingness to listen, and emotional support was the provision of empathy and relational connection. For instance, Karl (G2) stated "we could tell you something and you'd say 'ok, I can tell what you're saying and I'll try to improve it'…you

actually cared about our opinion." This statement addresses both how the facilitator was open to new suggestions, and how she provided emotional support through demonstrating her investment in the youth.

Group members. Other *group members* contributed to the process of development through *connecting* and *joking around*. Group members were seen as helpful when they were someone with whom the participant connected around career interests or having a similar approach to the group, "…he said he wanted to be a mechanic too. That surprised me at first…It surprised me, it was a connection" (Jason, G2). A few participants stated that others were helpful when they "…made me laugh" (Julien), because they kept the group light and fun. Many of the participants specifically spoke about the importance of having *friends* in the group. Friends helped the process by providing a *comforting* climate and opportunities for *fooling around*. Having his friends in the group was particularly important for Jean (G1): "I was with my friends and I'm going to be myself…if I was with different people I would be like 'I can't do this, I don't like the people', I don't like doing this stuff with other people I don't know." Sam focused his experience almost exclusively on being with friends and having opportunities to fool around; "[we] didn't stop joking around, that's what I like, when it's too serious, it starts to get really boring."

Group climate. Many of the participants also described the group *climate* as a contributing factor. They explained that the size of the group was conducive to their learning, "you're not a lot, like you're not 30. We were 8 or something…Like no one really judge you like on what you're saying and stuff" (Sebastien). In addition, being offered food as compensation for their

participation was seen as creating a particularly rewarding and supportive group climate. A central property of the climate was the *process* within which the activities and group interactions took place. The process varied along the dimensions of *supporting* and *engaging*. Marc (G2) highlighted the importance of a supportive group climate; "there was like no pressure…it's more free, I find." At times the climate was seen as simply offering the opportunity to get out of class, while other times the process was considered interesting and worth investing in. In addition, several of the participants, such as Damien, explained the *cohesiveness* of the group climate and how it became more engaging from *beginning* to *end* of the intervention:

> I thought the first class was pretty normal in the beginning, we didn't know exactly why we're here, well we did, but not completely. After the class it got better. People started talking, more laughing, a lot funner.

Various aspects of the group process, including fooling around, were described as central to providing a safe, comfortable climate within which to develop a work identity.

Action Strategies

While moving along the trajectory, participants engaged in *behaviours* that occurred *in the group* or *outside of the group*. The use of these strategies distinguished the two trajectories, and are therefore only depicted in Figure 1. In the group, the strategies that some of the participants used were characterized as *expressing self, acting independently,* and *investing in the group*. Participants made attempts to show newly discovered aspects of who they are, and to be authentic in the group (*expressing self*): "well, like at school I'm someone else,

like different. I'm really different. When I'm actually with my friends alone, and in that group, I was actually myself. That was me" (Jean). *Acting independently* was a category developed out of participants' descriptions of engaging in the group process on their own initiative or in their own way. These strategies evolved over the course of the group, as these participants began to invest. For several, investing was a process of getting comfortable in the group in a way that allowed them to become active participants.

> …like at the beginning, I was almost day dreaming a little, but then at the end I was listening…So after - at the very end - I started actually getting in to the conversation so it was like my way to get more comfortable with people, like getting in the group, and actually putting effort in the work. (Michel)

Outside the group, a few participants engaged in action strategies to further their career exploration. These strategies were used primarily by the youth whose outcome was characterized by *knowing who I am*, and were generally employed near the end of the trajectory once participants had begun to develop their new identities. The strategies, or sub-properties of behaviours outside the group, were *taking action*, *exploring*, *planning for the future*, *making career decisions*, and *seeking help* from parents and other significant adults. When asked about any action he had taken since the group ended, Jason explained that "well I guess it was my time to go on to the computer and look for career options. There was nobody who told me to go do this. I actually wanted to go" (*exploring*).

Approximately half of the participants, those whose outcome was characterized as *knowing what I'm good at*, did not report any self-initiated action

in the group. When asked about actions taken outside the group, these participants indicated that either they had taken no action "like I'm not interested in looking up on the internet, stuff like that" (Alain, G2), or if there was some engagement in career exploration it was passive: "ya, well [my father] kind of talked to me about it. Like I don't go and talk about that to my parents" (Julien).

Intervening Conditions

The intervening conditions helped to distinguish the youth relative to their developmental outcome along the work identity trajectory. In the two figures, these conditions are shown as part of the backdrop, but with a more proximal and overlapping relationship to the trajectory. Some external factors were intervening conditions that influenced whether action strategies were used in the group, or if actions taken outside of the group were passive or active. The intervening conditions were grouped into the categories of *personal characteristics* and r*elationship to parents*. Relative to personal characteristics, participants demonstrated differences in their *readiness* (for both career exploration and decision-making), *approach to career*, and *reflexivity*. The dimensions of readiness ranged from participants *needing to make a career decision* soon (described by Jean, Mathieu, Michel, Bryan, Karl, Jason) to *having time to decide* (reported by Marc, Sebastien, Julien, Sam, Jesse, Alain). The category *approach to career* was characterized by either seeing one's career as his dream or *calling* (Jason, Michel, Mathieu, Jean, Marc), or as a way to make money doing something fun (*means to an end*) (Sebastien, Nathan, Damien). Reflexivity spanned the dimensions of *abstract thinking* (i.e. linking the importance of knowing yourself to the process of choosing a career), and *concrete thinking* (i.e.

identifying new self-learning, but not connecting it to choosing a career). The participants differed in the extent to which they seemed able to make abstract connections. For instance, Jason frequently connected the group activities to his self-learning:

> When I saw that every single student in my class wanted to go into computer, and computer engineering, I thought that our life is going to computers and we're still going to need those mechanics. Then I thought to myself, that's what I like, I have been around cars all of my life and we're going to need more and more of them, so I should start heading off into that direction.

However, when asked in the post-group interview, what qualities he brings to group work, Jesse (G2) responded: "you make things for them to use to finish whatever you're doing." This response was interpreted as a concrete response, because Jesse did not reflect on himself. Rather than connect personal or unique qualities that he possesses and how these relate to group work, he stated factual information about what any individual can contribute to any group.

A second intervening condition was *personal characteristics*, characterized particularly by *parental support*. Participants described their parents as offering either *emotional* or *instrumental* support for career exploration. Emotional support was understood as more invested and relational, while instrumental support included help with planning, organizing, and preparing for making career decisions. Michel described receiving this latter kind of support from his mother: "I feel that it was nice from her, like important that she brang me where I wanted to go, like kind of guide me, 'cause outside of the course it was

like I wanted to do something but didn't know what, but my mom told me where to go and all that."

Outcomes

Agency. Developing a work identity, through the interactions among the intervening and contributing conditions, and action strategies led most participants to feel an increase in *agency*. This category had the properties of *feelings, focus,* and *actions,* and is depicted in the figures as extending out of the trajectory. Feelings of agency were characterized as a sense of having more control over career and life decisions at the end of the group. Feelings spanned *local,* for example when Karl compared his group experience to his previous career class ("you had more like a right, I guess, you had more of a say in what was going on"), and *global* dimensions. Global feelings of agency were when the experience was connected to a sense of having more control outside of the immediate group context. Mathieu described how, once knowing himself better, he was feeling more agency and beginning to talk more with his godfather about his career plans.

> My life's actually going somewhere now. 'Cause as a teenager when you're in school, it feels like your life's going nowhere, until you're actually out of it. But, now that I know my godfather wants to help me succeed throughout my lifetime things just felt like it got more serious. And I actually want to go through it.

Agency was also characterized by its *focus*, which spanned *internal* and *external* dimensions. Those participants who described *knowing who I am* explained their agency as internally-focused, "[after the toolbox activity] there's things that I

wanna work on, so I can be better" (Bryan, G2) while participants who described *knowing what I'm good at* experienced external, job-related agency "I could look at [characteristics in the toolbox] and, I could in an interview like review them, and let's say the guy asks me my values, I could easily tell him" (Alain).

Participants also described their agency as new *actions* that they had not taken before. This property spanned the dimensions of *independent* and *dependent*. Some participants relied on themselves when making career and life decisions, while others relied more heavily on other people to initiate career decision-making. Jason described developing independent actions through the process:

> Independence, like my own thinking and what I want to do in life, not what somebody else is telling me what I should do, what I should be. I guess generally [the group] gave me a kick start to 'okay, I can do this, I don't need people to tell me to do this'.

By contrast, others made more *dependent* decisions, or allowed others to influence their decision-making process more directly. For instance, Nathan explained that he was considering a career in cooking, because his mother had suggested it for him: "well [my mother] always knew I liked cooking. She told me I should be a cook. I said 'ya, I know it's something that interests me." At the end of the group, Nathan wanted to investigate becoming a cook, but had not actively or independently taken that initiative.

Learning. All participants except Sam described *learning* as a central outcome of their group experience. They talked about *learning about self*, *learning about the world of work*, and *learning to connect self to work*. First,

participants described getting to know themselves better. Sebastien reflected on how skills, values, and interests converged for him during the toolbox activity.

> Well, 'cause I never thought about all of those things at the same time. I would think of them gradually, like over a long time. But since we did them, I could read them all in the same class. It just showed who I was.

Many participants also discussed *learning about the world of work*. This was described as learning more about jobs or careers that interested the participants and about the steps needed to achieve their career goals: "well you brought those pamphlets last time. That was helpful. To know what kind of jobs, what we had to do, what credits you need…if we had to go to [college] or anything like that" (Damien).

Most of the participants also discussed how their development of a work identity included learning to connect what they were learning about themselves to what they were learning about the world of work. Bryan put it this way:

> I think the…best activity for everybody was the toolbox where I think the other one was the car building…'cause I don't think anybody knew what they really wanted to go in, I guess, like the kind of…work area, so I guess by somebody giving instructions and I didn't like it, I guess I'm not gonna be a supervisor or something, 'cause that's what supervisors do, they instruct people. So I guess they're not gonna go into that. And it just helps people out more… know what kind of work environment really.

For Bryan, and for many others, learning to connect self to work was an important outcome of the group experience.

Discussion

The trajectory discovered through the grounded theory analysis represents the process, as the youth in this study described, of developing a work identity through participation in a group career exploration intervention. It offers a nuanced understanding of the development of career-related identity constructs, and suggests a process through which these youth internalized, integrated, and used career self-concepts. In particular, this model suggests incremental pathways through which the youth in this study, and others who may feel disengaged in career courses, develop self-determination for career exploration.

Exploratory Process and Need Satisfaction

Marginalization. Negative academic experiences were identified by all the youth in this study as influenced by a school climate in which they lacked a feeling of belonging. The youth entered the group intervention not knowing themselves, believing that they did not belong in school and were unable to do the work, and feeling that their previous career-related experiences were not valued in their career exploration class. They experienced a lack of autonomy in the class, a poor sense of competence during and after the class, and a lack of connection to teachers. Previous research has also shown that a lack of basic need satisfaction in adolescence is related to ruminative exploration and a diffuse identity style (Luyckx, Vansteenkiste, Goossens, & Duriez, 2009). In fact, youth who experience marginalization perceive less support for their self-determination, as well as incongruence between what they desire for their futures and what parents and teachers expect of them (Gil-Kashiwabara, Hogansen, Geenen, Powers, & Powers, 2007). Our findings support these claims. The trajectory of career

development for disengaged youth in this study started with a lack of self-knowledge and understanding that was influenced by a perceived lack of need satisfaction both at school and during previous career exploration experiences.

For the disengaged youth in this study, negative school experiences and a thwarting of their basic psychological needs may explain their pre-group perception that they did not know themselves even after completing a year-long career exploration class. Marginalization and feelings of not belonging at school were described as central factors that placed these youth at risk for poor career exploration. They may have felt powerless at school and in their class, which contributed to a negative self-perception. The perception that their needs were thwarted seemed to contribute to feelings of marginalization and disempowerment.

Intervention factors. Although the youth experienced marginalization outside the group, they described the group as having a positive influence on their development of a work identity. They particularly highlighted the importance of autonomy-support and relatedness from both the facilitator and their peers. They described the facilitator as providing a balance of structure and guidance, as well as emotional support. This finding is consistent with research that has shown that group leaders play a large role in facilitating the process of self-directed learning (Larson, Hansen, & Walker, 2005) through the provision of autonomy-support. In addition, relatedness appeared a central need for these youth as they described the significant impact of peers and friends on their process of developing a work identity.

Others have argued that relational dimensions and interpersonal connection are crucial to successful career and identity development (Blustein, 1997; Flum, 2001; Phillips, Christopher-Sisk, & Gravino, 2001). Elsewhere, we have suggested the importance of relational connection for adolescent males, and shown that humour, referring to shared experiences, helping others out, and displaying empathy are all ways in which this population relate to and connect with one another in groups (Hutman, Konieczna, Kerner, Armstrong, & Fitzpatrick, in press). This underlines the importance of attending to relatedness and creating connection when facilitating career exploration groups with disengaged youth.

Work Identities, Self-Regulation, and Intrinsic Goals

The core process that characterized the youth's experience in the group was *Developing a Work Identity* which resulted in new learning and an increased sense of agency. Relative to career self-concept development, the more integrated work identity, *knowing who I am*, involved the development of a personal narrative around career and work (Law, Meijers, & Wijers, 2002). It captured the experience of taking into consideration not just fit between self and job, but a greater understanding of self expressed through job and vice versa. By contrast, the experience characterized by *knowing what I'm good at* was less fluid and more concrete, in that it captured the experience of connecting with the importance of job search for practical reasons, such as finding a job, rather than to enhance self-understanding.

Meijers (1998) makes the distinction between a vocational identity and a career identity. A vocational identity includes having clarity around vocational

goals and self-perceptions (Holland, 1997); it is the result of matching self-concepts to occupational concepts (Savickas, 1995). A career identity is more integrated and involves a greater understanding of how vocational and self-concepts relate to and influence one another (Meijers, 1998). In this study, the integrated quality (i.e. *knowing who I am*) seems consistent with the concept of a career identity, while the more practical quality (*knowing what I'm good at*) seems to connote a vocational identity. Both contributed to a more empowered identity that differed relative to its impact and focus.

Through the lens of SDT, the *knowing who I am* trajectory seems more self-regulated and integrated than *knowing what I'm good at*. For the former, when agency was experienced as global and internal, it was paired with independent initiative to make career decisions and engage in career planning. For the latter group, when the agency was local and external, it was linked to initiative that was dependent on others for guidance and support. It was less autonomous, and actions were less self-determined. The research on intrinsic versus extrinsic goals (Vansteenkiste, et al., 2006) may help to explain this. In comparison to the youth who focused externally on a job as a financial means to an end, the youth who focused their career goals on finding an intrinsically interesting job, or one that felt like a calling, were more likely to describe their trajectory as resulting in autonomous action and internalized feelings of agency.

Interestingly, however, previous research has shown that when individuals feel threatened by the possibility of underemployment during a recession, and when they perceive their relationships with others as conditional, they are more likely to strive for extrinsic goals (Sheldon & Kasser, 2008). It may be that some

of the youth in this study felt less relatedness and genuine connection with others (particularly parents) and/or did not have the luxury of focusing on intrinsic goals, such as self-discovery. This finding is particularly crucial relative to understanding the career development of individuals from lower socioeconomic groups or those with less access to the opportunity structure (Blustein & Flum, 1999; Blustein, Kenna, Gill, & Devoy, 2008). Future research could investigate the reasons why disengaged youth focus on either intrinsic or extrinsic goals during their career exploration, and explore how else to facilitate autonomous motivation when intrinsic goals are not a possibility. Studies could also explore the personal, social, and economic impacts of different goal pursuits on the career development of this population.

Limitations

Although this study presents important findings from an integrative career development and self-determination theory framework, it has several limitations. Consistency of the context for data collection, participant selection, language of participants, and a single researcher-facilitator should be recognized as limitations of this work. First, the two intervention groups were conducted with participants from different school environments and different group interventions. Although the same measures were taken to recruit participants from each group, the individuals were drawn from two very different schools and geographic locations. While this potentially strengthens the generalizability of the findings, it also raises questions about how the differences may have impacted the results. The results suggest that most of the participants in group one were those who described the more integrated quality of learning, while those in group two mostly described

their learning in more practical, concrete ways. This may have been due to the fact that participants in group one were, on average, older than those in group two, were friends prior to the study, and were from a smaller, rural area. Previous research has in fact highlighted the impact of relational and interpersonal connections on the positive career development and decision-making of rural youth (Shepard, 2005). Future research could explore influences of contextual factors, such as age and rural versus urban setting, on the development of a work identity for disengaged youth.

Additionally, a limitation of this study is that the intervention design was revised from group one to group two. Group one focused more on motivation and group process, while group two was more about developing career concepts within a motivating structure. While the revisions to the design were purposeful (to improve the intervention and develop a theory about the most salient aspects of the process), the authors are aware that combining the data across groups may have led to overly simplified results. Although many common themes emerged across groups, and the results did capture some differences, by combining the results we may have glossed over or missed some important nuances of the experience and of the intervention design.

A second limitation is that of participant selection and self-selection (Creswell, 2007). The authors were interested in studying the process of developing self-determined career exploration for amotivated youth. However, by virtue of the youth electing to participate, they possessed some level of interest in the process. More research is needed to understand if differences exist between these youth and those disengaged and disinterested in career exploration

specifically. In addition, for many participants, English was not their first language. This posed a challenge particularly during the interviews, as many participants had difficulty elaborating on their process in their second language. In future studies, it might be helpful to interview participants in their first language and then translate the interviews. Finally, as these were youth who often struggled to think abstractly and to articulate their experiences, analyzing the data and extrapolating conceptual ideas was a challenge for the researchers. Perhaps other ways of interviewing this population, such as in a group format, could yield richer, more elaborate data. Finally, the principal investigator for this study was also the primary group facilitator. Although, this provided for in-depth, first-hand knowledge of the participants, it also created a challenge relative to maintaining distance from the data. Memoing and auditing were used to enhance the trustworthiness of the analysis; however, from the standpoint of the researcher, analyzing the data and working to maintain some level of objectivity was a challenge.

Implications: Theory, Research, Practice, Policy

Despite the limitations, the findings of this study have implications for expanding theory, advancing research, and informing practice and policy. To the authors' knowledge, this is the first qualitative study exploring the process of internalization for youth who struggle with career exploration. The trajectory discovered in this study extends SDT principles into the career domain and with an underrepresented population of adolescents. In the future, case study research could provide more detail of the process and of the impact of the group factors for

different individuals, and path modeling could be used to test the proposition of the model.

This study also provides illuminating information concerning clinical methods of facilitating career exploration for disengaged youth. The findings suggest that interventions that increase opportunities for relatedness might be crucial for helping marginalized youth develop a work identity. In addition, the results provide information about how to facilitate both *knowing who I am* and *knowing what I'm good at*, and how the school climate, relationships with parents, and personal characteristics (i.e. readiness and approach to career exploration) can contribute to these identities. In developing future interventions, it will be important to pay attention to the desired outcomes and how best to facilitate them. The findings of this study also provide suggestions for how to approach the teaching of career exploration in high schools. Specifically, participants expressed the need for more support and guidance around the activities, but more autonomy relative to the content explored. Therefore, career exploration courses should provide these youth with highly structured methods of self-exploration, followed by education around how to directly and concretely integrate this learning into the job search process.

In sum, the disengaged youth represented throughout this study are youth who may be interested in and excited about finding their place in the world of work, but have found that their academic environments are not organized in ways that facilitate their interest in exploration. Researchers' and practitioners' direct attention to and facilitation of the unique needs of this population will likely go a long way in helping these youth to develop a work identity.

Table 1.

Open Coding Categories and Subcategories.

Category	Properties	Dimensions/Sub-properties
Developing a Work Identity	Realizing I don't know myself Finding out who I am Knowing myself better	Knowing who I am (sp), Knowing what I'm good at (sp)
Personal Characteristics (context)	Memory	Difficulty remembering (sp)
	Abstract thinking	Difficulty expanding on an Idea (sp), Difficulty explaining a Concept (sp), Difficulty comparing two ideas (sp)
	Work preference	Preferring hands-on work (sp)
	Distractibility	Easily distracted (sp)
	Work experience	Having a part-time job (sp)
Relationship to Parents (context)	Closeness	Close (d), Not very close (d)
	Interactions	Encouraging (d), Putting me down (d)
	Career role model	
School Climate	Connection to school	Not belonging (sp)
Negative experiences in POP	External	Class size (sp), Teacher (sp), Class work (sp)
	Personal	Needing guidance (sp), Not paying attention (sp), Feeling disconnected (sp), Not doing assignments (sp)
Group Activities and Interventions	Helpfulness	Focusing on self (sp), Focusing on world of work (sp), Building skills (sp)
Facilitator	Helpfulness	Structure (sp), Openness (sp), Emotional support (sp)

Group Members	Peers	Connecting (d), Joking around (d)
	Friends	Comforting (d), Fooling around (d)
Group Climate	Process	Supporting (d), Engaging (d)
	Cohesiveness	Beginning (d), End (d)
Behaviours	In group	Expressing self (sp), Acting independently (sp), Investing in the group (sp)
	Outside group	Taking action (sp), Exploring (sp), Planning for the future (sp), Making career decisions (sp), Seeking help (sp)
Personal Characteristics (intervening condition)	Readiness	Needing to make a decision (d), Having time to decide (d)
	Approach to career	Calling (d), Means to an end (d)
	Reflexivity	Abstract (d), Concrete (d)
Relationship to Parents (intervening condition)	Parental support	Instrumental (d), Emotional (d)
Learning	Self World of Work Connecting Self to Work	
Agency	Feelings Focus Actions	Local (d), Global (d) Internal (d), External (d) Independent (d), Dependent (d)

Note: Dimensions of a property are denoted with (d), and sub-properties with (sp).

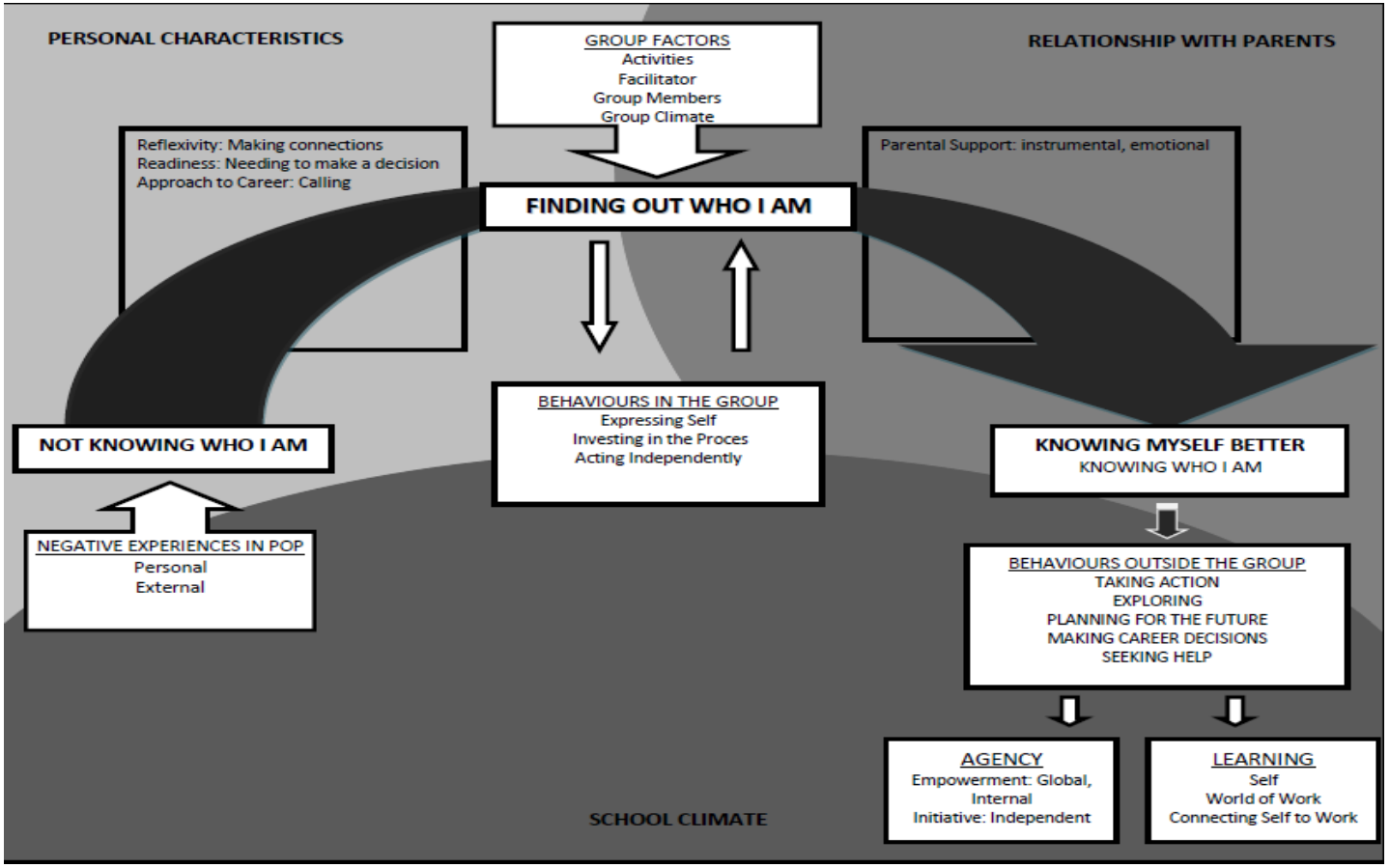

Figure 1. The 'Knowing Who I am' Trajectory of Developing a Work Identity

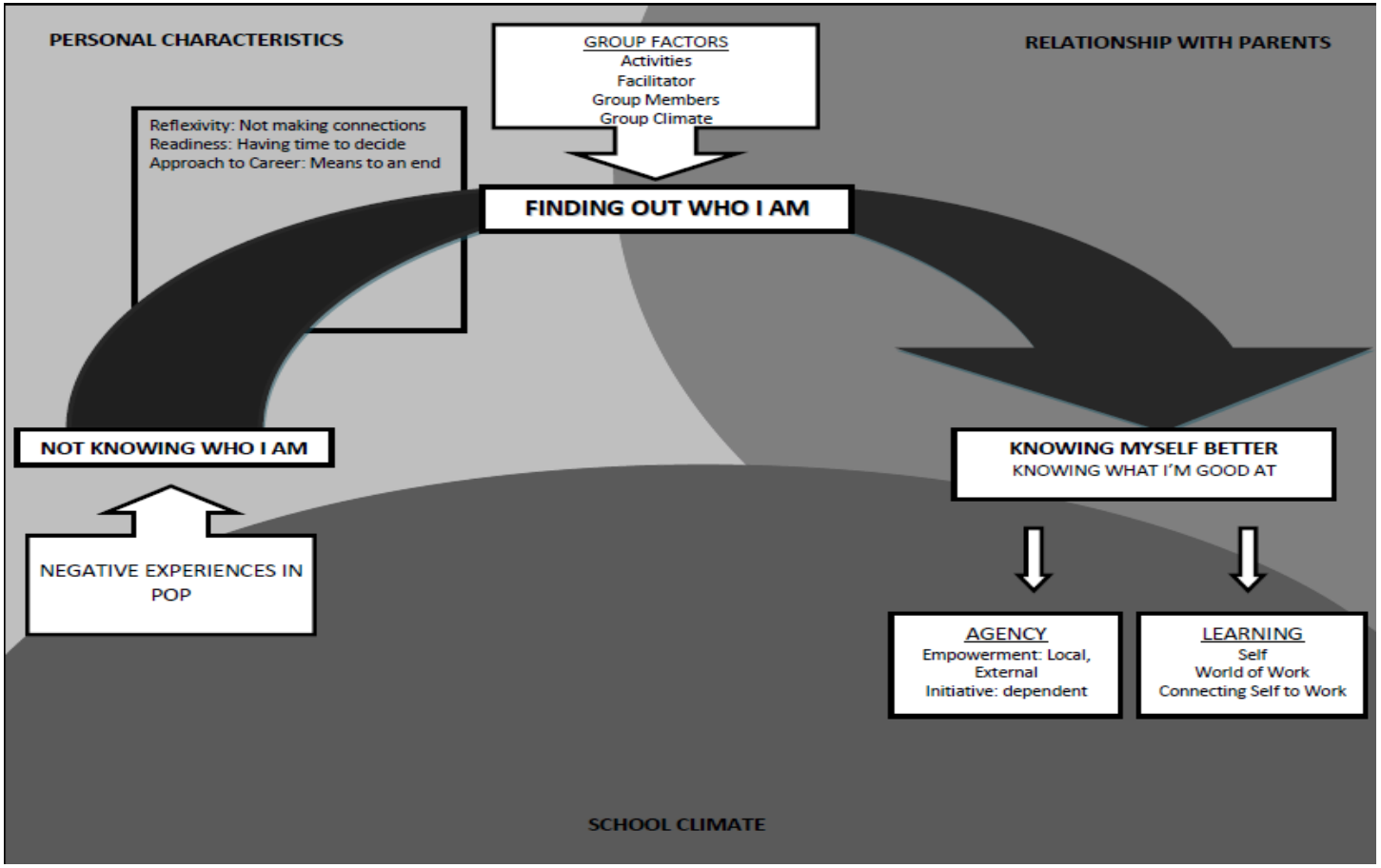

Figure 2. The 'Knowing What I'm Good At' Trajectory of Developing a Work Identity

Bridging Manuscripts 2 and 3

Manuscript 2 presented a grounded theory study with fourteen adolescent males who had participated in two versions of the Motivate to Explore Career Intervention. The youth characterized their development over the course of the group as a process of getting to know themselves better, which resulted in feelings of agency. The findings highlighted the negative impact of academic marginalization, and the positive influence of group/intervention factors, on the career identity development process. The study supported and elaborated previous research on self-determination theory and career development. Particularly, findings of this study pointed to the importance of satisfying the youth's needs for autonomy, competence, and relatedness, and highlighted how focus on intrinsic versus extrinsic goals differentiated the pathways through which the trajectory occurred. Overall, feeling related and connected to both peers and the group facilitator was of particular significance for these youth.

The model discovered through the grounded theory study contributes a preliminary understanding of the process through which disengaged youth develop self-determination for career exploration. However, the focus was more on developing a comprehensive explanation of the process grounded in participants' experiences, rather than on exploring details of the intervention. For the next study, we were interested in knowing more about the direct contribution of the intervention to the developmental trajectory. Our objective for Manuscript 3 was to understand, through the use of an exemplary case, how the group influences (described as intervening factors in Manuscript 2) contributed to the trajectory.

CHAPTER 4

Mechanisms of Change in a Group Career Exploration Intervention: The Case of "Bryan"

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Abstract

While many individuals autonomously engage in career exploration, some require additional support and guidance to participate in this process. In particular, adolescents who experience marginalization and disengagement at school may be at risk for failing to explore. This can lead to difficulties when making the transition from school-to-work. This paper presents the case of one 16 year-old male who had failed his previous career class and then participated in a group intervention designed to increase his motivation to explore. Using a case study method, the authors triangulated video, questionnaire, observational, interview, and artefact data. Data was collected before, during, and after the group, and the analysis focused on identifying the main themes that emerged for the participant across the intervention. Themes were integrated into a narrative of the participant's process of developing self-determination for career exploration. The narrative highlighted increases in self-awareness, competence, and initiative from beginning to end of the group. Overall, the results suggest that interpersonal connection, structured activities, experiential learning, and participant resilience were all central mechanisms that contributed to change.

Keywords: career exploration, self-determination, intervention, case study

Mechanisms of Change in a Group Career Exploration Intervention: The Case of "Bryan"

One of the major tasks of adolescence is the exploration of identity and the development of a core sense of self in relation to work (Super, 1994). A central component of this process involves identifying career interests and beginning to make academic and work-related decisions. While some individuals autonomously engage in this process, others may need support and guidance to effectively and actively explore both self and work (Flum & Blustein, 2000). Youth who do not connect to school and who feel confused about how to explore require support to engage in this process and to see the benefits of exploring. Research has suggested that a lack of exploration can lead to poor decision-making and planning, and a diffuse sense of self (Usinger & Smith, 2010). However, few studies have directly addressed how to facilitate active and autonomous career exploration for youth who are disengaged at school. This is particularly important, as these youth are likely to transition from school to work. Work-bound youth face a number of challenges (e.g. unemployment), and often lack formal training that their college-bound counterparts acquire through higher education (Juntunen & Britta Wettersten, 2005).

The present study reviews one adolescent's process of change as a function of his participation in a group career exploration intervention. It explores the factors and mechanisms that contributed to his change over the course of the group. The theoretical framework used to conceptualize this study is an integration of Super's life-span, life-space approach to career development (Super, 1969, 1990) and self-determination theory (Ryan & Deci, 2002). As

others have suggested, self-determination may be a crucial factor contributing to engaged and productive career exploration (Blustein, 2006; Blustein & Flum, 1999; Flum & Blustein, 2000). The literature has only begun to investigate this proposition.

Theoretical Framework

Super argues that across ages and developmental stages individuals occupy a variety of life roles (Super, 1990). Within each stage, individuals cycle through tasks of growth, exploration, establishment, maintenance, and decline, as they work towards the development of a self-concept (Super, 1990). The goal of career development is to solidify a career self-concept, characterized by personal attributes, values, needs, and interests (Super, 1990). A self-concept also comprises the *subjective* experience of self (Savickas, 2005). According to Savickas (2002) we create and construct our identities over the course of our lives and through interactions with others and the environment. Self-concepts are not only internal representations; they also reflect the dynamic relationship between the individual and his or her social and cultural environment (Savickas, 2005). Career self-concepts are thus the result of exploring identity attributes (e.g. interests, skills) and negotiating its meaning within the context of the larger social environment.

Exploration is the process through which self-concepts are constructed. Active self-exploration, along with decision-making, self-regulation, competence, readiness, and planning (Creed, et al., 2009) contribute to career adaptability (Savickas, 1997). Career adaptability refers to the ability to adjust to ongoing personal or environmental changes in the world of work. It has been linked to life

satisfaction, empowerment, self-efficacy, and an internal sense of control (Hirschi, 2009). Research has shown that poor adaptability is associated with concern about finances, opportunities, and the capacity to achieve (Creed, et al., 2009). Therefore, it is important to develop skills for adapting to occupational and career changes across the lifespan.

We, and others (Flum & Blustein, 2000), suggest that one way for individuals to acquire these skills is to develop self-determination to explore. Self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2002) posits that individuals autonomously engage in activities when they feel a personal connection to their behaviour. The SDT perspective categorizes motivation along a continuum, across which actions become increasingly self-regulated. At one end is amotivation, which denotes a lack of motivation. When feeling amotivated, individuals fail to engage altogether. They cannot predict the outcomes of their actions, often feel detached, and expend little effort or energy on the activity (Legault, et al., 2006). The opposite end of the continuum is characterized by intrinsic motivation, wherein individuals engage in activities for the enjoyment the activity brings (Deci, 1975).

Between these two poles exists a range of self-regulatory styles characterized by either engaging to receive a reward or avoid punishment (external regulation), to avoid feelings of shame (introjected regulation), for reasons that are connected to the individual's beliefs (identified regulation), or because the action has been integrated into one's belief system (integrated regulation) (Ryan & Deci, 2000b). For instance, externally-regulated career exploration may take the form of exploring to receive a good grade on an

assignment in a career class, introjected exploration would be focused on exploring because one's parents are pressuring him to do so, identified exploration might occur when an adolescent thinks learning more about herself will help in finding a job, and integrated regulation would occur when an adolescent explores due to a strong belief in the purpose and value of the activity for his future success.

The central process that promotes self-determined behaviour (i.e. intrinsic motivation, integrated regulation, and identified regulation) is internalization. Internalization is "the process through which an individual acquires an attitude, belief, or behavioural regulation and progressively transforms it into a personal value, goal, or organization…the developmental process by which a child integrates the demand and values of the socializing environment" (Deci & Ryan, 1985, p. 130). Research has consistently shown that internalization occurs in contexts where individuals' basic psychological needs for autonomy, competence, and relatedness are met (Deci, et. al, 1994). In other words, when individuals feel they have choice, when they have the opportunity to feel successful, and when they feel connected to those around them, they are more likely to autonomously engage in activities and to feel more self-regulated when doing so.

Developing a Work Identity

In previous work, we explored the internalization process of career exploration activities for youth who participated in two versions of a career intervention (Kerner & Fitzpatrick, 2011). We interviewed 14 youth who participated in the two groups, and asked them about their experiences of career exploration before, during, and after the group. Our analysis of the interviews

suggested a yielded a model of developing self-determined motivation for career exploration. The core experience of this process was *Developing a Work Identity*, characterized by a trajectory of learning about the self, learning about the world of work, and learning to connect these two. The youth described entering the group not knowing themselves well, and gradually over the course of the group learning more about their interests, skills, and values, and how to begin connecting these to their career decision-making process. The trajectory resulted in the youth feeling a greater sense of agency with regards to their future planning, and to them taking some initiative to continue exploring career information after the group.

The process of developing a work identity was influenced by contextual factors, contributing and intervening conditions, and action strategies initiated by the youth both in and outside of the group. In particular, the youth described how group influences, such as the group activities and aspects of the group process (i.e. support from group facilitator, feeling connected to other group members), were factors that contributed to their growth. As a next step in refining our intervention and understanding how and why it works, we sought to further explore how these group influences facilitated the development of a work identity.

The Present Study

Our goals for the present study were to develop increased insight into the mechanisms that contributed to the development of a work identity, and to corroborate our findings drawing from multiple perspectives. Our research questions were: how did the group influences (i.e. activities, climate, members, and facilitator) contribute to the process of developing a work identity? What are the confounding or alternate factors (individual elements) that contribute to the

process? To explore these questions, we used a single, instrumental case study approach (Creswell, 2007; Yin, 2009). Case studies are used to investigate a phenomenon in depth and in its naturalistic context (Yin, 2009). Instrumental cases are those selected for their ability to provide insight into a particular issue of interest (Stake, 1995). We selected "Bryan" as our case, because we believed his process to be exemplary and could therefore elucidate important aspects of the impact of the group on change. We analyzed data from across multiple sources to further understand how the group contributed to Bryan's self-determination and development of a work identity.

Method

Participant

Bryan was a 16-year-old male, who identified as being of Eastern-European descent. At the time of investigation, he was in the tenth grade, and reported having failed the ninth grade once. He had never been diagnosed with a psychological disorder or learning disability, and noted that his academic grades were mostly in the "60s". At the time of investigation, he was attending a large, suburban high school. He was recruited for the intervention study, because he had failed his career exploration class the year prior to the investigation. This was the second time Bryan had taken the class; he had passed the first time, but failed the grade and therefore had to repeat all of his classes. He was invited to an informational meeting about the project, and he elected to participate (see Appendix F for a copy of the oral script used during the informational meeting). While he had passed the course once, Bryan was retained as a participant for his potential to illuminate why students lack motivation for the career class. He was

selected for the present study, as he was believed to be the individual who gained the most from the group sessions and who demonstrated the most commitment to the group process. He attended all ten sessions of the group intervention.

Data and Measures

We used a range of data sources to explore our research questions. This included: 1) video-recordings of full sessions, 2) two sets of field notes (one from a researcher who attended the sessions, and one from a researcher who watched the videotapes), 3) pre- and post-group interview transcripts, 4) participant artefacts, and 5) pre-test questionnaire data. We attempted to obtain post-test questionnaire data; however, Bryan did not complete and return the questionnaire.

Video records. Each session was videotaped. During some sessions participants were divided into small groups for particular activities, and therefore two cameras were used so that Bryan was on camera at all times. These video-recordings were used by one of the researchers as the object for recording field notes about the group process. The videos were also reviewed by the first author for the case study analysis, and portions of them were transcribed and are included in the results.

Observation records. The first and third authors attended all group sessions and produced field notes and observations. The first author facilitated the group, while the third author recorded observations during the session. The fourth author, who did not attend the sessions, viewed the videorecordings of sessions and documented her observations. Both researchers who did not facilitate the group observed and recorded field notes with a focus on participants' interactions with the activities, one another, and the facilitator. In addition to her

general notes about the group process, the in-session researcher intervened with selected participants at various points throughout the sessions in order to ask questions and obtain first-hand information about an individual's process and responses to the activities. During the analysis, observational data about Bryan were segregated from the overall records.

Interviews. Interviews were conducted with Bryan one week before the first session and one week after the final session. An interview protocol was developed to explore Bryan's experiences in the group. The first portion of the protocol was structured and consisted of five questions, asking Bryan about his career interests, self-knowledge, job search activities, help-seeking strategies, and thoughts about his previous career exploration class. These questions were asked both pre- and post-intervention. In the post-group, semi-structured interview, questions pertaining to Bryan's experiences of learning and motivational change over the course of the intervention were also included.

Participant artefacts. During the group sessions, Bryan completed various written or artistic tasks. This work was kept and used as data for exploring Bryan's reactions to or interactions with the activities. For instance, on several occasions, he was asked to reflect, using drawings, on his experience of the activities. The drawings were used as data representing his process in response to the group activities.

Questionnaires. Prior to beginning the group, Bryan completed a series of pre-test questionnaires. These questionnaires examined his self-regulation (e.g. amotivation, introjected, identified) for career exploration (*Treatment Self-Regulation Questionnaire* (TSRQ); (Levesque et al., 2007), his perceived

competence for career exploration (*Perceived Competence Scale* (PCS); e.g. Williams, et al., 2006), and his need satisfaction in life (*Basic Need Satisfaction in Life Scale* (BNS); Gagne, 2003). The TSRQ and PCS were both adapted from their original versions for the purpose of this study. The wording of items was changed to specifically tap Bryan's self-regulation and perceived competence for career exploration. Bryan also completed a modified version of the Academic Amotivation Inventory (AAI; Legault, Green-Demers, & Pelletier, 2006) to capture amotivation for his previous career class. Finally, an open-ended questionnaire was developed to obtain qualitative descriptions of, and allow for elaboration on, the items of the AAI. Copies of the questionnaires are included in Appendices G-K.

Procedure

Approval to conduct this study was secured from the ethical review board at the authors' institution and from the school board of Bryan's high school. Approval was also obtained from the governing board at Bryan's high school. Bryan then provided his assent to participate (see Appendix L for a copy of this form) and returned a signed consent form from his parents (see Appendix M). Once all approvals were obtained, he completed the pre-test questionnaires. He was then interviewed using the semi-structured, pre-group interview protocol. One week following the interview, the first meeting of the 10-session intervention commenced. (For a detailed description of this intervention, please see Kerner & Fitzpatrick, 2011). The sessions ran weekly, except for a one month break for holidays that occurred between sessions seven and eight. All sessions were videotaped. After every session, any work Bryan completed was collected and

stored using a confidential participant code. One week following the final group session, he was interviewed using the post-group interview protocol.

Data Analysis

We explored our research questions using a holistic case analysis approach (Creswell, 2007). This allowed us to describe and interpret aspects of the entire case; in other words, not only Bryan's process, but how the group contributed to this. To conduct our analysis, we first explored the observational data on the group process, and using holistic coding (Saldana, 2009) extracted a set of session-by-session codes. In holistic coding, data is chunked into broad topic areas in order to obtain codes that capture the big picture of what is occurring. We then grouped the codes from across the three sets of observational data and "themed" (Saldana, 2009, p. 139) them into more abstract concepts for each session. Next, we re-examined the data looking specifically for observations about Bryan. We used these examples to evaluate the applicability of the themes in describing his process, and modified the theme or re-grouped codes in order to most accurately capture what appeared to be occurring. The specific observations were designated as examples of the themes from which they were extracted. We then explored Bryan's artefacts and again used them to evaluate and/or expand the emerging themes. Our final step in this process was to interpret the case as a whole (Creswell, 2007), and describe Bryan's developmental trajectory as a function of the group activities and processes.

Results

The analysis yielded both a detailed description of Bryan as an individual, and a description of his interactions with the group activities and group members.

To present our results, we start by describing Bryan, including his appearance, characteristics, relational patterns, and self-perceptions. This description was developed out of integrating and triangulating data from across the multiple sources, and serves to contextualize the narrative that follows. We then present a narrative of Bryan's development across the course of the intervention, highlighting the main themes that emerged from each session. We end the results with a summary of the change Bryan exhibited as a result of his participation in the intervention.

Bryan: A Description

Bryan usually wore baggy jeans, a black t-shirt, skateboarding shoes, and a silver wallet chain. He identified himself as a skateboarder, and others in the group considered him the "artist", because they thought he could draw better than everyone else. Bryan did not believe he could draw well, but with interests in photography and graphic design, he did consider himself creative. Bryan was often self-deprecating, making statements such as "I have no skills", and he demonstrated conflicted feelings about being successful in the future. He talked about being lazy and disorganized, and how these qualities would hinder him in the world of work. At the same time, he also believed he had the ability to be a hard-worker.

As a group member, he was consistently funny, engaged, respectful, and inquisitive. He was observed to be the literal and symbolic center of the group. He generally sat in the same place, which was the chair in the middle of the semi-circle. He told jokes, lightened the mood by relating content to television shows and video games, and made humorous statements (e.g. "I am Bryan and I like

long walks on the beach, I am a romantic" when identifying his personal characteristics). When he told jokes, others would laugh and then make jokes of their own. At times he would distract others by talking to them, but took little time to reorient to the task. However, he was able to work independently, follow instructions, and ask for clarification when confused. He often raised his hand or asked for help from the facilitator. It became increasingly evident near the end of the group that others looked to Bryan for his comments and feedback, and that in many ways he drove and maintained the conversations. For instance, in the last session, after the group was silent for a few moments, he asked to speak and share his learning with the group. This started a discussion about what the group members had all learned, and they then engaged in asking each other follow up questions.

Bryan frequently raised themes of trust, respect, and "school smarts" versus "street smarts". He talked about not trusting people in positions of authority, particularly the government. In his opinion, authority figures took away his freedom and restricted his actions and choices. For instance, he felt frustrated with having to complete courses, such as math and science, in order to be considered for a job. He wanted to be recognized for his "street smarts" and common sense instead of restricted by his academic struggles. He perceived the educational system as placing strict and difficult academic demands on him.

While he expressed frustration with authority, Bryan was consistently respectful of the group facilitator. He thanked her every week for bringing snacks to the group, and offered to pay for the pizza she bought for the last session. He also requested that "respect" be included in the group contract for rules of

conduct, and made a point to add "listening to each other, especially [facilitator]" as a central aspect of respect in the group. In his post-group interview, he also discussed the differences between good and bad teachers, identifying the good ones as those who "show you" how to do the work instead of "doing it for you". It appeared that for Bryan, respect and feelings of equality were central to the development and maintenance of good, trusting relationships. In sum, Bryan seemed to know intuitively who he was and what he needed from the group experience. However, he had a poor self-image as a result of negative academic experiences. This left him feeling confused and conflicted about his strengths and ability to succeed in life.

Before the Group: Seeking Autonomy and Competence

Before the group, Bryan was looking forward to engaging in further career exploration, but was looking for an experience that met his needs. On the pre-test BNS, he showed a conflicted sense of overall competence in life. For instance, he indicated that the following statements were both somewhat true for him: "most days I feel a sense of accomplishment from what I do" and "I often do not feel very capable". However, relative to his competence for career exploration, he highly endorsed that he felt confident in his ability to explore, capable of doing career exploration, able to engage in exploration throughout his life, and able to meet the challenges of doing career exploration when needed. While Bryan felt competent to explore, he perceived himself as lacking autonomy in his life in general. He rated the item "I feel like I am free to decide for myself how to live my live" as not true at all, and "there is not much opportunity for me to decide for myself how to do things in my daily life" as somewhat true. Bryan felt a general

sense of being controlled by others, and perceived himself as having few choices with respect to his daily activities. Overall, Bryan generally felt he had good relationships with people in his life.

Bryan joined the group after failing his previous career exploration class. He had taken the class once before and done well, but failed the ninth grade and therefore had to repeat all of his classes, including the career class. He failed the class when he took it the second time, because "I was not as interested…I [already] knew what I liked." He also reported that his teacher "got mad at me for researching graphic design again." Although he had this negative experience, he reported on the TSRQ that he believed career exploration was an important and valuable task (identified regulation). At the same time, he also indicated that he would engage in career exploration to please other people (introjected regulation). Therefore, while he had personal reasons for exploring, he did not necessarily experience the exploration as purely autonomous. Bryan reported joining the group "to help me with my job exploration", and he expected the group to be about helping him "find and look into the job we would like to do in the future."

During the Group: Factors Leading to Change

In this section, we describe the session-level themes that emerged from our analysis across the multiple sources of data. Table 1 lists the themes by session, alongside the group activity from which the theme emerged. In the first session, Bryan expressed knowledge of his need for support around career exploration: "how would we help somebody, when we're the ones who need help?" However, he noted that it was interesting, "that I wasn't the only one who failed [the career exploration class]." In the second session, a central part of the group discussion

focused on brainstorming ideas for fun and engaging group activities. In discussing ideas, Bryan used language, such as "due date" and "project", and other group members critiqued this for feeling too much like school. This seemed to highlight an inner conflict for Bryan: he wanted the group to be different from school, but could not think beyond his academic frame of reference. Although he was seeking a new experience, he struggled to know exactly what he needed.

In session three, Bryan engaged in researching careers on the computer. During this session, he chose to listen to music through his headphones as he worked. This activity contributed to Bryan learning more about his career of interest, and in his drawing from that session he depicted the importance of having a quiet session to focus. He wrote "concentration" and "quiet" above the people he drew sitting at computers. This was interpreted to suggest that these were central aspects of his experience in this session. He wrote the words "when people want to succeed, success will happen" at the top of his drawing which suggests the emergence of a positive attitude, or perhaps a note to himself to maintain a positive outlook as he continued to explore careers. In session three, Bryan also began to identify obstacles to his career plans, including his grades, and specific qualities he may need to have in order to succeed in his career, i.e. "for graphic designing I need a strong artistic background." Overall, this session led Bryan to further explore graphic designing and learn more about the specifics of the field. This exploration also seems to have contributed to reflection on his idea of success.

During sessions four and five, Bryan began to engage more readily in self-exploration. In session four, Bryan took part in a small group activity wherein

each group member was assigned a role that they needed to stay in while they worked on building a small construction toy. Bryan was given the role of note-taker. He was not allowed to touch the model or help with building. In the group discussion after the activity, Bryan expressed having "the worst job" and wishing that next time he could build. He also stated that he "understood [the model] as soon as I saw it", but was frustrated because he could not do anything about it. By contrast, in session five when no roles were assigned, he became invested and wanted to keep looking at the model even after his group finished putting it together. The combination of these two experiences, one frustrating and one rewarding, engaged Bryan in reflecting on the types of jobs and work tasks for which he felt most suited. When describing the benefit of the car building activity, he explained the concept of person-environment fit in his own words.

> I don't think anybody knew what they really wanted to go in…like the kind of area, the work area…so I guess by somebody giving instructions and I didn't like it, I guess I'm not gonna be a supervisor or something, 'cause that's what supervisors do, they instruct people, so I guess I'm not gonna go into that. And it just helps people out more like, know what kind of work environment really.

Experiencing a role he did not like, contrasted with being able to choose his own role, helped Bryan to realize that he would not enjoy being in a supervisory role at work. He was beginning to reflect on himself and how he might fit into the world of work.

Session six was a transition point for the group; it involved challenge of the facilitator and disengagement of the group members. The activity focused on

allowing group members to evaluate the intervention to date. Bryan complied with the task, but also resisted fully engaging in it. When the facilitator asked the group members to self-reflect, Bryan reported that "thinking about yourself is selfish." He also expressed feeling bored and disconnected from the activity. However, when the facilitator asked the group members to reflect on what career exploration means to them, Bryan's response was "doing activities like this and finding out what you're good at." From there the group engaged in a discussion about work environments. Overall, Bryan vacillated in this session between boredom and connection to the activity.

Session seven was the turning point for Bryan. In this session, Bryan engaged in a Career Toolbox activity. For this activity, the facilitator took the group through exploring and writing down examples of their personal characteristics, interests, skills, values, needs, and supports relative to career. The facilitator shared her own examples to help explain the concepts. Through filling his toolbox, and through dialogue with other group members, Bryan identified, and constructed the meaning of these attributes for his ongoing exploration. He clarified his strengths and also began to explore his negative self-perceptions. He engaged in making meaning around the impact of these perceptions on his career exploration. In sharing and discussing both strengths and challenges with others, Bryan began to develop who he was and explore how to use this knowledge to feel successful in his career decision-making. The following interaction between Bryan, the facilitator, and other group members demonstrates this theme of *constructing beliefs about self*:

Facilitator: Bryan, before you were saying that you don't feel skilful. Do you think that's true?

Bryan: I don't know. I think I am, but at the same time, I don't know.

Marc: You're skilful at taking pictures.

Bryan: I guess. I have a creative eye, if that makes sense.

Jesse: You're skilful at drawing.

Bryan: (mumbling) I guess so.

Facilitator: Well, it sounds like you're doubting yourself a little bit.

Bryan: Well, I don't know. I know I have skills. It's just that, I don't know what they are yet. Unless, I don't know what skills are (laughs).

Marc and Jesse offered Bryan support and praise for his strengths in an attempt to encourage him to see himself as "skilful" and creative. He accepted their compliments, but only in a cursory way. He did not integrate the positive comments into his sense of self, but began to engage in exploring the meaning of a skill and if he had one. He was constructing for himself the concept of a "skill" and being "skilful". While he laughed at the idea that he does not know what skills are, it is quite likely that it had not occurred to Bryan to count as valuable the things that he could do.

At the end of the session, Bryan said, "well I learned that I don't know what skills I have, I want to carry [the toolbox] around so that if someone asks me I can say oh, I have (and then he pretends to be opening the envelopes)." This shows that, although he had not internalized the positive feedback from the group, the toolbox provided him with an external container of his skills and strengths. In fact, Bryan returned to the group in session eight, opened his toolbox and was

surprised at how few skills he had put in there. He stated that "I have been thinking about it and I think I have more skills than I thought." He then proceeded to add new skills to his toolbox, further constructing his sense of competence and identity.

During session eight, Bryan engaged in filling his Career Garbage Bag. This activity focused on identifying barriers and obstacles to the career development process, and placing them in a symbolic garbage bag. In this session, Bryan shared some negative comments he received from his parents, "you're stupid, because you suck at school. My dad told me that." He explained that hearing these statements from his father "makes me feel like I'm not going to be successful. I'd rather have more positive comments." Through this activity, he actively engaged in processing the impact of these statements on his sense of work-related competence, but also challenged social values with regard to work skills. This was when he particularly emphasized his frustration with feeling that being smart and doing well in school are the only ways to get a good job. He expressed concern that his skills would be overlooked if his grades were too low, and worried about his future, "I hope I'm successful in the future. I think about that every day." While he explored difficult content in filling his garbage bag, he also wanted to "keep the garbage bag. I won't always read it, but we can read it ten years later to see if we achieved the things we wanted."

In session nine, Bryan engaged in integrating his learning from across all sessions. The activity was to complete a Career Profile Sheet, listing attributes and individual characteristics learned through the group. The contents of Bryan's profile sheet reflected the conclusions he came to during the group discussions.

He was still unable to identify what he had contributed to the small and large group activities, but he could identify some strengths and skills (i.e. "making people laugh", "creativity", "always doing my work", "willpower"). Although Bryan expressed some boredom with the task, because it felt repetitive, he identified a possible reason for its usefulness in the future.

> Bryan: I think you're just trying to make us stick it into our heads of what we know about each other.
>
> Facilitator: Ok. Is that a good thing or a bad thing?
>
> Bryan: Well maybe it's good, ya, I guess it's good, 'cause we think of now, well we're in our teenage years and we think of all our skills and all that we have now. Maybe later on in like six years we won't have the exact same skills so we can look at this sheet.

This quotation highlights Bryan's recognition of his current developmental phase "we're in our teenage years", but also his ability to imagine his skills evolving over time. He was aware that in several years he would be different, and that he would be able to look back and reflect on the changes he had made. Having to integrate his learning led him to reflect on development as fluid and ongoing, as something to be continually constructed. During this session, Bryan talked most often to the facilitator and showed more engagement in the self-reflective activity than other members of the group. While others joked around, talked about feeling bored, and did not respond to the facilitator's questions, Bryan frequently responded and elaborated on his thoughts.

In the final session, Bryan was quieter than he had been in previous sessions. When he did speak, he made reference to the group being different from a regular class. He stated:

> I liked the fact that you were the teacher, but you talked to us like a group, it's not like individual (pause). I don't know how to explain it. It's not like a class where if the student has a problem with something he has to go up to the teacher individually. Basically, this was a group (motions with his hands to include everyone), it's more comforting.

In addition, at one point in the session he asked the facilitator "do you feel older when we call you 'miss'?" The facilitator responded "yes", and then Bryan said "oh ok, then we should call you [name]". This appeared to be an attempt at connecting and relating in a more egalitarian way with the facilitator. The environment and his feelings of comfort in the setting, and with the people, appeared to be a central aspect of the group for Bryan. Although he learned about himself and engaged in self-exploration, at the end of the group, this seemed to be less significant than his connection with the facilitator and other group members. However, he did connect to the purpose of the intervention as a whole: "we can't dislike [any of the activities], because they're kind of important."

After the Group: Change

Overall, at the end of the group, Bryan had developed a new sense of self, one that was more empowered, excited about his future, self-assured, and action-oriented. His career interest had not changed, but after the group he reported feeling more capable of making career decisions based on knowledge of his values and needs. Our analysis yielded three main outcomes for Bryan as a result

of these many experiences in the group: *self-awareness*, *competence*, and *initiative*. At the end of the group, Bryan was making more connections between what he knew about himself to what he also knew about work: work environments can to some extent be chosen to meet your personal work needs. In the post-group interview, he stated "I would like to work at an office but like, be told what to do, but at the same time not exactly what to do...if I was given a specific date [to finish a project]…I'd do it…well that's something I have to work on." His competence had also increased, as he saw himself being more capable of attending higher education: "well, I wanna go for graphic designing and photography, but I want to try and go into University too. I could be more, a more ah, legit." Prior to the group, he had questioned his ability and desire to attend junior college. Finally, by the end of the group Bryan had adopted a more active approach to help-seeking. At first, he relied on his father to do the research; after the group, he took the initiative to attend a career fair to learn more about graphic design schools. He took the information his father had shared with him, and actively sought out others who could help him increase his knowledge of the field. After his group experience, Bryan was interested in learning more about how to attain his career goals.

Discussion

The case of Bryan highlights several important findings relative to mechanisms that contributed to change. Through the lens of our theoretical framework, we understand the case to point to the importance of satisfying Bryan's needs for autonomy, competence, and relatedness, as well as engaging him in activities that provided opportunities for dialogue and identity

construction. However, we have also identified several findings that we see as extending beyond the scope of our framework. For instance, several concepts from learning theories, such as experiential learning (Kolb, 1984) and scaffolding (Vygotsky, 1978), may offer unique and valuable perspectives to this case. In addition, several influencing factors emerged that were unique to Bryan. To discuss the findings we both apply our theoretical framework and explore these additional perspectives in an attempt to explain how and why the intervention led to Bryan's self-awareness, competence, and initiative/help-seeking.

Group Mechanisms

One of the significant themes that emerged from the case was the importance of relatedness. Bryan actively sought connection with the facilitator, and responded positively when others sought connection with him. When he felt connected, he engaged. His engagement was both immediate and long-term; he actively participated in the group activities, but also began to think about his identity when outside the group. This suggests that he was identifying with the task of self-exploration, and seeing it as something worthwhile and interesting. According to SDT this is a marker of autonomous motivation and a move towards self-regulated behaviour (Deci & Ryan, 2008). For Bryan, autonomous motivation to self-explore stemmed from the satisfaction of his need for relatedness by both his peers and the facilitator. In fact, for at-risk adolescents, connection with a caring, competent, and responsible adult often assists in developing feelings of competence, and it helps foster resilience (Aronowitz, 2005; Larson, et al., 2005). As a result of a strong sense of relatedness, Bryan was able to explore negative experiences and barriers, resolve inner conflicts, and

begin to develop a positive, empowered self-concept. In essence, he had developed a new set of tools for adapting to internal and environmental challenges (Savickas, 2005).

In addition to feeling related, Bryan developed competence. One of the ways in which his competence was fostered was through structure, particularly during the toolbox and garbage bag activities. Research has suggested that greater self-determination and cognitive learning occurs when lessons are presented in a clear and coherent way (Seidel, Rimmele, & Prenzel, 2005). In Bryan's case, he seemed to learn more about himself during those sessions where the activity provided him with clear instructions, a strong rationale, and small steps towards a larger goal. In addition, through the structure, Bryan's learning was scaffolded (Vygotsky, 1978). The facilitator's modeling and systematic introduction of each "tool", helped Bryan to engage one attribute at a time, break down the process, and *gradually* build his toolbox. The task was also personal and gave him some autonomy to construct his toolbox in his own way. Both personal scaffolding (Ley, Kump, & Gerdenitsch, 2010) and autonomy-support (Jang, Reeve, & Deci, 2010) have been shown to contribute to self-regulated learning. Bryan's case highlights how these mechanisms contributed to greater involvement in the process of identity and career construction (Savickas, 2002). Constructing his self-concept, evaluating his identity in relation to others, and exploring ways to find value in his qualities appears to have led to a more fluid view of self.

Extending this point, our analysis suggests that engagement in experiential activities, in which Bryan learned by doing, paired with dialogue around identity (and skills, in particular) facilitated his growth. A recent study has shown the

importance of career dialogues and practice-based learning in supporting the development of career competencies (Kuijpers, et al., 2011). These authors found that environments that engaged youth in both of these types of learning led to more reflective and proactive career behaviours, as well as increased networking. In this study, Bryan began reflecting on his own career identity after engaging in the practice-based car building activity. The toolbox and garbage bag activities then encouraged dialogue that ultimately increased his competence and readiness to be proactive. These activities likely contributed to Bryan's competence, because they focused on constructing not only who he was but how to use his knowledge to achieve his expectations (Savickas, et al., 2009). He defined his work priorities, identified supports and resources, and engaged in active self-reflection. Savickas and colleagues (2009) have argued that these are central aspects of successful career interventions.

Unique Factors

While several group-level change mechanisms emerged from the data, there was also evidence to suggest that Bryan possessed several unique qualities that helped to move the process along. Bryan's use of the group to help resolve his inner conflicts (e.g. uncertainty about skills or his ability to succeed) demonstrates resilience, and the ability to both adapt to the context and to seek a transformational experience (Smith, 2006). He actively sought out the opportunity to increase his competence by joining the group, and then proceeded to readily engage in the activities. For an individual who has experienced much school failure, and specific failure in the practice of career exploration, this shows strength and an ability to cope with adversity. Reframing negative experiences, as

Bryan did during the garbage bag activity, is believed to be a significant contributor to the development of strengths (Smith, 2005), and resilience is considered a central factor in positive developmental outcomes for at-risk youth (Hauser, Allen, & Golden, 2006). While our data suggest several important mechanisms of change stemming from the intervention itself, the contribution of Bryan's resilience to his development of self-awareness, competence, and initiative should not be overlooked.

Limitations

Although Bryan's case illuminated some interesting and important factors in the process of developing a work identity, there are several limitations to this study. First, the analysis involved a single case. As Yin (2009) argues, a multiple case study approach is generally the strongest research design. In a multiple case study, analyzing data across cases can provide more discriminating and potentially more generalizable results. While we selected Bryan's case for its potential to illuminate particular aspects of the phenomenon of developing a work identity, we cannot conclude that his experience is typical, even of members of his group. Other individuals may present with different unique qualities that influence the trajectory in other ways. To account for possible differences, a comparative case study could be conducted to explore and cross-analyze data from several participants. This could aid in the discovery of other change mechanisms not characteristic of Bryan's process.

A second major limitation of this study is that the group facilitator was also the primary researcher. She conducted the group sessions, as well as collected and analyzed the data. While this approach provided a wealth of

experience and insight from which to develop interpretations, it may also have biased the data. By triangulating the data and conducting the analysis using multiple sources (including observations recorded by two different researchers), we have attempted to decrease the impact of researcher bias. However, the credibility of the results could have been enhanced through, for example, member checking (Creswell, 2007). We were unable to conduct a member check due to practical considerations (i.e. end of Bryan's school year), but sharing the narrative with Bryan and inviting his feedback would certainly have helped to substantiate the accuracy of our interpretations.

Implications

While this study has several limitations, Bryan's case also illuminates some exciting possibilities for future theory, research, and practice. This study offers a greater understanding of the intervention-level mechanisms that are likely to contribute to the career development of disengaged youth. Through the lens of our theoretical framework, our findings also help to elaborate on the connection between motivation and career development. In particular, our results suggest that the satisfaction of basic psychological needs contributes to engagement in career dialogue and self-exploration. For Bryan, the provision of structure and connection were two crucial components of this process. Relative to using these findings to refine the group intervention, future versions of the design may benefit from integrating activities aimed at cultivating new strengths and building on existing resilience. As Smith (2006) has argued, these are central components of conducting strength-based counselling with at-risk youth. In our own work, we plan to use results of this study to inform our ongoing design of intervention. For

instance, we now have evidence to support continuing to facilitate the car building, toolbox, and garbage bag activities that engaged Bryan in experiential learning, scaffolding, and identity construction.

More globally, our findings help to suggest potential areas for future research on SDT and career construction. In particular, Bryan's case suggests that the satisfaction of needs for relatedness and competence were central components of engaging him in career dialogue. While SDT researchers have explored need satisfaction, the majority of the research has focused on autonomy-support. The present study argues for the potential of exploring the importance of relatedness in the process of identity development for at-risk youth. Flum (2001) and Flum and Lavi-Yudelevitch (2002) have begun to explore the connection between relational dimensions and identity development, but have yet to relate their findings to the process of developing a work identity or to studying at-risk youth. As this particular population of youth have often faced academic failure, they may be in need of more structure, as well as trusting, empathic relationships with authority figures, and supportive, affirming relationships with peers who experience similar struggles. Exploring this hypothesis and developing insight into the crucial components of these relationships as they relate to career development could be a fruitful avenue for future research.

Finally, Bryan's case suggests several implications for practitioners engaged in facilitating the career development of at-risk youth. As was the case with Bryan, building a trusting relationship based on collaboration and equality may be central to engaging this population in career exploration. Providing them with a lot of structure, clear rationales, explicit instructions, and systematic

procedures for exploring their identities, is likely to lead to greater competence, self-awareness, and initiative. In addition, self-exploration through practice-based and experiential activities, paired with ongoing career dialogue, is a potentially valuable combination of interventions for these youth.

In sum, the present study attempted to describe the career development experience of one adolescent from an at-risk population. The results suggest that developing a work identity (that results in greater self-awareness, competence, and help-seeking) is facilitated by feeling connected while self-exploring, learning-by-doing, following a structure, engaging in dialogue, and drawing on resilience. By attending to these issues, practitioners and researchers may be able to improve existing services for youth like Bryan, and more effectively meet the needs of disengaged youth during their school-to-work transition.

Table 1.

Session Activities and Corresponding Case Themes.

Session	Activity	Theme
1	Group contract	Construction of rules, norms, boundaries (relational, structural)
2	Reviewing contract, setting goals	Construction of rules, norms, boundaries Psychoeducation: obstacles to career exploration Construction of group activities
3	Computer research	Focused attention/engagement Job exploration Connecting self to job
4	Building a car (with roles)	Involvement (investment, broadening, evaluation) Connecting self to activity
5	Building a car (no roles)	Involvement (excitement, problem-solving) Negotiating small group roles Connecting self to activity
6	Reviewing objectives	Conflict/challenge Disengagement Exploration of career decision-making
7	Career Toolbox	Constructing beliefs about self Engagement Group cohesion Teaching/modeling by facilitator
8	Career Garbage Bag	Constructing personal meaning of career exploration Negotiating relational dynamics Teaching/modeling
9	Career Profile Sheet	Constructing an identity Negotiating relational dynamics Reciprocal teaching
10	Termination/Close the group	Constructing purpose of group Seeking connection Feeling supported and validated

CHAPTER 5

Conclusion

Summary of Research Program and Relevant Findings

This dissertation comprised three manuscripts detailing an innovative methodological approach (the Scientist-Practitioner Design Framework), a grounded theory study, and a case study. Drawing on the theories of career development and self-determination, the principal investigator and her research team designed the *Motivate to Explore Career Intervention* and evaluated its contribution to motivating disengaged youth to participate in their own career exploration. Manuscript 1 proposed a method of scientist-practitioner research developed for the purpose of this research and to design the intervention. This method integrates a participatory framework, design-based research, and rigorous methods in a scientist-practitioner approach.

Manuscript 2 presented the first investigation of the Motivate to Explore Career Intervention. Through the qualitative approach of grounded theory, this paper explored the participants' experiences of career and motivation development as a result of the intervention. The research questions that guided this study were: what is the developmental trajectory that occurs for these youth as a result of their participation in a group career exploration intervention, and how does this process unfold? The analysis yielded a model of *Developing a Work Identity* for disengaged adolescents who participated in the intervention. The model highlighted the impact on the youth's career development of previous negative academic experiences, emotional and instrumental support from parents, the group facilitator's provision of guidance and structure, and the youth's own

readiness for career exploration. The trajectory resulted in increased agency, self-awareness, and initiative for career exploration. However, some participants integrated their learning more fully than others.

Manuscript 3 presented a second, and more focused investigation of the Motivate to Explore Career Intervention. Using a case study method, we explored the experience and trajectory of one participant who could illuminate crucial aspects of the developmental process. The research questions that guided this study were: how did the group influences (i.e. activities, climate, members, and facilitator) contribute to the process of developing a work identity? What are the confounding or alternate factors (individual elements) that contribute to the process? Results highlighted the importance of a trusting relationship with the facilitator, a lot of structure around the activities, opportunities to engage in identity construction, and opportunities to learn through experiential activities. The findings suggested that the provision of trust, relatedness, and autonomy-support from the facilitator, relatedness with group members, and a structured, scaffolded, and engaging context contributed to increases in the participant's self-awareness of, competence for, and initiative in occupational and self exploration.

Overall, the combination of the two studies highlights several noteworthy findings. First, the youth in this study required support to autonomously engage in self exploration more than in occupational exploration. Second, the youth had a strong need for autonomy that was not supported in their previous career class. Third, the youth felt a general lack of competence and self-efficacy that stemmed from repeated school failures and perceived that the school did not pay attention to their educational needs. Fourth, empathic, trusting relationships with the adult

counsellor were crucial in supporting the exploration process. Fifth, practical, hands-on tasks engaged these youth in exploration and contributed to their feelings of efficacy and competence. These findings along with the proposal of the Scientist-Practitioner Design Framework contribute to theory, research, and practice in the area of adolescent career development.

Contributions to Knowledge and Future Directions

Theory. Overall, the results of the two studies have provided a local theory about the process through which academically disengaged youth develop self-determined motivation and the means of supporting it. In particular, the studies have helped to identify several critical variables of career adaptability as they relate to disengaged youth. While the youth in these studies had motivation for work after high school, as well as clear occupational goals, they lacked the motivation to engage in ongoing self exploration. This is likely to impede their career adaptability across the course of their lives. This expands Flum and Blustein's (2000) perspective on the connection between identity and exploration, and argues for a more nuanced perspective. In particular, the model could be broken down to attend to "motivation to explore self" and "motivation to explore occupations". As it stands currently, the model discusses exploration as a singular construct; however, the results of this research program suggest that individuals may differ in their motivation to explore self versus occupation. This addition to the theory could also inform research on career interventions, as previous interventions have often placed more emphasis on occupational exploration and choice (e.g. Turner & Lapan, 2005). By conceptualizing exploration as a more complex construct, our current theories and interventions can be expanded to take

into account the cultural, social, and environmental factors that make occupational exploration a privilege (Blustein, et al., 2008).

The results of the two studies also contribute to theory by offering evidence to support the integration of self-determination and career development constructs. In particular, these studies have highlighted the importance of attending to satisfying disengaged youth's need for relatedness. While others have discussed relational constructs in the context of identity development (e.g. Flum, 2001), the literature has not explored this from a motivational perspective. Our studies point to the strong connection between satisfying the need for relatedness and the development of autonomous motivation to engage in self exploration. Integrating the importance of need satisfaction into theory about the process of career development may yield a perspective with broader applicability. It also renders the theory more culturally-sensitive, taking into account the unique needs of youth who feel excluded from the traditional and expected career path (Blustein, et al., 2008).

Research. This program of research presents a novel career exploration intervention for youth who may lack motivation to engage in the process. The results of the two studies conducted for this dissertation provide an initial version of an intervention that can be implemented, tested, and evaluated in future studies. While this intervention remains in its infancy, the results of the studies suggest preliminary foci (experiential learning, structured self-exploration) for activities (car building, toolbox) most likely to incite autonomous motivation for career exploration for disengaged youth. The results also challenge existing literature on career choice interventions (S. D. Brown, et al., 2003), and identified additional

critical ingredients that contribute to the efficacy of the intervention. For instance, while S.D. Brown et al. argue that writing tasks are particularly helpful for career planning and decision-making, the youth in this study found writing tedious, boring, and undermining their autonomy and competence. The case study in particular highlighted the critical nature of relational dimensions, structure, experiential learning, and dialogue in facilitating self-concept development, and the grounded theory analysis pointed to the importance of a fun, safe, supportive climate within which to explore. These findings suggest a set of additional crucial mechanisms that may contribute to greater efficacy of career interventions relative to enhancing participants' self-awareness. Our findings provide a fruitful area for ongoing research in refining and expanding interventions that will engage marginalized youth in their own career development.

In addition, the results offer new avenues for research on career interventions for disengaged youth. In future studies, the model of developing a work identity that resulted from this intervention could be further explored and validated. Some initial ideas for next steps in this area of research may be to first develop measures of motivation for self and occupational exploration, as well as a measure of career adaptability specific for this population of youth and at their level of development. These measures could then be administered pre- and post-test to evaluate the outcomes of the intervention. This would contribute to a greater understanding of the efficacy of the intervention in supporting the successful career development of this population. In addition, this could provide empirical support for how to refine the Motivate to Explore Career Intervention.

A second major contribution to research, as provided by the current work, is the proposal of the Scientist-Practitioner Design Framework (SPDF). This framework contributes a new methodology for the field of counselling psychology and presents a scientific approach with applicability to researchers seeking a method that informs, and is informed by, practice. In future studies, the framework could be examined relative to its utility in designing other types of interventions. For example, other researchers could use the framework to develop a different type of intervention (e.g. targeting adolescent depression), and modify the SPDF tenets where necessary. This would contribute to testing, validating, or elaborating the research framework, thereby creating a more comprehensive and broadly applicable methodology. In addition, future research could compare outcomes of an intervention developed using the SPDF to outcomes based on a theory-based, manualized intervention.

Practice. In addition to implications for theory and research, this program of research contributes important practice-based knowledge for teachers, schools, and school counsellors. First, the results suggest that teachers of career exploration classes should broaden their understanding of career exploration to be more inclusive of the experience of disengaged and marginalized youth. In particular, the youth in these studies highlighted the negative impact of teachers' expectation of broad exploration. The youth reported already knowing their occupation of choice, and were therefore seeking depth rather than breadth of exploration. A major reason these youth were amotivated in their class was due to feeling forced to explore other occupations, and from perceiving a lack of autonomy or choice to explore the practical details about their occupation of

interest. This suggests that teachers need not pressure all students to explore broadly, nor should teachers place undue value on breadth versus depth of exploration.

The results also have implications for the larger school system and individual educational institutions. The youth in these studies identified feeling a lack of competence and autonomy across their school experiences. The lack of competence, in particular, was a major contributor to the adolescents' amotivation to explore: they did not feel competent to succeed in a variety of occupations, and therefore did not explore broadly. The youth described this as significantly impacting their desire to remain in school. In the results presented in Manuscripts 2 and 3, when the youth were encouraged, supported, validated, and given opportunities to voice their opinions, many of them readily and openly engaged, connected to the group, and developed significant self-awareness. This suggests that the youth are likely capable explorers and learners whose needs (such as applied, concrete, and hands-on methods of learning, coupled with opportunities to feel autonomous) are not being supported by the schools.

This finding is consistent with literature on drop outs and school climate, that states that organizational structures that inhibit students' self-determination can impact retention and rates of completion (Baker et al., 2001). Specifically, this means that in order for institutions to keep students in school, they must examine the ways in which their organizational practices support or thwart *all* students' self-determination. The results of the studies presented here suggest that rather than place the onus on students to work harder or adapt to the existing system, educational institutions can do their own work to address the ways in

which the system undermines marginalized students' self-determination. In particular, the results of this program of research argue for the use of hands-on, experiential, and structured learning tasks in daily classroom instruction. Feeling connected to peers and significant adults was also crucial for engaging these boys. The combination of tasks that helped them to feel autonomous, competent, and related kept them motivated, engaged, and excited to learn. Therefore, providing practical and relationally connected learning opportunities in all classes is likely to engage these youth and may help to keep them in school.

Finally, the use of the SPDF to structure this research has yielded information, based in practice, about how counsellors can engage marginalized youth in a group career exploration intervention. The results of the case study are particularly relevant in that they highlight critical counselling practices, such as developing a trusting relationship, providing opportunities for hands-on activities, using role playing to engage clients in experiential self-exploration, and offering substantial structure. If counsellors attend to these factors, they are likely to empower their clients and provide them with crucial experiences of feeling competent, autonomous, and related. This can be critical in helping youth develop a positive sense of self and ongoing investment in learning and adapting to change.

A Final Conclusion

Failing to obtain a high school diploma can negatively impact one's transition into the world of work. Many of today's youth are facing this reality. This research program has attempted to understand some of the reasons why certain youth disengage from their own learning and development processes and

what can be done about this problem. The main goal has been to identify factors that can support this population of adolescent males in their school-to-work transition. Overall, this work has argued for attendance to social and environmental factors that contribute to disengagement, and to ways that adults and other individuals in positions of authority can adjust their practices to help these youth. If we can engage adolescent males at risk of failing to successfully transition from school to work, to develop internal resources and resilience to counter the obstacles and barriers they face, we can help them grow and thrive. By listening to disengaged youth and learning about what they need, teachers, counsellors, and researchers can more effectively and collaboratively empower these youth to engage in their own positive development.

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APPENDICES

Appendix A

Interview Protocol: POP Teachers

1. What makes POP a successful program for students?
2. What are the common challenges for students in POP?
3. Describe a typical student who struggles to succeed in POP.
    a. What are his/her unique needs?
    b. How are these needs being met?
    c. How are these needs not being met?
    d. What are your struggles in teaching these students?
4. Does the previous description represent all students who struggle? If not, please describe the unique needs of other students who struggle.
    a. How are these needs similar or different across the less successful students in POP?
5. What other factors contribute to these students not passing, or struggling to pass, the course?
6. What do you think would help prepare these students to succeed in POP?
7. What do you feel would be more beneficial for you as a teacher, and for these at-risk students:
    a. A preparatory intervention with these students the year prior to entering POP? A follow-up intervention to help them build on the skills they have gained in POP? An intervention that is conducted simultaneously to POP, i.e. a kind of "extra-help" program? Why?

Appendix B

Table 1.

Two Versions of the Motivate to Explore Career Intervention.

Session	Group One	Group Two
1	Ice-breakers, introductions	Ice-breakers, group contract
2	Discussion about career exploration course, identifying sources of amotivation	Identify and clarify goals for group, decide on group activity
3	Sociometry, storytelling to identify sources of intrinsic motivation/interest	Self-directed job search on computer
4	"My Career Toolbox", identify career values, beliefs, interests, skills	Group activity ("Building a Car"), taking on group roles to learn about self
5	Group activity ("Planning a Job Fair"), taking on group roles to learn about self	Group activity ("Building a Car"), taking on group roles to learn about self
6	Group activity ("Planning a Job Fair"), taking on group roles to learn about self	Evaluating group activities and learning, planning for future sessions
7	Group activity ("Planning a Job Fair"), taking on group roles to learn about self	"My Career Toolbox", identify career values, beliefs, interests, skills, needs
8	Group discussion, identify negative messages, obstacles to career exploration	"Garbage Bag", identify negative messages, obstacles to career exploration
9	Develop career/self profile, clarify strengths, values, beliefs, interests, obstacles	Develop career/self profile, clarify strengths, values, beliefs, interests, obstacles
10	Termination	Termination

Appendix C

Group One: Post-Group Interview Protocol

1. Tell me the story of your comic book.

    a. What did you learn about yourself?

    b. What or who helped you learn this?

    c. What were the obstacles that you had to overcome?

    d. How did you overcome these obstacles?

    e. Who or what was most and least important in helping you overcome these obstacles?

2. How would you have described yourself at the beginning of your story?

    a. How would you have described your level of motivation for job searching and planning?

3. How would you describe yourself now, after the group has ended?

    a. How would you describe your level of motivation now, for job searching and future planning?

4. Describe the most important even for you in the group?

5. Who was the most important person for you in the group and why?

Group Two: Pre-Group Interview Protocol

1. After high school, what kind of work or job do you think you would like to do?

2. Have you talked to anyone about this kind of work/job(s)?
    a. Who initiates these conversations?
    b. Tell me about a conversation you have had with this person.

3. Over the last year, have you done anything to learn about different jobs?
    a. If you've done a few things, tell me some reasons why you did these things
    b. If you haven't done much in the last year, tell me some reasons why not.

4. Everyone has some qualities or characteristics that make them who they are. Some characteristics help people do their jobs better or enjoy them more. Tell me about some of your personal qualities that you think would help you feel successful at a job or do it better.

5. What do you think your POP class was about? Tell me in your own words.

6. How easy or difficult was it for you answering these questions?

Group Two: Post-Group Interview Protocol

1. After high school, what kind of work or job do you think you would like to do?

2. Have you talked to anyone outside of the group about this kind of work/job(s)?
    a. Who initiates these conversations?
    b. Tell me about a conversation you have had with this person.

3. Since the beginning of this group, have you done anything outside of the group to learn about different jobs?
    a. What made you decide to do that?
        i. Tell me about how the group might have helped with this.
    b. *If they didn't do anything*: Do you know why you didn't do anything?

4. What group activity helped you to learn the most about yourself?

5. Everyone has some qualities or characteristics that make them who they are. Some characteristics help people do their jobs better or enjoy them more. Tell me about some of your personal qualities that you think would help you feel successful at a job or do it better.
    a. Tell me about how you see yourself using these qualities in your current job.
    b. Tell me about how you see yourself using these qualities in your future job/career.

6. In your opinion, what was the most important event that happened in the group? Why?

7. Who helped you most in this group?
    a. Tell me about this person, and what they did that was so important for you.
    b. *If they talk about the group facilitator, also ask:* Who else was important for you in this group?

8. If you were to describe this group experience to others who are thinking about participating next time, what would you tell them?

9. Is there anything I didn't ask but that you would like to tell me about your experience in the group?

10. How easy or difficult was it for you answering these questions?

Appendix D

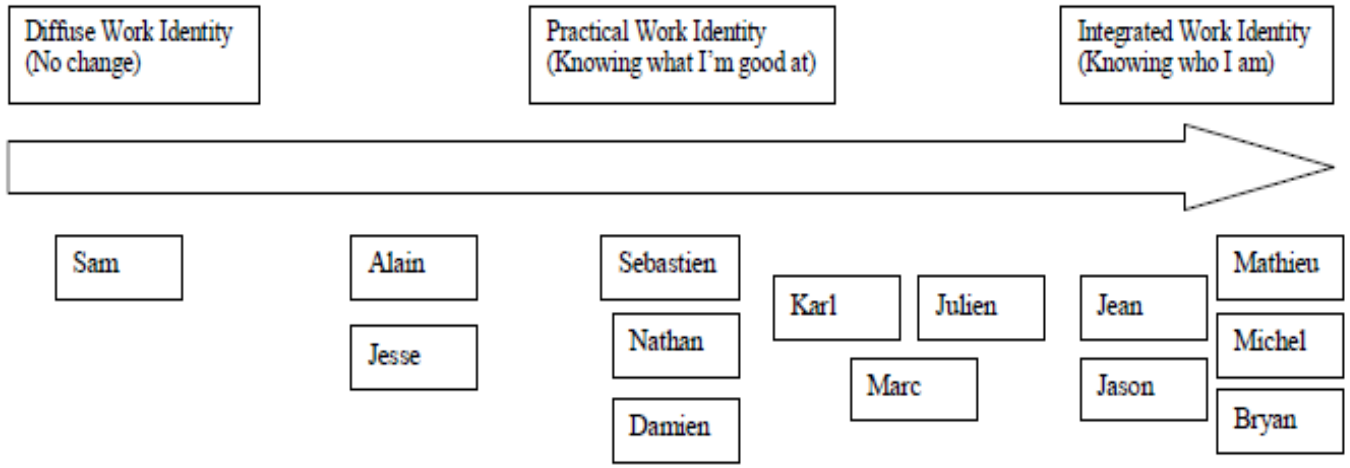

Figure 1. Participants' Pathways Along the Trajectory of Developing a Work Identity.

Appendix E

Table 1.

Comparison of Participants on Categories that Distinguish the Pathways of Developing a Work Identity.

	Work Identity	**Readiness**	**Approach to Career**	**Reflexivity**	**Agency**	**Initiative**
Mathieu	Knowing who I am	Needing to make a decision	Not specified	Making connections	Global, Internal	Independent
Michel	Knowing who I am	Needing to make a decision	Calling	Making connections	Global, Internal	Independent
Jason	Knowing who I am	Needing to make a decision	Calling	Making connections	Global, Internal	Independent
Bryan	Knowing who I am	Needing to make a decision	Calling	Making connections	Global, Internal	Independent
Jean	Knowing who I am	Needing to make a decision	Calling	Making connections	Global, Internal	Independent
Julien	Knowing who I am	Having time to decide	Not specified/ Unsure	Making connections	Local, Internal	Dependent
Marc	Knowing what I'm good at	Having time to decide	Calling	Making connections	Local, External	Dependent

Karl	Knowing what I'm good at	Having time to decide	Calling	Making connections	Local, External	Dependent
Damien	Knowing what I'm good at	Having time to decide	Means to an End	Not making connections	Local, External	Not specified
Nathan	Knowing what I'm good at	Having time to decide	Means to an End	Not making connections	Local, External	Dependent
Sebastien	Knowing what I'm good at	Having time to decide	Means to an End	Not making connections	Local, External	Dependent
Alain	Knowing what I'm good at	Having time to decide	Not specified	Not making connections	Local, External	Dependent
Jesse	Knowing what I'm good at	Having time to decide	Means to an End	Not making connections	Local, external	Dependent
Sam	None described	Having time to decide	Not specified/ Unsure	Making connections but not self to work	None described	None described

Appendix F

Oral Script to Explain Project and Invite Potential Participants

My name is Emily Kerner. I'm a PhD student at McGill studying Counselling Psychology. I'm also a trained counselor. Your school guidance counselor _____ (name)_____ called you here today to meet with me, because I would like to invite you to participate in a research project I am conducting. The purpose of the project will be for me to test out a series of career exploration activities with a small group of students who aren't particularly interested in career exploration. With the students' feedback I will then evaluate how well these activities worked to help the students feel more interested and excited about career exploration. Overall, then, I'm hoping the project will encourage those students who don't feel interested in career exploration to become interested in it to some extent.

You have been selected to meet with me, because your work in POP last year suggested that maybe you weren't too keen about doing career exploration. You are not being penalized in any way for last year, but are instead being invited to help me understand what would have made your POP class more exciting, interesting, and engaging. If we can figure out what would have motivated you more in your class last year, then we can use that information to improve the class and make it more interesting and accessible to all students. Also, the point of this project is to help you find career exploration more engaging, and become more excited about making future plans. Of course, you do not have to participate in this research. It is your choice to participate or decline this invitation. Even if you do choose to participate, you can always choose to stop your participation at any time.

Before you make your decision, I would like to tell you a bit more about what being a participant would mean. If you agree to participate, before I ask you to do anything, you will need to get permission from your parents. I will give you a form for your parents to read and sign. If they agree that you can participate, you'll bring this signed form back to me. I will also give you a form to sign saying that you agree to participate in the research. We will read through your form together so you know and understand everything in it before you sign it. Once I've received these forms from you and your parents, then we will schedule another meeting where I will ask you to fill out a few questionnaires. These questionnaires should take about 20 minutes to complete, and ask you about your experiences in POP last year.

After you fill out these questionnaires, I will compile the results and then select approximately 8-10 students to participate in a small group workshop. If you are selected, and you agree to continue your participation, you will meet with this group of students on a weekly basis for 10 weeks. The meetings will last about 1 hour and 30 minutes, and will take place during lunch and some class time. You will have to inform your teachers when you'll be missing class time; you will be provided with a letter from me and the guidance office letting your teacher know that you are participating in a special group. However, the details of the group will be kept private; your teacher (as well as other school administrators and your classmates) won't know why you're in the group, or what you do in the group.

In these group meetings you will do a variety of activities, like drawing, writing, role-playing, and discussing with other group members. The activities will focus on understanding both why you don't feel particularly interested in career exploration and what kinds of things do get you motivated, interested, and excited. After each group you will fill out a few questionnaires that ask you about your experience in the group that day, and then you will spend about 20 minutes discussing in the group how things went for you that day. One week after the last group meeting, I will invite you for an individual interview. In this interview, I will ask you some questions about the group experience, what was helpful and not helpful, what you liked and didn't like, and what you learned from being in the group.

Do you have any questions about the project and/or your participation? Would you like to participate in this project?

Appendix G

Treatment Self-Regulation Questionnaire – Career Exploration Version

The following question relates to the reasons why you would either explore different career options or not explore your career options. Different people have different reasons for doing that, and we want to know how true each of the following reasons is for you. All 15 responses are to the same question.

Please indicate the extent to which each reason is true for you, using the following 7-point scale:

1	2	3	4	5	6	7
not at all true			somewhat true			very true

The reason I would engage in *career exploration* is:

1. Because I feel that I want to take responsibility for my own future.
2. Because I would feel guilty or ashamed of myself if I did not explore my career options.
3. Because I personally believe it is the best thing for my future.
4. Because others would be upset with me if I didn't explore my career options.
5. I really don't think about it.
6. Because I have carefully thought about it and believe it is very important for many aspects of my life.
7. Because I would feel bad about myself if I didn't explore my career options.
8. Because it is an important choice I really want to make.
9. Because I feel pressure from others to explore my career options.
10. Because it is easier to do what I am told than think about it.
11. Because it is consistent with my life goals.
12. Because I want others to approve of me.
13. Because it is very important for being as future focused as possible.
14. Because I want others to see I can do it.
15. I don't really know why.

Appendix H

Perceived Competence Scale – Career Exploration Version

Please indicate the extent to which each statement is true for you, assuming that you are intending to either begin now to do career exploration or to remain committed to doing career exploration.

1	2	3	4	5	6	7
not at all true			somewhat true			very true

1. I feel confident in my ability to do career exploration.
2. I feel capable of doing career exploration.
3. I am able to do career exploration over the long term (throughout my life).
4. I am able to meet the challenge of doing career exploration when I will need to.

Appendix I

Basic Need Satisfaction Scale

Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

1	2	3	4	5	6	7
not at all true			somewhat true			very true

1. I feel like I am free to decide for myself how to live my life.
2. I really like the people I interact with.
3. Often, I do not feel very competent.
4. I feel pressured in my life.
5. People I know tell me I am good at what I do.
6. I get along with people I come into contact with.
7. I pretty much keep to myself and don't have a lot of social contacts.
8. I generally feel free to express my ideas and opinions.
9. I consider the people I regularly interact with to be my friends.
10. I have been able to learn interesting new skills recently.
11. In my daily life, I frequently have to do what I am told.
12. People in my life care about me.
13. Most days I feel a sense of accomplishment from what I do.
14. People I interact with on a daily basis tend to take my feelings into consideration.
15. In my life I do not get much of a chance to show how capable I am.
16. There are not many people that I am close to.
17. I feel like I can pretty much be myself in my daily situations.
18. The people I interact with regularly do not seem to like me much.
19. I often do not feel very capable.
20. There is not much opportunity for me to decide for myself how to do things in my daily life.
21. People are generally pretty friendly towards me.

Appendix J

Academic Amotivation Inventory – POP Version

The following questions ask, if you did not feel motivated during POP, *why* may have felt this way during the class. As the overall goal of POP is to introduce you to the process of *career exploration*, the questions ask you to reflect specifically on your reasons for not feeling motivated for career exploration.

How often did you experience a lack of motivation to study or do your school work in POP?

Please rate the degree to which each of the following statements corresponds with your reasons for not wanting to study or do your school work in POP last year.

1	2	3	4	5	6	7
does not correspond at all			*corresponds moderately*			*corresponds exactly*

Because, for me, career exploration holds no interest.
1 2 3 4 5 6 7

Because I'm not good at career exploration.
1 2 3 4 5 6 7

Because career exploration is not stimulating.
1 2 3 4 5 6 7

Because career exploration was not important to me.
1 2 3 4 5 6 7

Because I'm not energetic enough.
1 2 3 4 5 6 7

Because I didn't have what it takes to do well in career exploration.
1 2 3 4 5 6 7

Because I had no good reason to do career exploration.
1 2 3 4 5 6 7

Because career exploration is not valuable to me.

1 2 3 4 5 6 7

Because the tasks demanded of me surpassed my abilities.

1 2 3 4 5 6 7

Because I can't seem to invest the effort that is required.

1 2 3 4 5 6 7

Because I don't have the knowledge required to succeed in career exploration.

1 2 3 4 5 6 7

Because I find that career exploration is boring.

1 2 3 4 5 6 7

Because I have the impression that it's always the same thing everyday.

1 2 3 4 5 6 7

Because I'm a bit lazy.

1 2 3 4 5 6 7

I don't like career exploration.

1 2 3 4 5 6 7

Because I don't have the energy to do career exploration.

1 2 3 4 5 6 7

Appendix K

Amotivation Questionnaire

This set of questions asks you to explain your answers to the previous questions. This is an opportunity for you to give me more information about your responses to the previous questions. Please be as detailed as you can in answering the questions here.

1. When you think about career exploration, what is it that doesn't feel interesting and motivating to you?

2. When you stated that career exploration was not important or valuable to you, that you had no good reason to do career exploration, or that it holds no interest for you, what did you mean? Please explain what about career exploration was not valuable or interesting to you.

    a. What do you think would make career exploration more important, interesting, or valuable to you?

3. When you stated that you did not feel energetic enough, can't seem to invest enough energy in career exploration, don't have the energy to do the tasks, or that you're a bit lazy, what did you mean? Please explain what it is about career exploration that makes you feel lazy or not energetic enough.

    a. What do you think would help you to feel more invested in career exploration?

4. When you stated that the tasks demanded of you surpassed your abilities, that you don't have the knowledge you need to succeed, that you don't have what it takes, or that you're not good at career exploration, what did you mean? Please explain what it is about career exploration that felt too demanding or challenging for you.

    a. What do you think would help you to feel that career exploration tasks matched, and did not surpass, your abilities?

5. When you stated that you don't like career exploration, it's boring, it's the same thing every day, or that career exploration is not stimulating, what did you mean? Please explain what it is about career exploration specifically that makes it feel boring to you.

a. What would help you to feel that career exploration was not boring?

b. What would make career exploration more stimulating for you?

People have many reasons for not feeling interested in or motivated to do career exploration activities. If you feel the above questions do not really describe your reasons for not feeling motivated during POP last year, please use the space below to tell me your own reasons.

Appendix L

AGREEMENT TO PARTICIPATE IN RESEARCH
Participant Form

Title of the research project: Facilitating Amotivated Adolescents' Self-Determination for Career Exploration: Development and Evaluation of an Intervention

Conducted by: Emily Kerner, M.A.; McGill University

Purpose of the Research: For my research, I will be inviting students to participate in a group workshop on developing motivation for career exploration. In particular, I am interested in understanding why some students are not interested in career exploration, and in finding ways to facilitate greater motivation for this important developmental task. The students I am inviting as potential participants are those whose school work in POP last year suggest that they were not particularly interested in career exploration.

Procedures: I will first be asking you to complete two short questionnaires about your experiences in POP last year, including how motivated (or interested) you felt throughout the year in this class and what kinds of activities were more, or less enjoyable. Completing the initial questionnaires should take approximately 15-20 minutes. If your responses on the questionnaires demonstrate that you really dislike career exploration activities, I will invite you to participate in 10 group career exploration sessions with other students in your grade who also felt similarly to how you did about POP. In the group sessions, you will do a variety of activities, like drawing, writing, role-playing, and discussing topics with the group. One major component of the workshop as a whole will be the writing of a comic book. You will create a character and write the story of this character as he/she learns about career exploration. This comic book will be coded as a representation of your learning throughout the workshop. In order to thank you for your participation, there will be snacks provided during each group session.

There will also be a research assistant who will be present at the group sessions to record her observations of the group. After each group session, you will fill out a few questionnaires that ask you about your experiences in the group that day, and then we will spend about 20 minutes discussing, as a group, how things went for everyone. One week after the last group meeting, I will invite you for an individual interview about your experiences in all the group sessions. The group sessions will be video recorded, and the individual interview will be audio recorded. The audio recording and the video recording of the final 20 minutes of the group (the group discussion portion) will be transcribed, and both recordings will be coded.

As the purpose of this study is to provide a career counselling experience, there will be numerous opportunities for you to self-disclose, and get in touch with some inner

thoughts and feelings. This process may at times be challenging and uncomfortable for you, particularly in the context of a group of peers. However, this is a normal and typical process that occurs in counselling, and I am a trained counsellor with approximately 5 years of experience conducting individual and group counselling with children, adolescents, and families. Should any challenging situations occur, I will discuss these experiences with you and/or the group. I will end a group session by checking in with you to make sure you leave the session feeling safe. I will remain in contact with the school, make sure that you are aware of any additional services available to you, and encourage you to use these services if you feel they are needed. If a situation occurs in which I judge you to be at-risk of harming yourself and/or others, I will, in collaboration with you, contact your parents, alert the school, and depending on the nature of the concern, also alert appropriate authorities.

Although there may be instances where you could feel uncomfortable, I anticipate that the end result of your participation will be enhanced motivation and personal interest in career and self-exploration. These potential positive outcomes can turn out to be long-standing and have life-long implications, such as job and life satisfaction, and overall well-being.

Should you still at any point throughout this project, either while completing the questionnaires or participating in the groups, feel any discomfort, you are free to skip or refuse to answer any questions or to withdraw from the study at any time.

Confidentiality: All survey questionnaires and any work you produce in the group will remain anonymous. You will not be asked to write your name or any other identifying information on the questionnaires or work. All of your work will be identified using a numerical code. This code will also be used to identify you on videotape; therefore, your name will not be associated with the tapes. Once the interviews have been transcribed, only your code will be used to identify the transcript. All of data will be kept in a locked cabinet in my research office in the Faculty of Education at McGill University. Only my supervisor, the research assistant, and I will have access to this data. The data will be kept in the cabinet for 5 years, after which they will be destroyed.

Sharing of Findings: Once I have compiled and analyzed all of the data, I will invite you and the other group members to a meeting where I will discuss my results and ask for your feedback. Following this meeting, I will revise my findings if necessary and then write a summary of the results. This summary will be sent home to your parents. This will provide you and your parents with information about how, in general, the students in the group experienced the workshop and what elements of the workshop worked best in facilitating motivation for career exploration. The summarized results may also be presented (anonymously) to relevant personnel at the school board and/or ministry of education, at research conferences, and published in academic journals.

If you should require any further information about this project, and/or about my ongoing research, please contact me (emily.kerner@mail.mcgill.ca; 514 398-1918) or my research supervisor, Dr. Marilyn Fitzpatrick (marilyn.fitzpatrick@mcgill.ca), Counselling Psychology Program, Faculty of Education, McGill University, 3700 McTavish St. Montreal, QC H3A 1Y2. If you have any questions or concerns about your rights as a research participant please contact the Research Ethics Officer at 514-398-6831.

Conditions of Participation: I have been informed of the purpose of this study, and know about the risks, benefits and inconveniences that this research project entails. I have been informed that my participation is completely voluntary, that I am free to withdraw at any time from the study, and that declining to participate will, in no way, affect my grades or evaluation of my work at school. I have been informed about how confidentiality will be maintained during this project. I have been informed about the anticipated uses of the data and that publication and communication of results will be done in such a way as to ensure that all participants will remain anonymous.

I have read the above and I have been told all of the above conditions. I voluntarily agree to participate in this study.

Name (please print) _____

Signature _____ Date _____

Appendix M

INFORMED CONSENT TO PARTICIPATE IN RESEARCH
Parent Form

Title of the research project: Facilitating Amotivated Adolescents' Self-Determination for Career Exploration: Development and Evaluation of an Intervention

Conducted by: Emily Kerner, M.A.; McGill University

Purpose of the Research: For my research, I will be inviting students to participate in a group workshop on developing motivation for career exploration. In particular, I am interested in understanding why some students are not interested in career exploration, and in finding ways to facilitate greater motivation for this important developmental task. The students I am inviting as potential participants are those whose school work in POP last year suggest that they were not particularly interested in career exploration.

Procedures: I will first be asking your child to complete two short questionnaires about his/her experiences in POP last year, including how motivated (or interested) he/she felt throughout the year in this class and what kinds of activities were more, or less enjoyable. Completing the initial questionnaires should take approximately 15-20 minutes. If your child's responses demonstrate that he/she really dislikes career exploration activities, I will invite him/her to participate in 10 group career exploration sessions with other students in his/her grade who also felt similarly about POP. In the group sessions, your child will do a variety of activities, like drawing, writing, role-playing, and discussing topics with the group. One major component of the workshop as a whole will be the writing of a comic book. Your child will create a character and write the story of this character as he/she learns about career exploration. This comic book will be coded as a representation of your child's learning throughout the workshop. In order to thank your child for his/her participation, there will be snacks provided during each group session.

There will also be a research assistant who will be present at the group sessions to record her observations of the group. After each group session, your child will fill out a few questionnaires that ask about his/her experiences in the group that day, and then we will spend about 20 minutes discussing, as a group, how things went for everyone. One week after the last group meeting, I will invite your child for an individual interview about his/her experiences in all the group sessions. The group sessions will be video recorded, and the individual interview will be audio recorded. The audio recording and the video recording of the final 20 minutes of the group (the group discussion portion) will be transcribed, and both recordings will be coded.

As the purpose of this study is to provide a career counselling experience, there will be numerous opportunities for your child to self-disclose, and get in touch with some inner

thoughts and feelings. This process may at times be challenging and uncomfortable for your child, particularly in the context of a group of peers. However, this is a normal and typical process that occurs in counselling, and I am a trained counsellor with approximately 5 years of experience conducting individual and group counselling with children, adolescents, and families. Should any challenging situations occur, I will discuss these experiences with your child and/or the group. I will end a group session by checking in with your child to make sure he/she leaves the session feeling safe. I will remain in contact with the school, make sure that your child is aware of any additional services available to him/her, and encourage him/her to use these services if he/she feels they are needed. If a situation occurs in which I judge him/her to be at-risk of harming him/herself and/or others, I will, in collaboration with your child, contact you, alert the school, and depending on the nature of the concern, also alert appropriate authorities.

Although there may be instances where your child could feel uncomfortable, I anticipate that the end result of his/her participation will be enhanced motivation and personal interest in career and self-exploration. These potential positive outcomes can turn out to be long-standing and have life-long implications, such as job and life satisfaction, and overall well-being.

Should your child still at any point throughout this project, either while completing the questionnaires or participating in the groups, feel any discomfort, he/she is free to skip or refuse to answer any questions or to withdraw from the study at any time.

Confidentiality: All survey questionnaires and any work your child produces in the group will remain anonymous. Your child will not be asked to write his/her name or any other identifying information on the questionnaires or work. All of your child's work will be identified using a numerical code. This code will also be used to identify your child on videotape; therefore, his/her name will not be associated with the tapes. Once the interviews have been transcribed, only your child's code will be used to identify the transcript. All of data will be kept in a locked cabinet in my research office in the Faculty of Education at McGill University. Only my supervisor, the research assistant, and I will have access to this data. The data will be kept in the cabinet for 5 years, after which they will be destroyed.

Sharing of Findings: Once I have compiled and analyzed all of the data, I will invite your child and the other group members to a meeting where I will discuss my results and ask for his/her feedback. Following this meeting, I will revise my findings if necessary and then write a summary of the results. This summary will be sent home to you. This will provide you and your child with information about how, in general, the students in the group experienced the workshop and what elements of the workshop worked best in facilitating motivation for career exploration. The summarized results may also be presented (anonymously) to relevant personnel at the school board and/or ministry of education, at research conferences, and published in academic journals.

If you should require any further information about this project, and/or about my ongoing research, please contact me (emily.kerner@mail.mcgill.ca; 514 398-1918) or my research supervisor, Dr. Marilyn Fitzpatrick (marilyn.fitzpatrick@mcgill.ca), Counselling Psychology Program, Faculty of Education, McGill University, 3700 McTavish St. Montreal, QC H3A 1Y2. If you have any questions or concerns about your child's rights as a research participant please contact the Research Ethics Officer at 514-398-6831.

Conditions of Participation: I have been informed of the purpose of this study, and know about the risks, benefits and inconveniences that this research project entails. I have been informed that my child's participation is completely voluntary, that he/she is free to withdraw at any time from the study, and that declining to participate will, in no way, affect my child's grades or evaluation of his/her work. I have been informed about how confidentiality will be maintained during this project. I have been informed about the anticipated uses of the data and that publication and communication of results will be done in such a way as to ensure that all participants will remain anonymous.

I have read the above and I have been informed of all of the above conditions. I freely consent and voluntarily agree that my child may participate in this study.

Name of parent/legal tutor (please print) _____

Signature _____ Date _____