

University of Alberta

Towards a fulfilling sojourn: Examining the role of possible selves in
international students' cross-cultural adaptation

by

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in partial fulfillment of the requirements for the degree of

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Department of Psychology

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Dedication

I would like to dedicate this dissertation to my family, whose love, support, understanding and humour have sustained me throughout my journey in this foreign land.

Abstract

Despite the growing research on international students' cross-cultural adaptation, little is known regarding their migration motivation and goal-pursuit while sojourning abroad. The purpose of the present research was to consider the motivational significance of possible selves and self-regulatory processes in relation to their academic, linguistic, psychological, and socio-cultural adjustment in Canada. The present research is comprised of two studies. Study 1 explored international students' possible selves by general content and by balanced vs. matched configurations, and examined the potential relations between possible selves and aspects of cultural adjustment. Results showed that international students were most likely to envision possible selves in the career, education, intrapersonal, and interpersonal domains, and reported more balanced pair of possible selves than matched pair of possible selves. Certain domains of possible selves were found to be associated with international students' psychological and socio-cultural adjustment, and life satisfaction in Canada.

Study 2 reported a path analysis of cross-cultural adaptation model which integrated balanced possible selves and self-regulatory dimensions with acculturation variables. Results of the path analysis indicated that international students (1) with balanced possible selves had lower depression, partially because they had better academic adaptation and satisfaction, (2) had higher linguistic self-confidence, lower socio-cultural difficulty and higher life satisfaction in Canada, which were mediated by both frequency and satisfaction with the quality of contact with host-nationals, and (3) had low English anxiety and better

academic adaptation and satisfaction, which were predicted by academic preparation. Results also revealed that the behavioral engagement combined with motivational intensity, did not predict any adjustment outcomes. These results demonstrate international students' possible selves reflect not only their immediate cross-cultural sojourning experiences but normative developmental tasks during adulthood. Envisioning balanced possible selves with high salience and expectancy helped international students focus on desirable and achievable goals and facilitated better academic adaptation and satisfaction leading to better psychological adjustment. Contact with host-nationals not only led to better linguistic self-confidence in host culture language but fewer socio-cultural difficulties and greater sojourn satisfaction. Implications and limitations of studies as well as suggestions for future research are also addressed.

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Table of Contents

Chapter 1.	
Statement of Purpose	1
Overview of the Dissertation	3
Review of the Literature	3
International Students' Cross-Cultural Adaptation	4
Psychological and Sociocultural Adjustment	5
Academic Adjustment	7
Contact with Host-Nationals	8
Linguistic Self-Confidence	9
International Students' Migration Motivation	10
Possible Selves: Cognitive Bridge between Motivation and Behavior	13
Multifaceted Definition of Possible Selves	13
Development of Possible Selves	15
Functions of Possible Selves	17
Possible Selves in Socio-Cultural Contexts	19
Possible Selves and Self-Regulation	23
Rationale for the Present Studies	25
Chapter 2. Exploring International Students' Possible Selves (Study 1)	
Overview of the Study	27
Method	28
Results and Discussion	35
Conclusion	47
Chapter 3. Exploring the Role of Possible Selves in International Students' Cross-Cultural Adaptation (Study 2)	
Overview of the Study	49
Method	53
Results and Discussion	64

Overview of Analysis	64
Data Screening Prior to Statistical Analysis	64
Preliminary Analyses of Possible Selves Descriptions	65
Testing of Hypothesized Path Model	74
Conclusion	90
Chapter 4.	
General Discussion	91
Comparison of International and Canadian Students’ Possible Selves	91
International Students’ Balanced Configuration of Possible Selves	94
Possible Selves and International Students’ Migration Motivation	97
The Importance of Intercultural Contact and Linguistic Self-Confidence	99
Educational and Career Goal-Setting and Planning	101
Assistance in Academic Preparation	102
Limitations	102
Future Research Directions	106
An Ethical Issue Related to the Research of Possible Selves	109
Conclusion	110
References	112
Appendix A. Materials for Study 1	126
Appendix B. Materials for Study 2	135

List of Tables

Table 2.1. Mean prevalence scores, standard deviations, and examples of a possible self for all categories	37
Table 2.2. Means, standard deviations, Cronbach α 's and correlations for all adjustment measures	42
Table 2.3. Intercorrelations between possible selves by category and adjustment measures	43
Table 3.1. Mean prevalence scores, standard deviations, and examples of a possible self for all categories for international students	68
Table 3.2. Mean prevalence scores, standard deviations, and samples of a possible self for all categories for Canadian students	69
Table 3.3. Skewness and kurtosis of variables based on the final model	71
Table 3.4. Intercorrelations between all variables in the model	75

List of Figures

Figure 2.1. Prevalence of balanced and matched configuration of possible selves	39
Figure 2.2. Prevalence of configuration of possible selves by category	41
Figure 3.1. Hypothesized path model of international students' cross-cultural adaptation process	51
Figure 3.2. Prevalence of balanced and matched type of possible selves by student groups	70
Figure 3.3. Prevalence of balanced type of possible selves by category for each student group	72
Figure 3.4. Revised hypothesized path model of international students' cross-cultural adaptation process.	77
Figure 3.5. Final path model of international students' cross-cultural adaptation	83

CHAPTER 1

STATEMENT OF PURPOSE

In recent decades, the trend in higher education around the world has been marked by the increased internationalization. With this trend of globalization, a rapid increase of students has traveled outside their national borders to pursue an education. According to the United Nations Education, Scientific, and Cultural Organization (UNESCO, 2009), there were over 2.8 million students enrolled in higher educational institutions outside their country of origin in 2007, a 53% increase since 1999. While international students have predominantly traveled to the United States or the United Kingdom for the purpose of higher education in the past decade, countries such as Australia, Canada, France, Italy, Japan and South Africa have recently become popular destinations with growing shares of mobile students (UNESCO, 2009). According to the Association of Universities and Colleges of Canada (AUCC, 2007), the number of international students on Canadian campuses has grown rapidly to approximately 70,000 full time and 13, 000 part-time international students in 2006; of which 48, 000 at the undergraduate level and 22, 0000 were at the graduate level, accounting for 7% of the total full-time undergraduate student population and almost 20% at the graduate population.

Both the international student and the Canadian institution stand to benefit when a student is satisfied with their sojourn abroad. The international student gains an education and experience in an international context, which have implications for their future educational and career prospects (as well as international social relationships). The institution not only gains financially but

also in terms of international recognition and prestige. Moreover, international students enrich the host society and host institutions with cultural diversity and international perspective. The complexity of their sojourning experiences and intercultural contact with the host society, however, represent a challenge and a need to study their cross-cultural transition and adaptation.

These international students represent a unique acculturating group because of the nature of their sojourn and their motivation to pursue an education abroad. Despite the growing interest and research in studying international students' cross-cultural transition and adaptation, very little is known regarding international student' cross-cultural adaptation in relation to their motivation, and particularly their *possible selves* – the future oriented components of the self-concept which generally include individualized scripts (mental representations of events), plans and behavioural control or strategies for achieving a goal (Aloise-Young, Hennigan & Leong, 2001). Constructing and envisioning a possible self having attained a goal is critical not only in connecting the goal to specific behavioral participation in a given activity, but also for one's self-concept because they serve as the foundation for representations of oneself in the future (Cross & Markus, 1994; Markus & Ruvolo, 1989). An in-depth look at international students' future possible selves and cross-cultural adaptation can provide not only international students themselves, and the host institutions and student support services personnel with helpful information making the cross-cultural journey as fulfilling and satisfying as possible.

The purpose of this dissertation research is to examine the functional role of “possible selves” in international students’ cross-cultural adaptation. Specifically, the study seeks (1) to explore international students’ possible selves in the host country, (2) to compare content and configurations of possible selves between international students and domestic Canadian students, and (3) to consider whether and how possible selves and relevant self-regulatory dimensions are related to international students’ cross-cultural adaptation.

OVERVIEW OF THE DISSERTATION

This dissertation consists of four chapters. Chapter One introduces the thesis and reviews the literature. Chapter Two describes a pilot study that explored international students’ possible selves and examined the potential relationships between possible selves and cross-cultural adaptation. In Chapter Three, the possible selves of international students and of domestic Canadian students are analyzed and compared. This extended study also tests a hypothesized model of international students’ cross-cultural adaptation by incorporating possible selves and relevant self-regulatory dimensions. The final chapter, Chapter Four, addresses the implications of the findings as well as potential applications of the research. Chapter Four concludes with a presentation of limitations and suggestions for future research.

REVIEW OF THE LITERATURE

The following sections provide an overview of the literature related to international students’ cross-cultural adaptation and their motivation to study abroad, with particular attention to the construct of possible selves. First, an

outcome-based framework of international students' cross-cultural adaptation developed by Ward and her colleagues is introduced (e.g., Ward, 2001; Ward, Bochner, & Furnham, 2001; Ward & Kennedy, 1993a), followed by other influential acculturative variables that are pertinent to international students' cross-cultural adaptation, such as academic adjustment, contact with host-nationals, and linguistic self-confidence. The second part reviews international students' mobility with a description of motivational perspectives on their migration motivation including the standard push-pull framework and recent intrinsically-motivated theoretical perspectives in studying international students' cross-cultural adaptation. Third, the construct of possible selves, their development, functions, and recent extension are addressed. Fourth, important self-regulatory dimensions related to possible selves are outlined. This chapter concludes with a rationale of the studies presented in this dissertation.

International Students' Cross-Cultural Adaptation

Increased international mobility of students not only contributes to the internationalization of institutions, but also impacts on the outlooks, subsequent career choices as well as cross-cultural adaptation of students themselves. The cross-cultural mobility of international students is often voluntary and temporary¹ as their migrant motivations are often education related (Arthur, 2004; Berry & Sam, 1997; Ward, Bochner, & Furnham, 2001). Prior to their departure, student sojourners begin their cross-cultural transitions by applying to the host

¹ The definition and length of temporary sojourn varies, usually ranging from a few months (e.g., for improving English language skills) to several years (e.g., for obtaining a degree, which can be considered to be a long-term stay).

institution, obtaining travel documents or authorization, making traveling arrangement, gathering/securing financial and housing resources, learning the host culture language, and finally preparing to leave their familiar cultural and social environment (Arthur, 2004).

Sojourning in a new culture can be a challenging and rewarding experience. The primary concern for international students after arriving in the host country lies in the expectation of success in their academic endeavours. In addition to problems similar to what domestic students may have, international students' cross-cultural adaptation can take on many different dimensions including psychological, sociocultural, academic, linguistic, and intercultural contact that could impact on their cross-cultural adaptation.

Psychological and Socio-cultural Adjustment

Drawing on contemporary models of cross-cultural adaptation and their research on international students' cross-cultural transition and adaptation, Ward and colleagues argue that international students' cross-cultural adaptation can be broadly examined and divided into two adjustment outcomes: *psychological adjustment* and *socio-cultural adjustment* (Searle & Ward, 1990; Ward, 2001; Ward & Chang, 1997; Ward & Kennedy, 1993a, 1993b; Ward & Rana-Deuba, 1999, 2000).

Psychological adjustment, which originated from the stress and coping perspective (Ward, 2001), and is largely affective in nature, and emphasizes the emotional well-being of sojourners and their satisfaction of sojourning experiences. Research has suggested that psychological adjustment is broadly

affected by personality, life changes, personality traits, coping styles, satisfaction of relationships with co-nationals, and social support from co/host nationals (Searle & Ward, 1990; Ward, 2001; Ward & Kennedy, 1992). It is often assessed by well-being related experiences such as self-esteem, anxiety, depression.

Sociocultural adjustment which is derived from social learning perspective (Ward, 2001), is pertinent to the behavioural domain. It highlights one's ability to "fit in" and to negotiate interactions with members of the host culture effectively. Specifically, sociocultural adjustment incorporates communication and social interaction skills which are characterized by the learning of appropriate social skills to deal with social interaction in host cultural contexts. Sociocultural adjustment is usually measured by the amount/level of difficulty experienced in daily intercultural encounters including making friends, participating in social activities, or managing school or work-related issues (Ward & Rana-Deuba, 1999). Research suggests that sociocultural adjustment is best predicted by the length of residence in the new culture, cultural knowledge, cultural distance, and contact variables such as quantity and quality of relations with host nationals (Searle & Ward, 1990; Ward, 2001; Ward & Kennedy, 1993b; Ward & Rana-Deuba, 2000).

Although psychological and sociocultural adjustment are conceptually distinct, evidence suggests that they are related (i.e., psychological distress is linked with sociocultural isolation) (Ward & Rana-Deuba, 1999). However, the relation between them may vary depending on the characteristics of sojourning

groups and cultural proximity. Across a range of studies, Ward and colleagues found that the relation between psychological and sociocultural adjustment was stronger in sedentary groups (e.g., indigenous people or multi-ethnic groups in plural societies) than in acculturating groups (e.g., immigrants, sojourners) (Masgoret & Ward, 2006; Ward & Kennedy, 1999). They also found that the relation between the two adjustment outcomes is stronger among acculturating individuals whose original cultures are similar to the host culture (Searle & Ward, 1990; Ward & Kennedy, 1993).

Both psychological and sociocultural adjustment are considered to be important to international students' academic performance and adjustment (Pedersen, 1995; Stoyhoff, 1997; Ward et al., 2001). The underlying assumption is that international students who are satisfied with their academic sojourn will serve as spokespersons for the country and the institution where they obtained education (Ward et al., 2001). Thus, it is also important to consider international students' academic adjustment when examining their cross-cultural adaptation.

Academic Adjustment

As noted previously, the defining characteristic that distinguishes international students from other types of sojourners is their academic objectives and goals (Ward et al., 2001). Successful cross-cultural adaptation depends very much upon their adaptation and capacity to manage their academic program of study in the host institution. Researchers have pointed out that academic difficulties have been ranked as some of the most salient problems by international students (Arthur, 2004; Chataway & Berry, 1989; Furnham &

Bochner, 1982; Ward et al., 2001). International students may not be aware or not accustomed to the underlying principles, values, and practices common in North American higher education. For instance, they may lack the knowledge or understanding of the importance of active participation and contribution to class discussion. According to Arthur (2004), common academic adaptation concerns of international students include prior academic preparation, adjustment to foreign teaching methodology, pressures from performance expectations, curriculum content, and workload issues. Understanding international students' academic adaptation and difficulties in addition to more general adaptation problems could help prevent the highly undesirable consequences of having to return to the home country without successfully completing the certificate or degree (Arthur, 2004).

Contact with Host-nationals

International students' academic adjustment is also considered to be related to their intercultural contact with host-nationals (Perrucci & Hu, 1995; Zimmerman, 1995). Host-nationals typically include other students, faculty members, counselors, university personnel, and individuals in the local community (Ward et al., 2001). Furnham and colleagues (Bochner, McLeod, & Furnham, 1977; Furnham & Bochner, 1982; Furnham & Alibhai, 1985; also see Kashima & Loh, 2006) argue that international students' contact with host-nationals is mainly instrumental and pragmatic in nature in that it helps facilitate international students' academic and professional aspirations.

Research has indicated that international students who had frequent interactions with host-nationals and were satisfied with those contacts reported better psychological adjustment (Searle & Ward, 1990; Kashima & Loh, 2006), fewer socio-cultural difficulties (Ward & Kennedy, 1993b; Yang et al., 2006), better academic adjustment, and greater sojourn satisfaction (Perrucci & Hu, 1995; Trice, 2004; Ward et al., 2001; Ward & Rana-Deuba, 2000; Ying & Liese, 1991; Zimmerman, 1995). Given the benefit of contact with host-nationals, this dissertation project will focus on international students' contact with host-nationals that include frequency and satisfaction with host-national contact because contact with host-nationals is also an essential factor contributing to international students' linguistic and communicative competency in the host country.

Linguistic Self-confidence

Adequate communication skills have been argued as one of the influential factors in international students' cross-cultural experiences (Arthur, 2004; Ward et al., 2001). In particular, linguistic self-confidence in the host culture language is considered to be important to both contact with host-nationals and cultural adjustment of international students. Clément's (1980, 1986) social contextual model of bilingualism posits a relation between intercultural contact, self-confidence in a second language, and psychological adjustment. Self-confidence refers to a high level of perceived competence in using second language, combined with low levels of anxiety using that language. Self-confidence in second language is argued to be as important and

possibly more important predictor of language use and acculturative outcomes than actual linguistic competence (MacIntyre, Clément, Dörnyei, & Noels, 1998; MacIntyre, Noels, & Clément, 1996). Clément and Noels (1992, 1996) argue that language competence and confidence are important for adjustment outcomes because they provide the capacity for newcomers to interact with the host society to achieve everyday practical and emotional needs.

Across a range of studies, these researchers found that acculturating individuals (e.g., international students, immigrants) in Canada who had frequent interethnic contact experienced better psychological adjustment, but this relation was partially mediated by their level of English (Clément, Noels, & Deneault, 2001; Gaudet & Clément, 2009; Noels, Pon, & Clément, 1996). In another study, Yang, Noels, and Saumure (2006) extended this link and found that international students' English self-confidence mediates the relations not only between host cultural contact and psychological adjustment, but between host cultural contact and socio-cultural adjustment.

International Students' Migration Motivation

Cross-cultural mobility of students is a core component of the internationalization of higher education (Li & Bray, 2007). Much of the earlier theoretical framework on cross-cultural mobility and migration motivation of international students focused on factors at the macro level that influence international students' mobility and migration motivation. For example, the "push-pull model" was used to explain the international students' decision and motivation to study abroad (Chen, 2006; Li & Bray, 2007; Mazzarol & Soutar,

2002). This generally involves both the country of origin and country of destination. Push factors operate within the country of origin, and generally include the limited availability of educational opportunities in the original country, economic wealth of the country, financial capability, and array of political factors. Pull factors are those positive opportunities that attract students to the host country, including the availability of scholarships and financial support, better research facilities, advanced socio-economic and political development of the host country, and cultural or linguistic similarities.

Researchers using the push-pull framework consider the decision, motivation, and flow of international students to be a function of the combined “pull” and “push” factors impacting on students’ choices to study abroad (Chen, 2006; Li & Bray, 2007). Although the push-pull model of migration is useful as an explanatory framework for international students’ motivations to study abroad, it tends to be based on external forces that impact on international students’ behaviors and choices, and gives little attention to the individuals’ internal factors (Li & Bray, 2007).

Accordingly, contemporary research on international students’ migration motivation has emphasized individual differences such as personality and autonomy. For example, in their research on migrant personality of mobile students, Frieze and colleagues found that students who migrate tend to score higher in achievement, power, and work value-related motivation and score lower in family and affiliation motivation than those who remain in their country

(Boneva & Frieze; 2001; Frieze et al., 2004; Frieze, Hansen, & Boneva, 2006). However, their line of research is relatively atheoretical.

One exception is the work of Chirkov and colleagues who based their research on the Self-Determination Theory (SDT; Chirkov, Safdar, Guzman & Playford, 2007; Chirkov, Vansteenkiste, Tao, & Lynch, 2008). They proposed a two-factor model of human motivation involving level of self-determination (i.e., autonomy) and goal content in studying international students' migration motivation and cross-cultural adaptation. Chirkov and colleagues specified two types of goals pertinent to international students' adaptation. While "preservation goals" include desires and strivings to avoid aversive situations in the home country, "self-development goals" refer to desires to obtain better education and successful careers (Chirkov et al., 2007; Chirkov et al., 2008). They found that international students who are more autonomous in their decision to study abroad tend to have more successful cross-cultural adaptation. They also reported that although self-development goals were not associated with adaptation outcomes, international students with self-development goals are nonetheless more intrinsically motivated.

Both the migrant personality and SDT research highlight the importance of personal characteristics and human agency in studying international students' migration and adaptation. These approaches, however, focus on what students currently report to be their orientations to the sojourn, but do not articulate their future desires. It can be argued that much of the decision and motivations to pursue a foreign education is also contingent on individuals' self-conceptions of

what they would like to achieve in the future or what they think pursuing an education abroad may hold for them in the future. To put it in another way, what are the possibilities conceivable for the future? In light of these imagined future possible selves, this dissertation considers international students' migration motivation and adaptation using another approach which is similar to the above-mentioned internally-focused perspectives with an emphasis on future possibilities – the construct of possible selves.

Possible Selves: Cognitive Bridge between Motivation and Behavior

Introduced by Markus and Nurius (1986), the notion of possible selves has gradually evolved and been elaborated. The following sections provide a consolidated summary on important aspects and recent advances in possible selves, particularly as they pertain to cross-cultural study and student motivation.

Multifaceted Definition of Possible Selves

The notion of possible selves is an offshoot of Markus' self-schema theory that is situated within a subset of an individual's self-concept called the *working self-concept*, a temporary self-schema that is currently active and accessible, and subject to change depending on an individual's internal states and immediate socio-contextual influences (Markus & Nurius, 1986; Markus & Ruvolo, 1989). Markus and Nurius (1986) contend that possible selves are future-oriented components of self-schema that are aspects of *identity* or cognitive blueprints (e.g., aspirations, thoughts, fears, plans, hopes, enduring goals, motives, threats) of what individuals *hope*, *expect*, or *fear* of becoming in

the future and are therefore important in goal setting and motivation (Markus & Nurius, 1986; Markus & Ruvolo, 1989; Oyserman & James, 2008).

The blueprints for future possibilities, according to Markus and colleagues, do not operate in isolation, but are linked to the *past self* that may or may not have been successful and provide the interpretative meaning and evaluative standard in comparison with the *current self* (Markus & Nurius, 1986; Markus & Ruvolo, 1989). Further, they argue that possible selves serve as a cognitive bridge between the self-system and motivation that in the sense that *“individuals’ self-knowledge of what is possible for them to achieve is motivation as it is particularized and individualized; it serves to frame behaviour, and to guide its course...Possible selves serve to select among future behaviours (i.e., they are selves to be approached or to be avoided)”* (Markus & Nurius, 1986, p. 955).

Taken together, possible selves can be viewed as a multifaceted construct that not only organizes self-relevant information linking past and current self, but also acts as personalized goals carrying motivational power or incentives to organize and energize individuals’ action to approach future desirable selves and avoid negative ones they wish to avoid becoming. Hence, the motivational power in possible selves is utilized when individuals visualize the connections between these internal goals to their overt actions as *“imaging one’ actions through the construction of elaborated possible selves achieving the desired goals and may thus directly facilitate the translation of goals into intentions and instrumental actions”* (Markus & Ruvolo, 1989, p. 213). In other

words, “the ability to construct well-elaborated possible selves around particular goals (i.e., the ability to envision oneself performing or having achieved the goals) leads to goal-directed action” (Rossiter, 2007, p. 7).

Possible selves have been researched with regard to domains such as career choices with adolescent girls (Packard & Nguyen, 2003), identity exploration and formation in college students (Dunkel, 2000; Dunkel & Anthis, 2001), adolescent delinquency (Oyserman & Markus, 1990a, 1990b), task performance (Ruvolo & Markus, 1992), and social identities and school persistence in African Americans (Oyserman, Gant, & Ager, 1995). On the whole, possible selves researchers agree that possible selves not only enable individuals to focus on and sustain a representation of the intended act, but also allow individuals to simulate or imagine the behaviors and actions necessary to accomplish that desired act (Cross & Markus, 1990; Markus & Ruvolo, 1989).

Development of Possible Selves

The development of possible selves is said to be influenced by both contextual and individual factors (Markus & Nurius, 1986; Lee & Oyserman, 2009). According to Markus and Nurius (1986), as part of working self-concept, possible selves are highly inventive and constructive in nature because they develop and emerge from the domains made salient by the individual’s particular socio-cultural and historical contexts. In other words, current social comparisons and individuals’ cultural and life contexts are factors in one’s assessment of what might be a possible self (Rossiter, 2007). Socio-cultural contexts provide social roles and images of possible selves that may be

dominated or currently active in one's thinking at any particular time.

Presumably changes in one's socio-cultural surroundings also alter the types of possible selves available to individuals.

In addition, individuals' life experiences contribute to the development of possible selves. Over a life time, individuals develop not only a generalized identity of who they are as a person, but also beliefs about what they are capable of achieving in a particular domain based on their successes and failures (e.g., competence, abilities) in the past. In this sense, possible selves are cognitive representations of the incentive for mastery that give rise to individuals' feeling of *competence* about what is possible in a domain in the future that direct one's intentions and motivation to act, and without them, there would be little instrumental behaviour in the direction of mastery (Markus, Cross, & Wurf, 1990; Markus & Nurius, 1986).

Thus, through life experiences, individuals are likely to construct possible selves in domains in which they feel competent, and potentially successful that may vary according to valence, level of elaboration, accessibility, and attainability of possible selves (Lee & Oyserman, 2009; Markus et al., 1990; Markus & Nurius, 1986). Accordingly, both "global and task-specific possible selves" can be viewed as the carriers of competence (Markus et al., 1990, p. 207). In sum, given the contextual and individual influences on the development of possible selves, an individual's repertoire of possible selves is likely to include only those selves that are psychologically accessible and personally meaningful in a given socio-historically context (Rossiter, 2007).

Functions of Possible Selves

Possible selves serve several key functions in motivating behaviours related to future goals. First, possible selves serve as agents or blueprints for self-development. That is, through selection, rejection, and retention of certain possible selves over the life course, individuals construct their own development (Cross & Markus, 1991; Markus & Nurius, 1986). Further, the construction of possible selves reflects developmentally relevant life tasks (Cross & Markus, 1991; Lee & Oyserman, 2009). While college students and younger adults tend to project educational, occupational and interpersonal selves, young and middle-age adults tend to focus on family and parenting selves, and older adults tend to envision physical health related selves (Cross & Markus, 1991; Frazier & Hooker, 2006; Frazier, Johnson, Gonzalez, & Kafka, 2002; Hooker, 1999).

Second, possible selves serve an affective or emotional function. By imagining a possible self, an individual may anticipate and experience positive or negative emotion, associated with the end state (Markus & Ruvolo, 1989). Positive emotion triggered by imagining a positive or successful possible self has been found to be associated with task persistence as the positive emotion experienced is assumed to propel individuals to focus and organize performance (Ruvolo & Markus, 1992). Literature regarding the function of negative emotion triggered by a negative possible self is unclear. Markus and Ruvolo (1989) claim that when a positive possible self is available to "counter" a negative possible self, the negative emotion triggered by the negative possible self can be beneficial. That is, individuals can use the negative emotion as a stimulus to

better performance and to avoid negative end state (Markus & Ruvolo, 1989). In general, visualizing oneself achieving *desirable* goals or enacting anticipatory behaviours towards positive outcomes promotes well-being and optimism about the future and focuses one's attention on how to realize them (Markus et al., 1990; Oyserman & James, 2008).

Third, possible selves serve an evaluative function. As noted previously, possible selves provide the interpretative meaning and evaluative standard in comparison with the current self or current behaviours. The construction of possible selves not only enables individuals to personalize the goals, but also allows individuals to experience a contingency between one's current self and one's imaged future self (Markus & Ruvolo, 1989). This in turn brings individuals phenomenologically very close to the actual thoughts and feelings they experience when they are in the process of motivated behaviour and instrumental action (Markus & Ruvolo, 1989). Accordingly, "*the better one is at constructing these possible selves, the more vivid and specific they become, the more one's current state can be made similar to the desired state*" (Markus & Ruvolo, 1989, p. 228).

Fourth, possible selves provide incentives for means-end behaviour (Yowell, 2000). Research suggests that as individuals seek to achieve their hopes, dreams and expectations, and to avoid their fears, it is the "*balance*" between these possible selves in the same domains that serves to motivate behaviour (Oyserman, Bybee, Terry, & Hart-Johnson, 2004; Oyserman, Bybee, & Terry, 2006; Oyserman, Gant, & Ager, 1995; Oyserman & Markus, 1990a,

1990b) Specifically, Markus and colleagues argue that a vivid representation of a desired possible self in a given domain (e.g., being a college student) can be used to counter the representation of an undesired self in the same domain (e.g., being a college drop-out) to prevent inaction that occurs when a negative possible self dominates the working self-concept (Markus & Ruvolo, 1989).

Moreover, they contend that the more balanced possible selves an individual has, “*the more motivational effectiveness, more resources, and more control over behaviour an individual can gain in a given domain than an individual without such balance*” (Markus & Ruvolo, 1989, p. 224).

Additionally, balanced possible selves draw on both approach and avoidance motives that broaden the repertoire of behaviour relevant for the desired outcome (Hoyle & Sherrill, 2006). Previous research using balanced possible selves has documented that students with school-focused balanced possible selves are less likely to be involved in delinquent activities and have better academic performances (Oyserman & Markus, 1990a; Oyserman et al., 2004; Oyserman et al., 2006).

Possible Selves in Sociocultural Contexts

Given that an essential feature of possible selves is the notion that they develop within individuals’ socio-cultural context (Markus & Nurius, 1986; Oyserman & Fryberg, 2006), extensions of the construct of possible selves have been proposed to account for variations and motivational effectiveness of possible selves associated with differing sociocultural contexts. Accordingly,

research has uncovered differences in the ways individuals construct possible selves that reflect different life and cultural experiences.

Configuration of Possible Selves. The “*balanced possible selves*” introduced above is an extension of the original conceptualization of possible selves (Oyserman & Markus 1990a, 1990b). This extension proposes that a balance between an expected² possible self and a feared possible self with an opposing valence in similar thematic content (positive expected + feared possible selves; e.g., *expecting to be in a good shape + fearing of being in poor health*) have more motivational effectiveness than expected and feared possible selves alone. The underlying rationale is that an expected or positive possible self alone may be motivating in guiding behaviours; however, if individuals have other positive or expected possible selves competing for expression and salience simultaneously, a balance with an offsetting feared possible self in the same domain would enhance motivation in facilitating behaviours as it provides scenarios of what one can do to avoid the feared state by striving towards a desired positive state (Oyserman & Markus, 1990a, 1990b). Thus, the motivation gained by balanced possible selves is *additive* in that they confers individuals more control and resources over their behaviour in a particular domain (Hoyle & Sherrill, 2006; Oyserman, Gant, & Ager, 1995).

Unemori, Omoregie, and Markus (2004) extend the balanced possible selves notion a step further and argue that the motivational significance of the

² In a personal communication with Oyserman (October 12, 2006), she stated that hoped-for possible selves were not found to be predictive of individuals’ behaviors and subsequently have been dropped in her later research on possible selves, and were replaced by expected possible selves.

balanced possible selves appears to be grounded in “*approaching optimistic or idealistic, aspirations and avoiding potential threats and failure*” (p. 324). They further reason that balanced possible selves may be relatively more common in the European-American cultural contexts as these cultures emphasize positive and optimistic evaluations of the self (Unemori et al., 2004). In other words, individuals with balanced possible selves may be more self-enhancing by promoting a positive and optimistic self-view.

Another extension of possible selves developed by Unemori and colleagues (Unemori et al., 2004) is the “*matched possible selves*”. This extension considers the relevant motivational tendencies in contexts with different cultural understandings. Particularly, Unemori et al. (2004) argue that in collectivistic cultural contexts (e.g., Japan) or cultures that emphasize values such as self-improvement and self-criticism; the motivational resource seems to be grounded in the awareness of potential difficulties and negative outcomes and in realizing ways to deal with them. Thus, a matched configuration of an expected possible and a feared possible self with an equal valence in a similar thematic domain (negative expected + feared possible selves; e.g. *expecting to become fat and fearing of being in poor health*) may serve such motive in East-Asian cultural contexts.

The underlying rationale is that the double-negative effect is incorporated into individuals’ images of the future, thereby encouraging individuals to direct energy and attention towards working through difficulties (Unemori et al., 2004). More importantly, Unemori et al. (2004) argue that

matched possible selves may reflect “*an underlying assumption that certain problems cannot be avoided, and that motivation arises through accepting and adapting to them*” (p. 325). Accordingly, this motivational resource may be viewed as *compensatory* in nature. In sum, the matched possible selves may be relatively common in the cultures that emphasizes self-improvement motivational tendency. Individuals with matched possible selves may be more oriented toward self-improving by preventing potential difficulties and correcting shortcoming.

In their study, Unemori et al. (2004) found that whereas Euro-Americans focused on intrapersonal and independent possible selves consistent with the cultural influence on uniqueness and independence, Chilean, Japanese, and Japanese Americans emphasized career and education-related possible selves consistent with the cultural emphasis on professional and academic success. Moreover, the configuration of balanced possible selves was evident in the Chilean and Euro-Americans sample, compared with predominant matched possible selves in Japanese and Japanese-Americans samples, reflecting socio-cultural differences in generating possible selves (Unemori et al., 2004).

In another study exploring the ways in which culture may influence the hoped-for and feared possible selves in Spanish-speaking and non Hispanic English-speaking older adults, Waid and Frazier (2003) found that while the possible selves of native English speakers reflected an individualistic culture with more hoped-for selves in the personal abilities/education domains and

feared selves in the physical domains, those of native Spanish speakers reflect a collectivistic culture reporting both hoped and feared selves related to family.

Possible Selves and Self-Regulation

Self-regulatory processes or strategies refer to the processes or systematic effort by which individuals control and direct their thoughts, feelings, and actions toward the attainment of their goals (Hoyle, 2006; Zimmerman, 2000). Markus and colleagues (Markus & Nurius, 1986; Markus & Wurf, 1987; McCombs, 2001) argue that individuals' self-knowledge which includes possible selves is seen as a critical determinant in how smoothly self-regulatory processes function. In other words, possible selves can improve individuals' ability to self-control and promote self-regulatory processes in pursuit of attaining positive future selves and avoiding negative possible selves (Lee & Oyserman, 2009; Oyserman & James, 2008). Further, Markus and Ruvolo (1989) suggest that motivated behaviour depends upon individuals' attributions and on expectancies and beliefs about the outcome in reference to the possible selves that are psychologically experienced.

Components or dimensions of self-regulatory processes generally vary depending upon the purpose and context of a study. While some emphasize concrete self-regulatory behavioural strategies (e.g., hours spent studying or exercising) (e.g., Oyserman et al., 2006), others focus on cognitive aspect of information processing (e.g., How important is it to you to achieve/avoid this possible self? or How likely is it for you to attain/avoid this possible self?)

(Dunkel, 2000; cf. Norman & Aron, 2003). In this dissertation, the following self-regulatory dimensions pertinent to possible selves are considered:

Saliency. Possible selves researchers argue that effect of possible selves upon behaviour differs according the importance individuals assign to their possible selves (Markus & Ruvolo, 1989; Oyserman & James, 2008). The more important, or salient a possible self is, the more powerful it will be. Specifically, when future possible selves or future goals are more specific, important, accessible, or elaborated with regard to behaviour or performance in domains of current involvement or expertise, individuals are more likely to engage in the processes involved in the performance (Markus & Ruvolo, 1989; Oyserman & James, 2008). As well, individuals with a clear image of themselves in the future (e.g., successful on completing a task) will have more accessible cues relevant to the end state that in turn will enhance goal-related behaviour (Markus et al., 1990).

Efficacy Belief. Another important factor that exerts influence on goal-pursuit behaviour is individuals' beliefs about their efficacy on attaining future goals. An efficacy expectation or efficacy expectancy is the individual's belief or estimate that he or she is competent to perform required or necessary behaviour to produce the outcome (Bandera, 1997; Markus & Nurius, 1986). Markus and Nurius (1986) further state that individuals' "general beliefs about efficacy can be particularly influential to the extent they are linked to specific, clearly envisioned possible selves" (p. 961).

Motivational Intensity. Individuals' efficacy expectations bring forth another important dimension in self-regulation – motivational intensity (e.g., willingness to expend effort). According to Balmiast and Vows (2007), motivation to achieve the goal or meet the standard in practice amounts to motivation to regulate the self. They further suggest that even if the standards (or strategies in the context of attaining/avoiding possible selves) are clear, and individuals' resources are abundant, individuals may still fail to perform the required behaviour due to not caring about the reaching the goal (Balmiast & Vows, 2007). Accordingly, individuals who assign great value or salience to their future goals with high perceived efficacy expectancy expend more effort and persist longer in realizing a possible self (Markus & Ruvolo, 1989).

RATIONALE FOR THE PRESENT STUDIES

In response to the lack of investigation of possible selves on international students during their cross-cultural transition and adaptation, the dissertation explores the nature and function of possible selves in relation to their cross-cultural adaptation. Given the motivational significance of possible selves in guiding and facilitating behaviours, it would be of particular interest and relevance to examine international students' possible selves as they serve as incentives by generating and energizing actions in response to the ever-present adjustment processes and by motivating the pursuit/avoidance of specific goals during cross-cultural adaptation.

The literature on possible selves and cross-cultural adaptation has been relatively scant as there is virtually no research study conducted on the potential

links between them. Therefore, this dissertation explores international students' possible selves and attempt to determine whether relations exist between possible selves and cross-cultural adaptation. More specifically, this dissertation takes an expanded approach to researching international students' cross-cultural adaptation on important academic, linguistic, psychological, and socio-cultural variables important to international students' cross-cultural adaptation along with consideration of their possible selves and relevant self-regulatory components during their academic sojourn in Canada.

CHAPTER 2

STUDY 1: EXPLORING INTERNATIONAL STUDENTS'

POSSIBLE SELVES

Overview of the Study

Chapter 1 reviewed the relevant literature concerning the motivational nature, development, and functions of possible selves and theoretical frameworks of international students' cross-cultural adaptation. Although researchers have begun to examine possible selves in individuals with respect to the ethnic and cultural differences, empirical research is lacking in cross-cultural contexts, and particularly research that directly examines the representations of the future self in international students and potential relations with regard to cultural adjustment. This chapter describes a study that explored possible selves of international students who originated from predominantly collectivistic cultures and examined the relations between international students' possible selves and certain aspects of cultural adjustment.

To this end, the present study has two main objectives. The first objective is to explore the content and configuration of possible selves of international students in Canada with the aim of testing the hypothesis that, given international students' intentions to pursue education abroad for increased opportunities after graduation, international students would generate more education and career-related possible selves relative to possible selves in other domains (e.g., leisure, health). Based on the literature review presented in Chapter 1 (i.e., Unemori et al., 2004), the present study also assesses the

configuration of possible selves in international students. Given the pre-dominant interdependent-oriented cultural background of international students recruited in this study (Hofsted, 2001), it is expected that international students will report more matched possible selves than balanced possible selves. The second of objective of the present study is to consider how future-oriented and goal-directed possible selves may be linked to the international students' cultural adjustment in the host society.

Method

Participants

Ninety-five international students³ ranged in age from 18 to 47 years, with a mean age of 25.66 years (SD = 4.99) were recruited to participate in this study, of whom 87 had a study permit, 5 had permanent resident status, 1 had naturalized Canadian citizenship, (2 participants did not specify their status in Canada). Males comprised 51.6 % (n = 49) of the sample. Approximately 90.5 % participants were from regions typically have more collectivistic values than in North America such as East and South Asia (e.g., China, Hong Kong, India, Thailand) and Latin and South America (e.g., Brazil, Mexico, Venezuela) (Hofsted, 1980, 2001; Oyserman, Coon, Kimmelmeier, 2002). No participants spoke English as a native language. The mean length of residence in Canada was 2.04 years (SD = 1.84).

Materials

³ The breakdown of participants' program of study (i.e., undergraduate program or graduate program) was not specified in this study.

Possible Selves Questionnaire. Originally developed by Markus and Nurius (1986), the possible selves questionnaire is designed to elicit information about participants' expected and feared possible selves associated with their future. Participants were asked to list three expected possible selves and three feared possible selves by the time they finish their studies in Canada. The probes (cf. Cross & Markus, 1991) for the expected and feared selves were as follows:

Everyone thinks about the future to some extent. When doing so, we usually think about the kinds of experiences that are in store for us and the kinds of people we might possible become. Some of these experiences are probably quite likely to occur and others are much less likely. Some of these future experiences are very much desired, hoped-for and expected, and others are worried about or feared.

Think a minute about your time/experiences as an international student in Canada. What do you expect you will be like or fear of being like by the time you finish your studies in Canada? On the following space, please list three expected possible selves and three feared possible selves that you currently imagine for yourself by the time you finish your study in Canada.

A coding scheme developed by Oyserman and colleagues (Oyserman & Markus, 1990a, 1990b), and used in Unemori et al. (2004) was adopted to analyze the open-ended possible selves. This general coding scheme consists of

the following thematic categories with examples of possible selves descriptions generated by participants:

1. *Intrapersonal*: e.g., more confident, more maturity, self-reliant, happy.
2. *Interpersonal*: e.g., get friends of different nationalities, friendly, accepting, live and work comfortably with people from different cultures.
3. *Career*: e.g., working in an industry as an engineer, join a top research company after my Ph.D, becoming a faculty member, find a job that I expect.
4. *Education*: e.g., Obtain my master degree, finish my studies on time, apply to graduate school.
5. *Extracurricular activities*: e.g., travel, being a volunteer, get involved in social events on campus, join student organizations on campus.
6. *Attainment of material goods*: e.g., earn a pretty good income, being financially stable, buy a new house.
7. *Health*: be in a better shape and health, keep fit, being physically active.

In addition to the above-mentioned categories, three more categories were developed after a preliminary inspection of possible selves responses, in part to reflect the characteristics of international students as “the learners in transition” and tasks involved in adjusting to the host society (Arthur, 2004).

These three categories with examples of possible selves descriptions generated by participants are as follows:

8. *Migration*: e.g., going back to the country I am from and get a job there, staying in Canada to continue my education, go back to China.
9. *Language*: e.g., able to speak fluent English, to be proficient in English, improving my communication skills in English.
10. *Fictional or Celebrity Figure*: e.g., Brian Adams, Bill Gates, Celine Dion.

Coding of Possible Selves Responses

Using the coding system described above, two undergraduate students coded the open-ended possible selves descriptions. Both were blind to hypotheses and purposes of the study and worked independently. Before they started coding the possible selves descriptions, the coding categories were thoroughly discussed with them and examples for each category were presented. As they coded the data, further meetings were held to discuss the need for refinement of the criteria for the categories and to decide whether new categories would have to be added. Disagreements in coding were resolved by discussing the ambiguous possible selves descriptions and inconsistencies in the coding with the two coders. The appropriate coding that was decided on with consensus was applied to the relevant categories. If participants provided multiple possible selves in a single response slot (e.g., *finish my Ph. D and become a staff member in the U of A*), coders were instructed to code the first possible self that can stand alone in a given domain. For instance, in the above

example, “*finish my Ph. D*” was coded as first positive possible self in education domain. Following this procedure (c.f., Unemori et al. 2004), for each category of expected self and each category of feared self, participants each received a content or count score ranging from 0 (0 selves in a category) to 3 (3 total selves in a category).

The inter-rater reliability for all possible selves descriptions was calculated using the Cohen’s Kappa. The Kappa for each category of possible selves after the initial coding was calculated before discussions on resolving disagreements took place. The two coders were then proceeded to re-consider the cases where they disagreed. Cohen’s Kappa has a range from “0” to “1”, with larger values indicating better reliability. Generally a Kappa equal or above 0.70 is considered satisfactory (Cohen, 1960). The average Kappa for all possible selves descriptions across all categories was satisfactory, ranging from 0.81 to 1.00.

For configuration of balanced and matched possible selves, as defined previously, a balanced pair of possible selves consists of a positive expected self and a feared self. And a matched pair of possible selves consists of a negative expected self and a feared possible self. For example, a balanced pair of possible selves generated by one of the participants in this study included a positive expected self of “*becoming a university faculty member*” and the opposing feared self of “*being unemployed*”. In contrast, a matching pair of possible selves generated by a participant included a negative expected self of “*an*

engineer without much knowledge of physical applications to skills” and a feared self of *“engineer without skills”*.

The coding for configurations of balanced or matched pairs of possible selves were cross-coded and each possible self response was used more than once (that is, the first expected self is cross-coded with the first, second, and third feared self, and the second expected self is cross-coded with first, second, and third feared self, and so forth. If the first expected self was paired up with first feared self, it was counted as a pair, and if the first expected self was also paired up with the third feared self, it was counted as another pair). Coders were instructed to form whatever pairs were possible. Each participant thus received a score ranging from 0 (0 pair – no balance/no match) to 9 (all paired – balanced/matched) for the total number of configurations of possible selves (H. Omoregie, personal communication, May 6th, 2008; September 6th, 2009).

Psychological Adjustment. Psychological adjustment was assessed using the Center for Epidemiologic Studies Depression Scale (CES-D; Short Form). This commonly used 10-item scale measuring individuals’ level of depression was used as an index of psychological adjustment. Participants were asked to indicate duration of their feeling/emotional severity on each item ranging from (0) “rarely or none of time – less than 1 day” to (3) “most or all of the time – 5-7 days”. After revising the positively worded items, a mean score of 10 items was calculated, such that a high mean score indicated a high of depression. The Cronbach alpha in this instrument was .79.

Sociocultural Adjustment. Ward and Kennedy's (1999) Sociocultural Adaptation Scale was used to measure sociocultural adjustment. The 28-item scale measure participants' behavioural competence, social skills, and amount of difficulty in coping with everyday situations in Canada. Participants rated each item in terms of the difficulty they experienced on a scale ranging from (1) "no difficulty" to (5) "extreme difficulty". A high mean score indicated a high level of social difficulty. The Cronbach alpha of internal consistency was .93.

Academic Satisfaction in Canada. Vallerand and Bissonnette's (1990) Academic Satisfaction was used to assess participants' academic satisfaction in Canada. The 5-item scale was originally in French and was then translated into English by an English-French bilingual speaker. For the purpose of the study, the wording on this scale was slightly adjusted to reflect the characteristics of international students and their academic adjustment in a host institution in Canada (e.g., in general, my academic life *in Canada* closely corresponds with my ideal; the conditions of my academic life *in Canada* are excellent). Participants rated each item using a 7-point scale ranging from (1) "strongly disagree" to (7) "strongly agree", such that a high mean score indicated great satisfaction with their academic life. The Cronbach alpha for this scale was .89.

Satisfaction with Life in Canada. Students' satisfaction with their life in Canada in general was assessed with an adapted version of the Satisfaction with Life scale developed by Diener, Emmons, Larsen, and Griffin (1985). As with the Academic Satisfaction scale, the wording on the life satisfaction scale was adjusted (e.g., in most ways, my life *in Canada* is close to my ideal; I am

satisfied with my life *in Canada*). Responses was made on a 7-point scale from (1) “strongly disagree” to (7) “strongly agree”, such that a high mean score indicated that great satisfaction with their life in Canada. The Cronbach alpha of internal consistency was .89.

Procedure

An email invitation was sent out to international students via the University of Alberta International Student Network listserv (UAISN) with the survey webpage address embedded in the email message. All participants completed the survey on-line. Each participant obtained an identification number which served as a confirmation that they could use to pick up from the researcher a \$10 honorarium in appreciation of their participation. Upon completion of the on-line survey, participants were instructed to click on a web-link which served as a thank-you for their participation and a debriefing of the present study.

Results and Discussion

Content and Configurations of International Students' Possible Selves

The first purpose of present study was to test the hypothesis that, given the nature of their sojourn and motivation to pursuing an education abroad, international students would report more education and career-related possible selves in Canada. To determine the distribution of possible selves responses in each category reported by the participants, the mean prevalence scores of possible selves responses across all categories was calculated. Mean scores and standard deviations of the possible selves descriptions across all 10 categories

are presented in Table 2.1. The most frequently mentioned category of expected possible selves was in the domain of *career* (mean = 1.09), followed by the *intrapersonal* domain (mean = .45), and the *education* domain (mean = .39).

For feared possible selves, international students again reported *career* possible selves most often than other categories (mean = .72), followed by the *interpersonal* domain (mean = .40). The category of *education* again was the third most common response (mean = .37). The overall trend for the frequent mention of both expected and feared possible selves by category partially supported the hypothesis that international students would report more career-related possible selves more than other types of possible selves (e.g., health, lifestyle, leisure).

Consistent with the expectation, the results indicated that for this group of international students, their primary concern for expected and feared selves was the career-related future opportunities available after graduation. However, the results also revealed that pursuing their education may be another major concern, as were issues concerning intrapersonal growth and intercultural encounters. Thus, they expected themselves to develop intrapersonal qualities (e.g., *independent, self-reliant, confident*) that are desirable in the individualistic-oriented Canadian society, but feared not being able to expand their interpersonal network or strengthen their relationships while sojourning in Canada (e.g., *friendless, having problems with my family*).

Table 2.1
 Mean prevalence scores, standard deviations, and examples of a possible self for all categories

Categories of Possible Selves	Mean	SD	Cohen's Kappa (Mean)	Examples
<i>Expected Possible Selves</i>				
Intrapersonal	.45	.80	.88	Self-reliant
Interpersonal	.21	.44	.89	Having some good Canadian friends
Career	1.09	.90	.87	To be research scientist
Education	.39	.69	.81	Obtain a master degree
Extracurricular Activity	.04	.20	.90	Publishing a book
Attainment of Material Goods	.15	.39	.86	Saving money for a vehicle
Health	.02	.14	1.0	Being health
Migration	.17	.40	.95	Go back to China
Language	.11	.31	.93	Improving my communication skills in English
Fictional/Celebrity Figure	.06	.43	1.0	Brian Adams
<i>Feared Possible Selves</i>				
Intrapersonal	.33	.74	.95	Egocentric
Interpersonal	.40	.63	.90	Friendless
Career	.72	.74	.89	Cannot get a good job
Education	.37	.67	.88	Fail to obtain the pharmacy degree
Extracurricular Activity	.07	.26	-	Can't finish writing a book
Attainment of Material Goods	.03	.18	.89	Broke
Health	.08	.28	1.0	Getting sick
Migration	.23	.47	.94	Leave Canada and cannot return
Language	.09	.29	1.0	Don't get the level of English wanted
Fictional/Celebrity Figure	.06	.43	1.0	Carla Roberts

With regard to configuration of possible selves, Figure 2.1 illustrates the mean prevalence scores for both balanced and matched configurations. Counter to expectation and previous research on possible selves with individuals of different ethnicities (Unemori et al., 2004), international students reported more pairs of balanced possible selves (mean = 2.04) as there was only one pair of matched possible selves (mean = .03). These findings are inconsistent with those of findings reported by Unemori et al. (2004).

There are at least three explanations for this unexpected finding. First, Unemori et al., (2004) examined balanced and matched possible selves in four different groups of individuals - - *European-American, Japanese-American, Japanese*, and *Chilean*. They found that only individuals in the Japanese culture and individuals who grew up with Japanese values (e.g., *Japanese in Japan and Japanese-American*) reported more matched configuration of possible selves. However, the sample of the present study consisted of international students of multi-national backgrounds (with only one participant from Japan), thus it may be argued that the idea of a matched configuration of possible selves may only pertain to individuals of a specific and particular culture (i.e., the Japanese cultural context). It is perhaps noteworthy that one pair of matched possible selves was generated by a participant with Pakistani (not Japanese) cultural background.

Another explanation is that the idea that a matched pair of possible selves may not as prevalent as suggested. Given the purpose of their “academic-related” sojourn, the motivational nature of self-improvement or self-effacement

underlying matched possible selves may not serve well for international students to interact with others in the post-secondary academic classroom where class participation, intellectual exchange, and competition for academic achievement are highly valued. Third, it is also plausible that international students who embarked on an academic sojourn were more independent/individualistic-oriented, which could be associated with their high report of balanced possible selves.

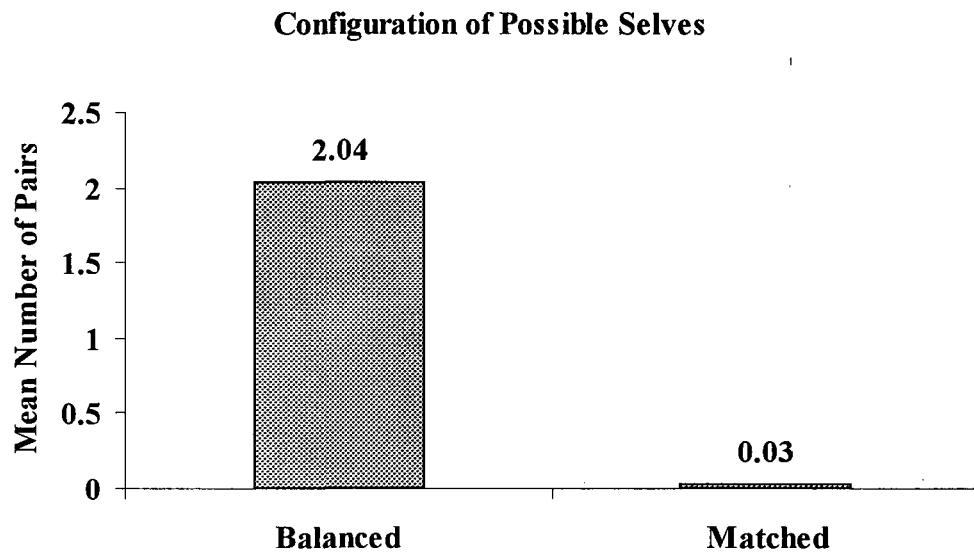


FIGURE 2.1
Prevalence of balanced and matched configurations of possible selves.

A sub-coding was carried out to further determine the prevalence of domains for balanced and matched configurations of possible selves across the thematic domains. As Figure 2.2 illustrates, similar to the general possible selves descriptions, for balanced possible selves, international students reported configurations of possible selves in the *career* domain (mean = 1.44) more often than any other domains, followed by the *intrapersonal* domain (mean = .21) and *education* domain (mean = .18). For matched possible selves, the only pair of matched possible selves reported by the Pakistani participant was related to the *career* domain (mean = .03).

Thus, reflecting the frequency with which participants mentioned different domains; international students were more likely to hold balance possible selves in career, intrapersonal, and education domains. The occurrence of matched possible selves was very rare, suggesting that such configuration may play a minor role in international students' motivational tendency.

Configuration of Balanced and Matched Possible Selves by Category

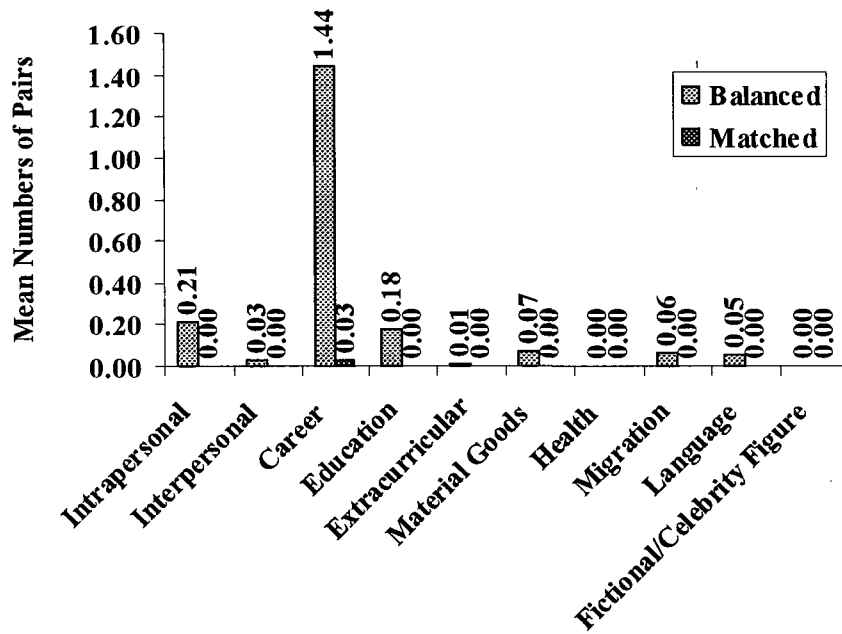


FIGURE 2.2
Prevalence of balanced and matched configurations of possible selves by category.

Relations between General Description of Possible Selves by Categories and Adjustment Measures

The second purpose of the study was to explore the potential relations between international students' possible selves and adjustment. Means, standard deviations, Cronbach α 's, and correlations for all adjustment measures are shown in Table 2.2. The results of correlational analyses between general possible selves descriptions⁴ by category and adjustment measures are presented in Table 2.3.

Table 2.2
Means, Standard Deviations, Cronbach α 's and Correlations for all adjustment measures

Measures	Mean	SD	α	2.	3.	4.
1. Depression	1.03	.57	.79	.38**	-.41**	-.46**
2. Socio-cultural Difficulty	1.92	.58	.93		-.39**	-.24*
3. Life Satisfaction in Canada	4.27	1.37	.89			.58*
4. Academic Satisfaction in Canada	4.57	1.38	.89			

Note: $N = 94$; ** $p < .05$; * $p < .01$.

⁴ The numbers of expected and feared possible selves generated were obtained by counting the number of possible selves participants wrote that were considered codable.

Table 2.3
Intercorrelations between Possible Selves by Category and Adjustment Measures

Variables	Depression	Socio-cultural Difficulty	Life Satisfaction in Canada	Academic Satisfaction
<i>Expected Possible Selves</i>				
Intrapersonal	–	.21*	–	–
Interpersonal	–	–	.23*	–
Career	–	–	–	–
Education	–	–	.21*	–
Extracurricular	–	–	–	–
Material Goods	–	–	–	–
Health	–	–	–	–
Migration	–	–	–	–
Language	–	.21*	–	–
Fictional/Celebrity Figures	–	–	–	–
<i>Feared Possible Selves</i>				
Intrapersonal	–	.30**	–	–
Interpersonal	–	–	–	–
Career	–	–	–	–
Education	–	–	–	–
Extracurricular	-.21*	–	–	–
Material Goods	–	-.23*	–	–
Health	–	–	–	–
Migration	–	–	–	–
Language	–	–	–	–
Fictional/Celebrity Figures	–	–	–	–

Note: $N = 94$; * $p < .05$; ** $p < .01$.

As can be seen in Table 2.3, participants who reported more expected possible selves in the intrapersonal domain (e.g., *a more confident human being, more maturity, competent, more self-confident*) reported more socio-cultural difficulty. Likewise, the more expected possible selves in the language domain were linked with high sociocultural difficulty. It might be assumed that many socio-cultural difficulties arise because of English language deficiency and a lack of positive personal characteristics congruent with (or required) Canadian individualistic cultural orientation. With more difficulties encountered in everyday social situations, the more participants may think about their expectations and abilities to accomplish future goals related to improving their English communication skills and developing certain personal and linguistic attributes by the end of their sojourn in Canada.

Also shown in Table 2.3, expected possible selves were positively related to life satisfaction. The more participants reported expected possible selves in both interpersonal (e.g., *to have some good Canadian friends, to have more quality relationships that last for a longer time*) and education (e.g., *to graduate, to become a post-doctoral fellow*) domains, the better was life satisfaction that international students experienced in Canada. It is possible that these expected interpersonal and education-related future possible selves encouraged international students to engage in behaviours that direct their energy and effort to achieve these goals, and such success in these domains would facilitate their life satisfaction while sojourning in Canada.

For feared possible selves, the more feared possible selves international students reported in the extracurricular domain (e.g., *cannot go any where, cannot find anything to do*), the less depressed they were. Moreover, the more fear they had in the attainment of material goods domain (e.g., *not enough money to finish studying, cannot earn enough money to support family*), the lower their socio-cultural difficulty. However, the more fear the international students had in the intrapersonal domain, the higher was their sociocultural difficulty.

It is conceivable that those fears in leisure and material goods domains enabled and motivated international students to engage in behaviours or activities to pursue an extracurricular life or to obtain materials goods. Accordingly, behaviours and engagement in these pursuits would have psychological and socio-cultural benefits in terms of their adjustment to Canadian cultural environment. On the other hand, it is possible that experiences of socio-cultural difficulties may be associated with the fear of developing or showing undesirable characteristics (e.g., *arrogant, egocentric, or self-centered*) or behaving in ways that are counterproductive when interacting with others on a daily basis.

The fact that expected and feared possible selves in the intrapersonal domain were both positively related to socio-cultural difficulty is difficult to explain. It may be that international students who are described as “learners in cultural transition” (Arthur, 2004) try to strike a balance with appropriateness of individualistic values in various intercultural situations not only with host-

nationals social network but with co-nationals and multi-cultural social networks. The importance of the “person x situation” interaction enable them to capitalize on opportunities to learn, rehearse and employ the interactive aspect of intrapersonal attributes appropriate (e.g., *being assertive but not overly arrogant*) in the more individualistically oriented country.

Relations between Balanced Configuration of Possible Selves by Category and Adjustment Measures

Further correlational analysis was performed to examine the relationship between balanced configuration of possible selves by category and adjustment measures. It was found that international students who reported more balanced pairs of possible selves in the education domain were less depressed ($r = -.23, p < .05$). Another notable significant correlation indicated that the more balanced pairs of possible selves international students reported in the intrapersonal domain, the higher was their sociocultural difficulty ($r = .28, p < .01$).

Though these findings may seem paradoxical, from a cross-cultural perspective, preparations and resources concerning academic program of study could be made long before one’s arrival in the host institution which may be facilitative in managing educational challenges for international students. Thus these positive preparations and motivation to “aim high” in their educational pursuit would be predictive of better psychological adjustment. On the other hand, it is reasonable to suggest that international students experience socio-cultural difficulty because it takes time for them to learn the desirable and

necessary skills to fit in or deal the individualistic aspects of Canadian individualistic socio-cultural context after arriving in Canada.

Conclusion

On the whole, the results of this study provide indications regarding international students' personalized future goals during their academic sojourn in Canada. The findings demonstrate that possible selves may not only act as motivational carriers, but also be linked to international students' cultural adjustment in Canada. On the one hand, images of positive career outlook, the advancement of education, concerns for intrapersonal growth, and interpersonal relationships appear to be major goals while sojourning in Canada. On the other hand, concerns for extracurricular activities (e.g., *not practicing my religion*), attainments of material goods (e.g., *stable financial situation*), fluency in host cultural language (e.g., *be proficient in English*), smooth academic progression (e.g., *get ready for master study*), and having personal attributes (e.g., *self-reliant*) conducive to the Canadian individualistic-oriented society were related to adjusting a new culture and having a satisfactory sojourn with better psychological and socio-cultural adjustment.

Oyserman and colleague argue that “possible selves are not just about feeling good; they can also serve to promote self-regulation” (Oyserman & James, 2008, p. 376). They also contend that *balanced* configuration of possible selves which motivate individuals to pursue one's positive future selves and avoiding the negative possible selves, are most effective in *regulating* individuals' behavior when they are well-conceived and well-elaborated (e.g.,

concrete and detailed) (Hoyle & Sherrill, 2006; Markus et al., 1990; Oyserman & James, 2008). Those well-conceived and well-elaborated balanced possible selves afford individuals simulations of performance and effort required in connecting current behaviors to the future desirable state (Markus et al., 1990; Oyserman & James, 2008).

In the next chapter, possible selves of international students will be further examined with relevant self-regulatory dimensions and the role of balanced possible selves in international students' cross-cultural adaptation will be studied in conjunction with acculturation variables of interest.

CHAPTER 3

STUDY 2: THE ROLE OF POSSIBLE SELVES IN INTERNATIONAL STUDENTS' CROSS-CULTURAL ADAPTATION

Overview of the Study

The previous chapter described the initial study that explored international students' possible selves during their academic sojourn in Canada and established exploratory relation between some domains of possible selves and aspects of cross-cultural adaptation. In this chapter, the motivational significance and consequences of possible selves are examined further, along with relevant self-regulatory dimensions as they pertain to international students' cross-cultural adaptation.

Specifically, the purpose of this study is twofold. The first objective is to replicate the findings reported in Chapter 2, and extend it by comparing the possible selves of international students with possible selves of a group of domestic Canadian students. Two hypotheses will be examined. First, based on findings reported in Study 1 and the work of Unemori and colleagues (2004), it is expected that possible selves of international students will be more career and education-focused than other categories (e.g., health, extracurricular activity). Moreover, the possible selves of Canadian students will tend to focus on educational, occupational and interpersonal possible selves. The second hypothesis, also based on Unemori et al.'s (2004) study, is that Canadian students will generate more balanced configuration of possible selves than matched configurations of possible selves. Given the relative low count of

matched possible selves and high mention of balanced possible selves reported in Study 1, it is uncertain regarding international students' configuration of possible selves.

The second object of this study sought to test a hypothesized cross-cultural adaptation model, based on the work of Ward (e.g., Ward, 2001; Ward & Rana-Deuba, 1999) and Clément (1980, 1986), that incorporates possible selves and important self-regulatory dimensions to examine their contribution in international students' cross-cultural adaptation. The hypothesized relations among acculturation-related variables, balanced possible selves, and self-regulatory dimensions within the model are portrayed in Figure 3.1. The diagram represents the expected relationships between constructs in the model, with positive signs (+) and negative signs (-) indicating positive and negative path coefficients respectively. Double-headed, curved arrows indicate that these variables are correlated without specifying the nature of causal direction between variables.

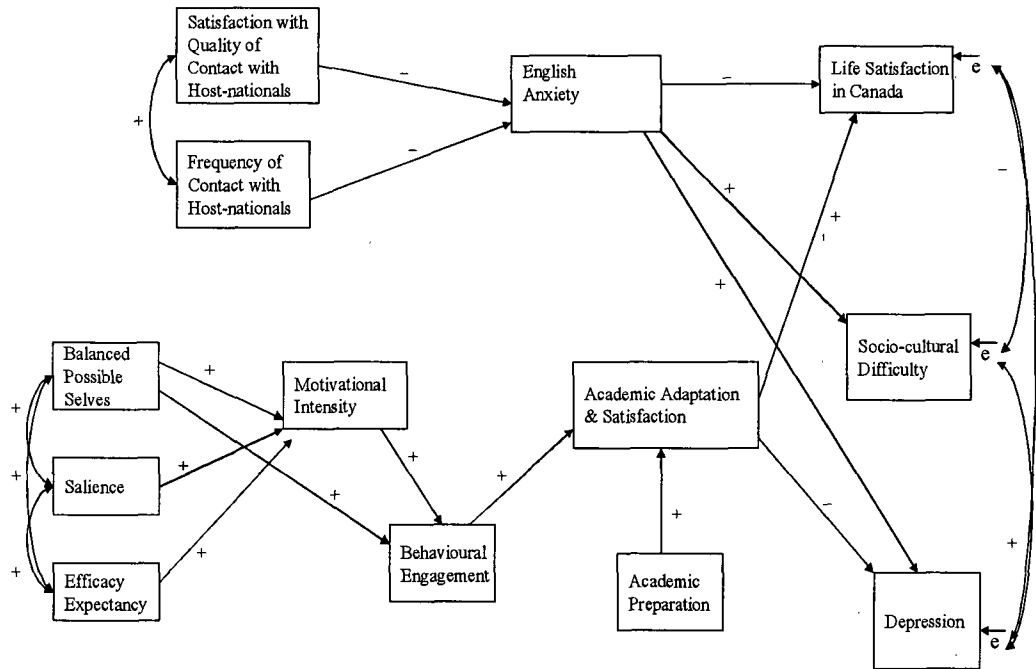


Figure 3.1

Hypothesized path model of international students' cross-cultural adaptation process.

The proposed model addresses the following hypotheses:

(1) Based on Clément's socio-contextual model (Clément, 1980, 1986) and previous research (Clément et al., 2001; Gaudet & Clément, 2009; Noels & Clément, 1996; Noels et al., 1996; Yang et al., 2006), it is argued that linguistic self-confidence (defined in this study as low levels of anxiety in using the host cultural language) mediates between aspects of intercultural contact including frequency and satisfaction with quality of contact with Canadian (i.e., host-

nationals) on the one hand, and cross-cultural adjustment on the other⁵.

Frequency of contact will be positively associated with satisfaction with quality of contact with Canadians.

(2) Consistent with Ward's (e.g., Ward, 2001; Ward & Kennedy 1993a, 1993b) formulation, cross-cultural adjustment is conceptualized as having two components, including psychological (e.g., depression) and socio-cultural (e.g., socio-cultural difficulty) aspects that are interrelated but conceptually distinct, and each type of adjustment will be negatively associated with overall life satisfaction in Canada.

(3) The hypothesized model expands these frameworks by incorporating a motivational component based on the notion of possible selves. Thus, it is argued that not only will balanced possible selves have motivational effectiveness in directing and energizing individuals' behavioral engagement in achieving these possible selves, but salience assigned to these balanced possible selves will be positively associated with efficacy expectancy, and both salience and efficacy expectancy will predict heightened motivational intensity which will also lead to increased behavioral engagement.

(4) Finally, based on previous research on balanced possible selves and school performance (cf. Oyserman et al., 2004; Oyserman et al., 2006) and research in acculturation that academic adaptation and satisfaction are related to psychological adjustment (Furnham & Bochner, 1982; Leung, 2001; Ward et al.,

⁵ The hypothesized model focuses on international students' "English use anxiety" which assesses their perceived competence in English and emotions associated with it in dealing with various situations.

2001; Ying & Liese, 1991), it is expected that increased behavioral engagement facilitated by balanced possible selves will predict better academic adaptation and satisfaction, which will in turn will foster better psychological adjustment and satisfaction of the sojourn.

Method

Participants

International Students. One hundred and five international students were recruited to participate in this study. Five individuals who indicated English as their native language were excluded from all analyses. The remaining one hundred participants consisted of 41 males and 59 females whose age ranged from 18 to 42 years with a mean age of 26.27 years ($SD = 4.68$). Sixty-four participants were graduate students, twenty-two were undergraduate students, and fourteen were short-term exchange students. Participants were comprised of members of over 30 ethnic groups with Chinese as the most frequent self-identified ethnicity (37%). Based on participants' indication of country of citizenship, 57 % participants were from East and South Asian countries (e.g., Bangladesh, China, Hong Kong, India, Japan, Korea, Malaysia, and Thailand), 14% were from European countries (e.g., Austria, France, Germany, Romania, Russian, Spain, and Ukraine), 12% were from Latin and South America (e.g., Brazil, Chile, Columbia, Mexico, and Peru), 11% were from Middle Eastern countries (e.g., Iran, Pakistan), and 6% were from Africa (e.g., Egypt, Nigeria, Saudi Arabia, and Tanzania). With regard to the marital status, 73 % of the participants were single, 25% were married (of whom 16% were married and

had their spouse in Canada, and 6 % were married with their spouse and children in Canada).

With regard to the native language, a sizeable number of participants indicated Chinese (37 %, including Mandarin and Cantonese) as their first language followed by Spanish (11%), Hindi/Urdu (7%), and the rest consisted of over 27 other languages (e.g., Arabic, Japanese, Korean, Russian, Persian, etc.). Forty-six participants indicated that they plan to work in Canada after completing their studies (with 36 undecided) and 55 participants intend to apply for a permanent resident status in Canada (with 26 undecided). The mean length of residence in the host society is 1.99 years ($SD = 2.38$).

Canadian Students. One hundred and eight-three students who were born in Canada and were registered in undergraduate psychology courses also participated. Twenty-seven individuals who indicated Edmonton as their permanent residence and plus eleven individuals who commuted between Edmonton and the greater Edmonton area were excluded from all analyses. The remaining one hundred and forty-five participants consisted of 56 males and 89 females who had all moved to Edmonton to pursue their post-secondary education, and were all native English speakers. Their age ranged from 17 to 35 years, with a mean age of 19.39 years ($SD = 1.98$). The mean length of residence in the host city was 1.08 years ($SD = 1.23$). Based on participants' ethnic self-identification, approximately 91.7% were primarily European/North American Caucasian, 4.1% were Chinese, 2.1% were East Indian, and 1.4% were Sri Lankan.

Preliminary analyses show that the two groups did not differ in terms of gender distribution $\chi^2(1, N = 245) = .14, p > .05$, but differed significantly in age and length of residence in the host city, such that international students were older, $t(124) = 13.86, p < .05$, and had resided longer in the host city, $t(136) = 3.54, p < .05$.

Materials

Possible Selves

Possible Selves Questionnaire. Originally developed by Markus and Nurius (1986), and used by Oyserman and Markus (1990a, 1990b), the possible selves questionnaire is designed to elicit information about participants' hoped-for and feared possible selves associated with their future and personalized goals. Participants were asked to list three hoped-for possible selves and three feared possible selves by the time they finish their studies in Canada. Wordings were slightly adjusted for Canadian students⁶ (e.g., by the time they finish their studies at the University of Alberta). The probes for the hoped-for and feared selves were as follows:

Everyone thinks about the future to some extent. When doing so, we usually think about the kinds of experiences that are in store for us and the kinds of people we might possible become. Some of these experiences are probably quite likely to occur and others are much less likely. Some of these future experiences are very much desired, hoped-for and expected, and others are worried

⁶ Canadian students filled out the Possible Selves Questionnaire only.

about or feared. These possible selves might be related to your personality characteristics, lifestyle/health, education/career, interpersonal relationships, social activity, and attainment of material goods, or anything else that might be important to you.

Think a minute about your time/experiences as an international student in Canada (or as a student at the University of Alberta).

What possible selves do you imagine for yourself by the time you finish your studies in Canada (or you finish your studies at the University of Alberta)? In the space below, please list three possible selves that you hope to become and three possible selves that you fear to become (with a word or a short phrase).

Coding. The coding scheme using in Study 1 was also employed in this study to analyze the open-ended possible selves descriptions for both groups.

This general coding scheme consists of following ten thematic categories:

1. *Intrapersonal*: e.g., assertive, successful, motivated.
2. *Interpersonal*: e.g., socially outgoing, in a relationship/married.
3. *Career*: e.g., start a career, human rights lawyer.
4. *Education*: e.g., completing bachelor of physical degree, medical student.
5. *Extracurricular activities*: e.g., traveling abroad, maker a difference in people's lives.
6. *Attainment of material goods*: e.g., economically stable, home/car owner.

7. *Health*: live a healthy and active lifestyle, still in shape.
8. *Migration*: e.g., going back to my hometown where I am from, go back to my country.
9. *Language*: e.g., speak fluent English, improve my English level.
10. *Fictional or Celebrity Figure*: no participants from either group provided description in this category in this study.

Using the coding system described above, two undergraduate research assistants (different from the coders in the Study 1) blind to hypotheses and purposes of the study independently coded the possible selves descriptions for both student groups. Based on Unemori et al. (2004), for each category of expected self and each category of feared self, participants each received a content or count score ranging from 0 (0 selves in a category) to 3 (3 total selves in a category). Before they proceeded to code the possible selves descriptions, an individual training session was held with each coder in which examples of various kinds of possible selves responses (e.g., ambiguous vs. explicit and single vs. multiple) were presented and discussed thoroughly with each coder to familiarize them with the coding schemes. As with the Study 1, disagreements in coding were resolved by further discussions with each coder in which consensus was made on the best code to use. The inter-rater reliability for all possible selves categories was calculated using the Cohen's Kappa. The average Kappa across all categories was satisfactory, ranging from 0.79 to 1.00 for international students and 0.85 to 1.00 for Canadian students.

The coding for configurations of balanced or matched pairs of possible selves were cross-coded and each possible self response was used more than once (that is, the first expected self is cross-coded with the first, second, and third feared self, and the second expected self is cross-coded with first, second, and third feared self, and so forth. If the first expected self was paired up with first feared self, it was counted as a pair, and if the first expected self was also paired up with the third feared self, it was counted as another pair). Coders were instructed to form whatever pairs were possible. Each participant thus received a score ranging from 0 (0 pair – no balance/no match) to 9 (all paired – balanced/matched) for the total number of configurations of possible selves (H. Omoregie, personal communication, May 6th, 2008; September 6th, 2009).

Self-Regulation Scale. For each hoped-for and feared possible self participants listed, they were then asked to rate each possible self on relevant self-regulatory dimensions described below (cf. Norman & Aron, 2003). Each item was rated on a 7-point scale ranging from (1) “strongly disagree” to (7) “strongly agree”.

- (1) Salience of possible selves. Salience was assessed with three items that measure importance, clarity, and frequency of thought of both hoped-for and feared possible selves: (a) *This possible self is important to me.* (b) *It is easy for me to imagine this possible self.* (c) *I frequently think of this possible self.* Participants’ scores on these three items were summed and averaged to form a composite score of salience.

- (2) Motivational Intensity. Motivational intensity was assessed with two items that measure individuals' motivation and volitional effort to attain/avoid possible selves: (a) *I am motivated to attain/avoid this possible self*. (b) *I am willing to work hard to attain/avoid this possible self*. Participants' scores on these two items were summed and averaged to form a composite score of motivational intensity.
- (3) Efficacy Expectancy. Efficacy expectancy was measured by one single item: "*I expect to attain/avoid this possible self*." This item measures participants' estimate that he or she is competent to attain/avoid hoped-for and feared possible selves.
- (4) Frequency of Behavioral Engagement. Frequency of behavioral engagement was measured by one item: "*I frequently engage in behavior that would aid in attaining/avoiding this possible self*". This item was designed to assess participants' subjective belief of acting towards attaining/avoiding possible selves.

Participants received a score for each dimension of self-regulation described above, which was calculated based on the sum scores of the corresponding pair of balanced possible selves divided by the total pairs of balanced possible selves they reported. A higher score indicated higher self-regulation for that particular dimension.

Contact with Host-Nationals

Frequency of Contact with Host-Nationals. Participants were asked to indicate how much contact they have had with Canadians since they arrival in Canada: (1) *with Canadian professors, teaching assistants, university personnel*, (2) *with Canadian students*, and (3) *with local people in the community (e.g., salesclerks, landlord, bus drives, and government officials, etc.)*. Responses were made on a 7-point scale ranging from (1) “None at all” to (7) “A lot”, with a high score indicating more frequent contact with Canadians. The Cronbach alpha for this scale was .73

Satisfaction with Quality of Contact with Host-Nationals. In addition to indicating the frequency of their host-national, participants were asked to express the level of satisfaction with quality of contact with those Canadians. Responses were made on a 7-point scale with (1) indicating “not at all satisfied” to (7) “very satisfied”, with a high score indicating high satisfaction with quality of contact with host-nationals. The Cronbach alpha for this scale was .60.

Linguistic Confidence

English Use Anxiety. Clément and Baker’s (2001) 8-item English use anxiety was used to assess participants’ degree of arousal and distress in communicating with others using English language (e.g., *When I make a telephone call, I get mixed up if I have to speak English; I feel uneasy whenever I speak English*). Items were rated on 6-point scale from (1) “strongly disagree” to (6) “strongly agree”, such that a high mean score indicated high anxiety. The Cronbach alpha for this study was .85.

Adjustment

Psychological Adjustment. The 10-item Center for Epidemiologic Studies Depression Scale (CES-D; Short Form) measuring individuals' level of depression was used as an index of psychological adjustment. Participants were asked to indicate duration of their feeling/emotional severity on each item ranging from (0) "rarely or none of time – less than 1 day" to (3) "most or all of the time – 5-7 days". After revising the positively worded items, a mean score of 10 items was calculated, such that a high mean score indicated a high of depression. The Cronbach alpha for the present study was .76.

Sociocultural Adjustment. Ward and Kennedy's (1999) Sociocultural Adaptation Scale was used to measure sociocultural adjustment. The 22-item scale measures participants' behavioural competence, social skills, and amount of difficulty in coping with everyday situations. Items were rated in terms of difficulty on a 5-point scale ranging from (1) "no difficulty" to (5) "extreme difficulty". A high mean score indicated a high level of social difficulty. The Cronbach alpha was .88.

Satisfaction with Life. Diener, Emmons, Larsen, and Griffin's (1985) 5-item life satisfaction scale was used to assess participants' general life satisfaction. Wording on the life satisfaction scale was adjusted for international students (e.g., *in most ways, my life in Canada is close to my ideal; I am satisfied with my life in Canada*). Responses were made on a 7-point scale from (1) "strongly disagree" to (7) "strongly agree", such that a high mean score

indicated that great satisfaction with their life in Canada. The Cronbach alpha of internal consistency for this study .88.

Academic Concerns

Academic Adaptation and Satisfaction. The academic adaptation and satisfaction scale consisted of 13 items. Five items were drawn from Vallerand and Bissonnette's (1990) Academic Satisfaction scale used in Study 1 to assess participants' academic satisfaction (e.g., *In general, my academic life in Canada closely corresponds with my ideal; The conditions of my academic life in Canada are excellent*). Eight items were drawn from Cemalicilar's (2003) Academic Adaptation scale to assess participants' adaptation and sense of competence in their academic pursuit (e.g., *I am skilled academically as the average undergraduate/graduate student; I am quite confident that I will be able to deal in a satisfactory manner with future challenges at the University of Alberta*). Participants rated each item using a 5-point scale ranging from (1) "strongly disagree" to (7) "strongly agree". A high mean score indicated a high academic adaptation and satisfaction. The Cronbach alpha for this scale was .88.

Academic Preparation. Based on Arthur's (2004) contention that academic preparation is one of major transitional issues faced by international students, another 5-item measure was created to assess participants' feeling of preparedness with their program of the study (e.g., *I felt that I was well-prepared for my academic program prior to my arrival at the University of Alberta; When I came to the University of Alberta, I was aware of expectations people have of students at this institution*). Participants rated each item using a

5-point scale ranging from (1) “strongly disagree” to (7) ‘strongly agree” such that a high mean score indicated a high academic preparation. The Cronbach alpha for this scale was .81.

Procedure

International Students. An email invitation was sent out to international students via the University of Alberta International Student Network listserv (UAISN). Interested participants responded to the e-mail invitation and subsequently signed up for the study, and completed the questionnaires in a pre-arranged group testing sessions. They received a \$10 honorarium in appreciation of their participation. Upon agreement to participate in this study, they were instructed to sign the consent forms and were reminded that their participation in this study was completely voluntary, and their individual responses would remain confidential. They were thanked for their participation and were given a debriefing form outlining the purpose of study after returning the questionnaire package. All questionnaires were presented in English.

Canadian Students. Canadian students were recruited from the introductory psychology classes at the University of Alberta and participated in partial fulfillment of a course requirement. Similar to the international students, Canadian students also came to a pre-arranged testing session to complete the questionnaires. They were instructed to sign the consent forms and were reminded that their participation in this study was completely voluntary, and their individual responses would remain confidential. They were thanked for

their participation and were given a debriefing form outlining the purpose of study after returning the questionnaire package.

Results and Discussion

Overview of the Analysis

Before performing any statistical analysis, the entire data file was first checked for accuracy, outliers, and missing data. After the completion of the data checking procedure, the following analyses were carried out. First, the relative frequency of possible selves descriptions of international students and of Canadian students were analyzed and compared by category as well as by configurations. Second, path modeling via the EQS program was performed to test the hypothesized model for understanding the role of balanced possible selves and relevant self-regulatory dimensions in predicting international students' cross-cultural adjustment.

Data Screening Prior to Statistical Analysis

Accuracy of the data. To ensure the accuracy of the data, the data file was double-checked and proof read against the responses on the original questionnaires. Patterns of descriptive statistics were examined to ensure that all scores were within the acceptable ranges. In addition, the missing values were randomly distributed through the entire data set. That is, there was no evidence to indicate that participants consistently avoided responding to certain or specific items on the survey questionnaire.

Outlier Inspection. Outliers were assessed by visual inspection of histograms and scatterplots as well as by a common rule of thumb, such that

cases more than 3 standard deviations beyond the mean may be outliers (Kline, 1998). In the present study, no patterns of scores on variables were deemed atypical.

Preliminary Analyses of Possible Selves Descriptions

Possible Selves by Category. To determine the distribution of possible selves responses in each category reported by the both groups of participants, the mean prevalence scores of possible selves responses across all categories was calculated for both international students and Canadian students. As in the study 1 (cf. Unemori et al., 2004), each participant received a content score ranging from 0 (0 possible self in a category) to a maximum score of 3 (each participant was asked to describe up to 3 selves for both hoped-for and feared possible selves) for each category of hoped-for and feared possible self in this study. Mean scores and standard deviations of the general possible selves across all 10 categories for international and Canadian students are presented in Table 3.1 and 3.2 respectively.

As shown in Table 3.1, the most frequently mentioned category of hoped-for possible selves for international students was in the domain of *career* (mean = .88), followed by the domain of *interpersonal* possible selves (mean = .47), and the category of *education* (mean = .44). For feared possible selves, though the categories were similar to those in the hoped-for possible selves, the distribution of mean prevalence scores differed. Specifically, international students reported the *interpersonal* possible selves as their most feared possible selves (mean = .53), followed by the *career* possible selves (mean = .42). The

domain of *education* again was the third most frequent response (mean = .39). Overall, the patterns of mention for both hoped-for and feared possible selves replicated Study 1 and slightly supported the hypothesis that international students' possible selves would emphasize career aspirations (e.g., becoming a professional) and academic accomplishment (e.g., finishing my current degree), followed by interpersonal possible selves (e.g., improve my family relationships, to have a family, mother of kids, or relationship with my partner fails).

Canadian students reported *career* possible selves most frequently (mean = .94) followed by domain of *interpersonal* possible selves (mean = .61) and *intrapersonal* possible selves (mean = .52). With regard to the feared possible selves, the domain of *career* was again the most frequently reported feared selves (mean = .60) with the *intrapersonal* category being the second most feared possible selves (mean = .59), followed by the *interpersonal* category (mean = .52). The overall trend of the frequent mention of general possible selves of Canadian students partially supported the hypothesis which is consistent with previous research on college students' and young adults' possible selves during this developmental stage (Cross & Markus, 1991; Frazier & Hooker, 2006; Frazier et al., 2002; Hooker, 1999; Unemori et al., 2004). Canadian university students were most concerned about their career prospects (e.g., have a respectable/high paying job), followed by interpersonal relationships (e.g., start a family, in a relationship) and intrapersonal issues (e.g., being confident, assertive). Job search, interpersonal relationships, and intrapersonal growth are primary and important goals for young adults to pursue during and after the

college (Lee& Oyserman, 2009; Unemori et al., 2004). Because no participants from either student group generated possible selves descriptions for the category of Fictional/Celebrity Figure, this category was subsequently dropped and excluded from further analysis.

Table 3.1
Mean prevalence scores, standard deviations, and examples of a possible self for all categories for international students

Categories of Possible Selves	Mean	SD	Cohens' Kappa (Mean)	Examples
<i>Hoped-for Possible Selves</i>				
Intrapersonal	.32	.58	.91	Unique
Interpersonal	.47	.63	.85	Easy going with many friends
Career	.88	.89	.87	Successful businessman
Education	.44	.59	.88	Finish my Ph.D
Extracurricular Activity	.03	.17	.90	Actively participate in volunteer activities
Attainment of Material Goods	.14	.38	.94	Financially comfortable
Health	.04	.20	1.0	A healthy person
Migration	.05	.22	1.0	To be a permanent resident of Canada
Language	.14	.35	.88	Knowing the language better
Fictional/Celebrity Figure	–	–	–	–
<i>Feared Possible Selves</i>				
Intrapersonal	.20	.51	.88	Arrogant
Interpersonal	.53	.67	.89	Become a insensitive person
Career	.42	.64	.92	Unemployment
Education	.39	.62	.93	Fail to be a good student
Extracurricular Activity	–	–	–	–
Attainment of Material Goods	.16	.39	.97	Be bankrupt
Health	.15	.36	.93	Illness
Migration	.10	.30	.97	Staying in Canada for the rest of my life
Language	.06	.28	1.0	My English speaking skills
Fictional/Celebrity Figure	–	–	–	–

Table 3.2

Mean prevalence scores, standard deviations, and examples of a possible self for all categories for Canadian students

Categories of Possible Selves	Mean	SD	Cohens' Kappa (Mean)	Examples
<i>Hoped-for Possible Selves</i>				
Intrapersonal	.52	.74	.85	Confident
Interpersonal	.63	.66	.86	A well-respected father
Career	.94	.86	.90	Physical therapist
Education	.23	.44	.85	Complete BA degree
Extracurricular Activity	.12	.36	.96	Traveled
Attainment of Material Goods	.18	.38	.89	Homeowner
Health	.14	.35	.91	Be in a good physical condition
Migration	.01	.12	1.0	In Yellowknife with my family
Language	.01	.08	1.0	Bilingual
Fictional/Celebrity Figure	–	–	–	–
<i>Feared Possible Selves</i>				
Intrapersonal	.59	.77	.94	Egotistical
Interpersonal	.52	.61	.96	Unkind
Career	.60	.78	.97	Unemployed
Education	.37	.62	.93	Drop out of school
Extracurricular Activity	.04	.23	1.0	Lack of time for sports
Attainment of Material Goods	.23	.42	.98	In debt
Health	.31	.51	1.0	Overweight
Migration	.03	.16	1.0	Get stuck in Alberta
Language	–	–	–	–
Fictional/Celebrity Figure	–	–	–	–

Possible Selves by Configuration. Figure 3.2 illustrates the mean frequency of pairs for balanced and matched pairs of possible selves for both international and Canadian students. As can be seen in Figure 3.2, both student groups reported balanced pairs of possible selves only (mean = 1.64 for international students; mean = 1.69 for Canadian students). Consistent with Unemori et al.'s (2004) study and finding reported in Study 1, both Canadian students (with predominantly European-Canadian students) and international students generated balanced possible selves only. No participant from either group generated possible selves descriptions that could be coded as matched type of possible selves. Consequently, it was dropped and excluded from further analysis.

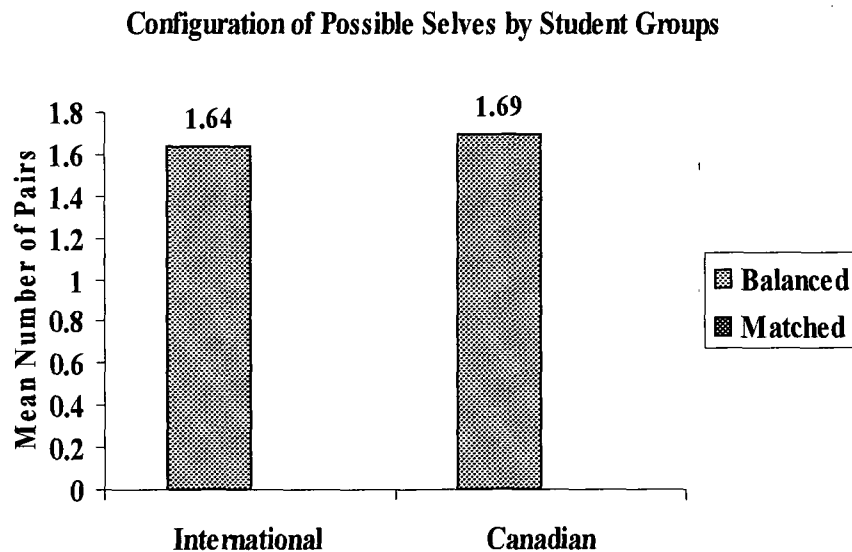


FIGURE 3.2
Prevalence of balanced and matched type of possible selves by student groups.

To further determine the specific domains of balanced possible selves participants generated, a sub-coding was performed and the mean prevalence score of each domain was calculated. Figure 3.3 illustrates the mean pairs of balanced configuration of possible selves by domain for both student groups. As can be seen in Figure 3.2, similar to the finding on the sub-categories of balanced type of possible selves reported in the Study 1, international students in a slightly different order reported balanced possible selves in the *career* domain (mean = .74) more often than any other domains, followed by the *education* domain (mean = .41) and *intrapersonal* domain (mean = .30).

For Canadian students, the frequent mention of sub-categories of balanced possible selves mirrored the general possible selves (i.e., hoped-for vs. feared) they reported. Specifically, Canadian students reported *career* balanced possible selves most frequently any other categories (mean = .89), followed by the domains of *interpersonal* and *intrapersonal* selves, both of which had equal mention (mean = .23 for each domain).

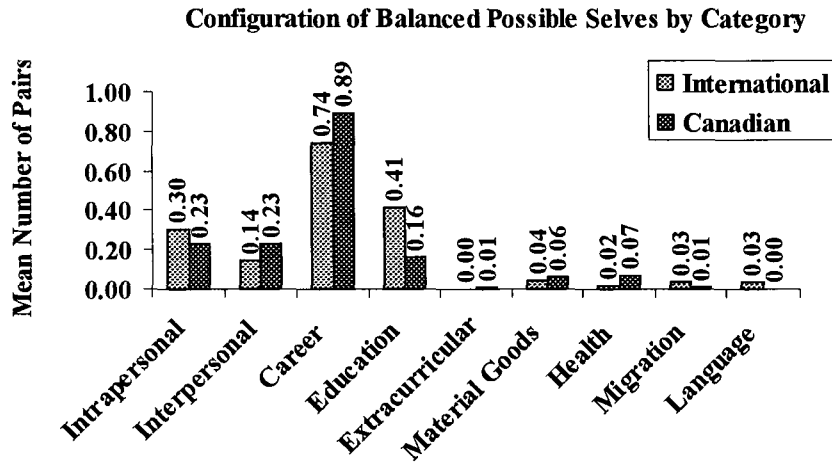


FIGURE 3.3
Prevalence of balanced configuration of possible selves by category for each student group.

Mean Comparisons on Possible Selves between International and Canadian Students

Possible Selves by Category. Multivariate analysis of variance (MANOVA) was used to compare hoped-for and feared possible selves responses between international and Canadian students on the four most frequently reported domains: *intrapersonal*, *interpersonal*, *career*, and *education*. An initial MANOVA with student groups as a between-subject factor (i.e., international vs. Canadian students) indicated a significant main effect of student group $F(8, 236) = 5.95, p < .05$. Follow-up univariate F -tests indicated that two groups differed in hoped-for *intrapersonal* possible selves $F(1, 243) = 5.00, p < .05$, hoped-for *educational* possible selves $F(1, 243) = 10.44, p < .05$, and in feared *intrapersonal* possible selves $F(1, 243) = 20.02, p < .05$. Whereas international students reported significantly more hoped-for possible selves in

education domain, Canadian students reported more hoped-for and feared possible selves in *intrapersonal* domain.

Possible Selves by Configuration. First, one-way analysis of variance (ANOVA) was performed to compare mean difference in balanced configuration of possible selves between international and Canadian students. The result indicated that there was no difference in the number of balanced possible selves reported between international and Canadian students $F(1, 243) = .04, p > .05$. Second, a multivariate analysis of variance (MANOVA) was performed to compare degree of similarity between these two student groups on the four most frequently reported domains: *intrapersonal*, *interpersonal*, *career*, and *education*. The initial MANOVA with student groups as a between-subject factor (i.e., international vs. Canadian students) yielded a marginally significant main effect of student group $F(4, 240) = 1.86, p = .05$. Followed-up univariate *F*-tests indicated that international and Canadian students differed only in education-related balanced possible selves $F(1, 243) = 6.24, p < .05$. International students reported more balanced type of possible selves in the domain of *education* than Canadian students.

These comparative results suggest that consistent with their respective within-cultural (for Canadian students) and cross-cultural contexts (for international students), while Canadian students who grew up in the individualistic-oriented Canadian culture showed a notable concern for intrapersonal issues and qualities (Markus & Kitayama, 1991; Unemori et al.'s,

2004), international students were most concerned with fulfilling their educational objectives and success in academic pursuits.

Testing of the Hypothesized Path Model

Path analysis via the EQS 6.1 program (Bentler, 2005) with maximum likelihood estimation was employed to examine the interrelationships among the variables and the fit of the data to the hypothesized model depicted in Figure 3.1. The basic aim of path analysis is to determine the extent to which correlations between exogenous variables and endogenous variables are consistent with those predicted on the basis of the researcher's hypothesized causal models according to previous theoretical and empirical evidence about the variables involved (Musil, Jones, & Warner, 1998). Although similar to structural equation modeling, path analysis does not deal with causation directly; it can suggest whether causal assumptions in a path model may be valid or make sense (Bollen, 1989).

Assessment of the model involves evaluation of the overall fit of the empirical data to the hypothesized model. EQS program provides several goodness-of-fit indices regarding the fit of the model as a whole. Among several goodness-of-fit indices provided by EQS program, the Chi-square (χ^2) goodness-of-fit index is the most frequently reported. A non-significant or small chi-square value generally indicates a good fit between the observed and the estimated data. However, it is important to note that chi-square is highly sensitive to sample size; as the sample size increases, the chi-square value also increases (Bentler, 1995; Byrne, 2006). To adjust for this sensitivity, some

researchers recommend using the ratio of the chi-square value by its degree of freedom (χ^2/df). Kline (1998) suggests that a χ^2/df ratio of 3 or less indicates an acceptable fit.

Other routinely used alternative model fit indices provided by EQS output is the Non-normed Fit Index (NNFI), Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA). Both NNFI and CFI are incremental indices that tend to be resilient against variations in sample size (Bentler, 1990; Hoe, 2008). RMSEA is an absolute index that measures the discrepancy between the observed covariance and estimated covariance predicted by the hypothesized model (Hoe, 2008). For NNFI and CFI, values of at least of .90, and preferably .95 or higher is generally considered representative of an acceptable fit of the model to the data (Bentler, 1992; Byrne, 2006). For RMSEA, values less than .05 indicates good fit and values up to .08 indicates reasonable fit (Byrne, 2006).

In addition to determining the overall model fit using the above mentioned goodness-of-fit indices, EQS program provides two modification indices that suggest possible model re-specification. The Lagrange Multiplier (LM) test provides suggestions to improve the fit of the model by adding paths or parameters between pairs of exogenous variables. The Wald test, on the other hand, suggests dropping paths or parameters, or eliminating covariance between variables in the equations (Bentler, 1995; Byrne, 2006). Considering the LM and Wald tests allows researchers the possibility that an alternative model may be a

better fit to the data, provided that modification or re-specification of adding or dropping paths makes theoretical sense.

Initial correlation analysis of all variables based on the hypothesized model (See Figure 3.1) indicated high multicollinearity among four dimensions of self-regulation (i.e., correlations are greater than 0.9). To avoid inaccurate parameter estimates in the path modeling analysis due to multicollinearity among exogenous variables (Grewal, Cote, & Baumgartner, 2004), participants' scores on the salience and efficacy expectancy dimension were combined because of their thought/information-processing related propensity on the one hand, and the motivational intensity and behavioral engagement dimensions were combined as they were more behavior-focused on the other. See Figure 3.4 for the revised hypothesized path model.

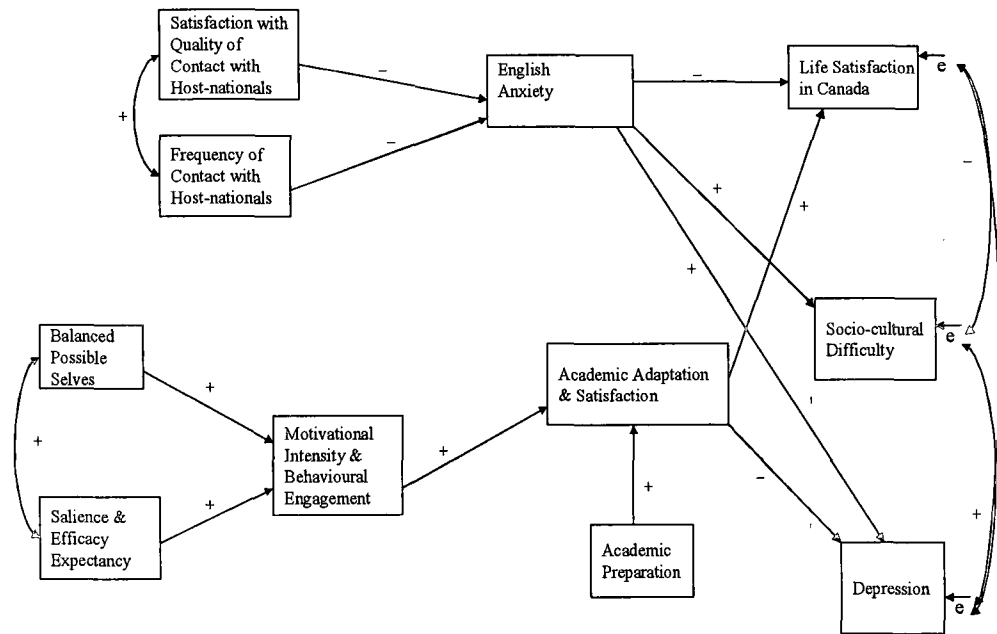


Figure 3.4

Revised hypothesized path model of international students' cross-cultural adaptation process.

Test of Multivariate Normality. Two ways of determining for normality are to identify the kurtosis and skewness in the distribution. Skewness is associated with the symmetry of the distribution. Kurtosis, on the other hand, deals with how peaked or flat the distribution is. When data is normally distributed the values of skewness and kurtosis are zero. West, Finch, and Curran (1995) recommended that univariate values approaching at least 2.0 for skewness and 7.0 for kurtosis should be considered non-normal. Furthermore, it has been stressed that while all univariate distributions may be normal, the joint or combined distributions in a model testing may be substantially multivariately

non-normal (Byrne, 2006; West et al., 1995). Therefore, it is important to examine both univariate and multivariate estimate of normality. EQS output provides both individual univariate estimates and Mardia's normalized estimate of multivariate normality. The values of skewness and kurtosis for all the variables presented in the model are presented in Table 3.3. As shown in the table, all values met the acceptable ranges indicating that normality assumption was met.

Table 3.3
Skewness and Kurtosis of Variables based on the Final Model

	Skewness	Kurtosis
Balanced Possible Selves	1.23	.79
Salience & Efficacy Expectancy	-.42	-1.56
Motivational Intensity & Behavioral Engagement	-.41	-1.59
Academic Preparation	-.01	-.57
Academic Adaptation & Satisfaction	-.21	-.67
Frequency of Contact with Host-nationals	-.06	-.80
Satisfaction with quality of Contact with Host-nationals	-.33	-.62
English Use Anxiety	-.04	-1.00
Depression	.38	-.52
Socio-cultural Difficulty	.71	.98
Life Satisfaction in Canada	-.24	-.62
*Mardia's normalized estimate (Multivariate Normality)	—	1.73

*Note: According to Bentler (2005; cited in Byrane, 2006), values of Mardia's normalized estimate > 5.00 are indicative that data are non-normally distributed.

Analysis of Path Model Estimation and Modification. The means, standard deviations, and interrelations⁷ among all variables based on the final model are shown in Table 3.4. An initial run of the hypothesized model suggested a poor fitting model (χ^2 (40, N = 100) = 72.31, $p < .05$, $\chi^2/df = 1.81$, NNFI = .91, CFI = .93, RMSEA = .09). The Wald test revealed five parameters that were not significant in the model and would contribute to a negligible increase in χ^2 if removed. These parameters contributed very little to the revised hypothesized model and fell short of being significant. These parameters include (1) relations among the three error terms of the endogenous adjustment variables (i.e., life satisfaction in Canada, socio-cultural difficulty, and depression), (2) the path between academic adaptation/satisfaction and life satisfaction in Canada, and (3) the path between the combined self-regulatory dimension of motivational intensity and behavioral engagement and academic adaptation/satisfaction. Accordingly, these paths were removed from the hypothesized model.

The Lagrange Multiple (LM) test identified several parameters that would improve model fit if they were added to the model. These parameters included (1) a direct pathway from satisfaction with quality of contact with host-nationals to academic adaptation/satisfaction, (2) a direct pathway from satisfaction with quality of contact with host-nationals to life satisfaction in Canada, (3) a direct pathway from academic preparation to English use anxiety,

⁷ A series of regression analysis was performed to consider the impact of demographic variables such as age, gender, length of residence, marital status on the outcome variables including life satisfaction in Canada, academic satisfaction, depression, and socio-cultural difficulty. None were found to be a significant predictor of adjustment variables in the model.

(4) a direct pathway from the combined self-regulatory dimension of salience and efficacy expectancy to academic adaptation/satisfaction, and (5) a direct pathway from the combined self-regulatory dimension of salience and efficacy expectancy to satisfaction with quality of contact with host-nationals.

Accordingly, the first three paths were added to the model after evaluating their theoretical plausibility, except for the suggested paths (4) and (5)⁸.

The modified model indicated a small improvement in the model (χ^2 (42, N = 100) = 60.73, p = .03, χ^2/df = 1.72, NNFI = .95, CFI = .96, RMSEA = .07.). Although this modified model reached the acceptable benchmark of fit indices, it was evaluated again based on the suggestions provided by the Wald test and the Lagrange Multiple (LM) test in order to obtain a more parsimonious path model. While the Wald test did not suggest any paths to be dropped, the Lagrange Multiple (LM) test identified one path to be added -- a direct path between balanced possible selves to academic adaptation/satisfaction. Given the intensifying motivation embedded in balanced possible selves to direct and guide individuals' behavior and a significant positive correlation between balanced possible selves and academic adaptation and satisfaction ($r = .26$; see Table 3.4 for intercorrelations among all variables in the model), this path was added.

Subsequent testing of this re-specified model with the insertion of this path (i.e., balanced possible selves → academic adaptation/satisfaction) resulted

⁸ These two suggested paths were not added because (1) there was no theoretical basis for adding these paths, and (2) the correlational analysis did not indicate a significant association between salience/efficacy expectancy and academic satisfaction, and between salience/efficacy expectancy and satisfaction with quality of contact with host-nationals.

in a better improvement in the model fit indices ($\chi^2 (41, N = 100) = 55.61, p = .06, \chi^2/df = 1.36, NNFI = .96, CFI = .97, RMSEA = .06$), indicating a plausible and optimal model explaining the role of balanced possible selves in facilitating international students' cross-cultural adaptation. The final path model with estimated path coefficients is shown in Figure 3.5. The amount of variance explained (R^2) in the six endogenous variables tested in the model ranged from .11 (English use anxiety predicted socio-cultural difficulty) to .94 (balanced possible selves and salience/efficacy expectancy predicted motivational intensity/behavioral engagement).

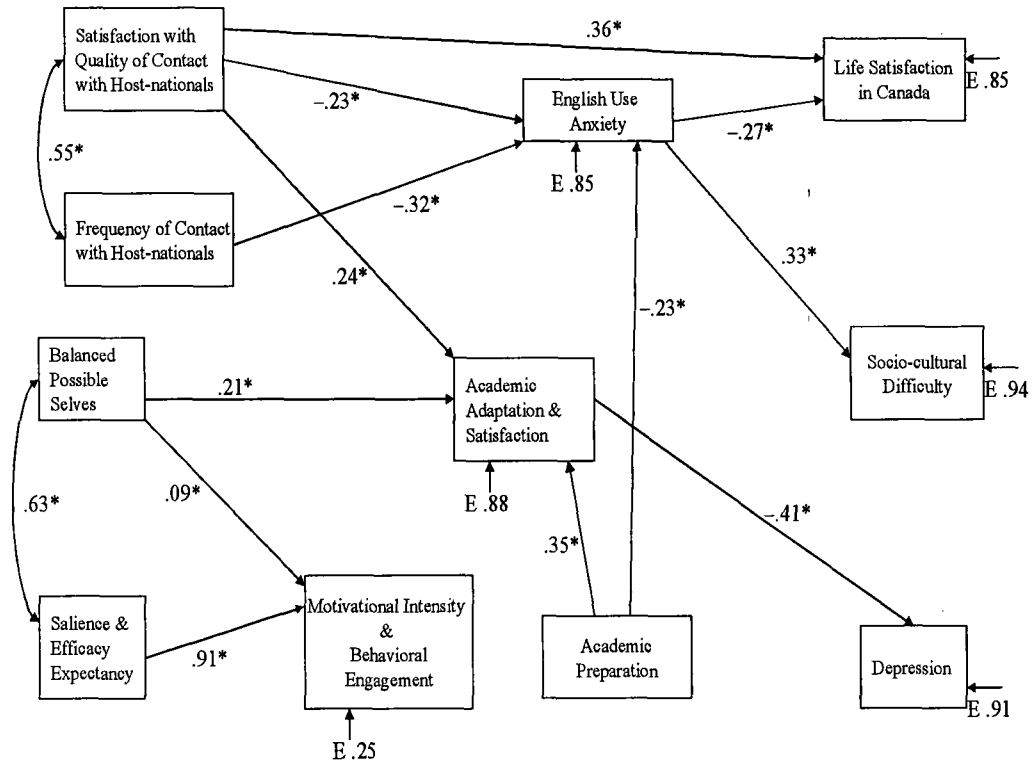


Figure 3.5
 Final path model of international students' cross-cultural adaptation.
 $\chi^2(41, N = 100) = 55.61, p = .06, \chi^2/df = 1.36, NNFI = .96, CFI = .97, RMSEA = .06$.
 All standardized path coefficients shown are significant, $* = p < .05$.

Table 3.4
Intercorrelations between all variables in the model.

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Balanced Possible Selves											
2. Salience & Efficacy Expectancy	.63**										
3. Motivational Intensity & Behavioral Engagement	.67**	.97**									
4. Academic Preparation	.13	.10	.12								
5. Academic Adaptation & Satisfaction	.26**	.11	.18	.37**							
6. English Use Anxiety	-.08	.05	.02	-.22*	-.22*						
7. Frequency of Contact with Host-nationals	.12	.07	.07	-.04	.09	-.43**					
8. Satisfaction of Contact with Host-nationals	.05	-.13	-.09	-.00	.25*	-.40**	.55**				
9. Depression	-.04	.05	.04	-.22*	-.42**	.28**	-.13	-.12			
10. Socio-cultural Difficulty	-.02	.03	.01	-.20*	-.25*	.33**	-.02	-.28**	.38**		
11. Life satisfaction in Canada	.06	-.07	-.04	.08	.23*	-.41**	.28**	.47**	-.32**	-.30**	
Mean	1.63	6.67	7.32	3.21	3.43	2.54	4.70	4.89	.98	2.21	4.25
Standard Deviation	1.79	5.04	5.56	.94	.67	1.03	1.33	1.18	.51	.56	1.33

Note. $N = 100$. * = $p < .05$, ** = $\bar{p} < .01$.

Overall, the final model provided support for some causal pathways depicted in the revised hypothesized model. The following discussions are organized by the hypotheses:

Hypothesis 1: The role of linguistic self-confidence in cross-cultural adaptation

Consistent with Clément's socio-contextual model (Clément, 1980, 1986) and previous research (Clément et al., 2001; Gaudet & Clément, 2009; Noels & Clément, 1996; Noels et al., 1996; Yang et al., 2006), the hypothesis that English use anxiety mediates the relation between contact with host-nationals including frequency of contact and satisfaction with quality of contact and adjustment was supported. As shown in the final model, international students who had frequent contacts with host-nationals and were satisfied with those contacts had lower socio-cultural difficulty and higher life satisfaction in Canada, partially because they had low English use anxiety.

In addition, two additional pathways highlight the importance of satisfaction with quality of contact with host-nationals. International students who were satisfied with the quality of contact with host-nationals had higher life satisfaction in Canada and better academic adaptation and satisfaction, and in turn better academic adaptation and satisfaction was associated with less depression. These pathways are line with previous research that contacts with host-nationals facilitate international students' academic and professional aims by providing help with language or academic difficulties, or other resources which accordingly has emotional (e.g., well-being) and behavioral benefits (e.g.,

greater academic adaptation) (Bochner et al., 1977; Furnham & Bochner, 1982; Perrucci & Hu, 1995; Trice, 2004; Ward et al., 2001; Ying & Liese, 1991).

Taken together, these findings suggest that intercultural contact and communication and confidence in the language of the host society promotes one's well-being and the ability to fulfill everyday needs and deals with demands of the mainstream cultural context or academic tasks. In other words, intercultural contact with host-nationals including frequency and satisfaction with Canadian students, professors, teaching assistants, and university administrative personnel will help mitigate common stressors faced by international students including second language anxiety, performance expectations, and academic system adjustment (Chen, 1999), that in turn will lead to better adjustment and satisfying sojourn.

Hypothesis 2: Relation between Psychological and Sociocultural Adjustment

Although depression, socio-cultural difficulty, and life satisfaction were correlated based on the bivariate analysis, the hypothesized associations among error variances of these three adjustment outcomes in the model were not supported. This suggests that psychological and sociocultural adjustment were predicted by distinct variables specified in this model (e.g., English use anxiety and academic adaptation/satisfaction). Given that participants in this study were non native English speakers who mostly came from the interdependent-oriented cultures, this finding lends credence to the previous research that the relation between psychological and sociocultural adjustment is not as evident in the

individuals experiencing cross-cultural transition and whose cultural backgrounds are dissimilar to the host culture (i.e., Canadian individualistic-oriented culture in this study) (Masgoret & Ward, 2006; Searle & Ward, 1990; Ward & Kennedy, 1993a).

Hypothesis 3: Relations between Balanced Possible Selves and Self-Regulatory Dimensions

Consistent with previous research that possible selves are related to variety of self-regulatory processes (e.g., Markus & Ruvolo, 1989; Oyserman et al., 2006; Oyserman et al., 2004), the hypothesized association between balanced possible selves and salience/efficacy expectancy was supported, as were the direct paths between balanced possible selves and motivational intensity/behavioral engagement, and between salience/efficacy expectancy and motivational intensity/behavioral engagement. International students whose balanced possible selves were well-conceived, important, and accessible with a strong representation of efficacy belief were more likely to exert volitional effort and engage in behaviors to achieve desirable outcomes and avoid negative possible selves.

This finding adds support to the more recent body of literature that although all possible selves have the potential to influence current behavior, those *self-regulatory possible selves* (i.e., balanced possible selves associated with self-regulations -- salience, specificity, attainability, accessibility, and efficacy belief, etc.) are most likely to facilitate behavioral control than generalized possible selves because they provide means (e.g., information,

plans, strategies) by which individuals might move towards positive selves and away from negative selves, thereby increasing motivational intensity and behavioral persistence (Hoyle & Sherrill, 2006; Markus & Ruvolo, 1989; Oyserman et al., 2006; Oyserman et al., 2004; Oyserman & James, 2009).

Hypothesis 4: Relations among the Balanced Possible Selves, Self-

Regulatory Processes, and Academic Adaptation/Satisfaction

Although balanced possible selves predicted motivational intensity/behavioral engagement, the hypothesized path from motivational intensity/behavioral engagement to academic adaptation/satisfaction was replaced by a direct path from balanced possible selves to academic adaptation/satisfaction. That is, the more self-regulatory balanced possible selves international students generated, the better their academic adaptation and satisfaction, and subsequently as hypothesized, leading to the better psychological adjustment (i.e., low depression).

This path, though was not originally hypothesized, underscores the motivational effectiveness embedded in the balanced possible selves because motivation conferred by balanced possible selves is greater than motivation conferred by a hoped-for or feared possible self alone (Hoyle & Sherrill, 2006; Markus & Ruvolo, 1989; Oyserman & Markus, 1990b). Further, as noted in Chapter 1, balanced possible selves create a frame within which behavior towards the desired possible selves and avoidance of the negative possible selves may occur, and the more balanced possible selves an individual has, *“the more motivational effectiveness, more resources, and more control over*

behavior an individual can gain in a given domain than an individual without such balance” (Markus & Ruvolo, 1989, p. 224).

In the context of international students’ academic sojourn, having self-regulatory balanced possible selves⁹ (i.e., salient and well-conceived balanced possible with strong expectancy) enables international students to simulate action-orientated representations with associated outcomes to both increase the likelihood of becoming the desirable possible self (e.g., complete current degree, increased communication with fellow students and faculty members) and decrease the likelihood of becoming the unwanted possible self (e.g., a university drop-out or return to home country without completing the academic program), thereby facilitating academic adaptation and satisfaction.

Moreover, the path that academic preparation predicted academic adaptation/satisfaction and English use anxiety respectively provides additional support to the assertion that academic preparation issues are one of major sojourning concerns for international students. As depicted in the final model, the fact that international students who were better prepared academically had better psychological and sociocultural adjustment (i.e., low depression and sociocultural difficulty), partially because they had better academic adaptation/satisfaction and low English use anxiety is consistent with previous research that international and ethnic minority students’ psychological functioning and adjustment fluctuates in line with changes, challenges, and

⁹ As described earlier, career and education-related possible selves were the two most commonly described balanced possible selves generated by participants in this study.

adjustments confronted in the academic settings (Selby & Woods, 1966; Gloria, Castellanos, & Orozco, 2005; Ward et al., 2001).

Conclusion

Overall, the present study adds important insight into international students' cross-cultural adaptation. The comparison between international and Canadian students reveals that although these two student groups shared visions of future goals such as career prospect, education achievement, intrapersonal growth, and interpersonal relationships to some extent, international students tended to focus more on educational aspirations and attainment while their Canadian counterpart tended to emphasize internal attributes and intrapersonal qualities. Motivational effectiveness conferred by of balanced possible selves in facilitating cross-cultural adaptation is illustrated in a comprehensive path model. International students who (1) had well-elaborated and salient balanced possible selves with strong efficacy expectancy had successful academic sojourn with low depression, (2) had frequent contact with host-nationals and were satisfied with those interactions had higher sojourn satisfaction in Canada with fewer socio-cultural difficulties, mediated by lower English use anxiety, and (3) were better prepared academically also had better adjustment overall, mediated by better academic adaptation/satisfaction and linguistic self-confidence. These results point to the significant role that balanced possible selves play in international students' cross-cultural adaptation beyond the often studied dynamics of interactions with the host culture and language competency issues.

CHAPTER 4

GENERAL DISCUSSION

The purpose of this dissertation was to explore international students' future possible selves -- "the individualized carriers of motivation" (Markus & Nurius, 1986; Markus & Ruvolo, 1989, p. 212) and to consider their motivational effectiveness in facilitating international students' adjustment during their academic sojourn. This chapter presents the integrated discussions and implications of major findings reported in Study 1 and Study 2 in reference to international students' migration motivation and cross-cultural adaptation. In views of the research findings presented in this dissertation, limitations and directions for future research will also be addressed.

Comparison of Possible Selves between International and Canadian Students

The results of Study 1 showed that international students' future possible selves were mostly career and education-focused with a moderate number of intrapersonal and interpersonal selves. They also reported more balanced configurations of career, education, and intrapersonal-related possible selves than matched configurations. These results were replicated and extended in Study 2 where possible selves of another group of international students were compared with a group of domestic Canadian students making within-cultural transition. Canadian students' possible selves were mostly career-related, followed by either interpersonally or intrapersonal possible selves with educational possible selves having the smaller share of responses. They also

generated balanced possible selves with strong career, interpersonal, and intrapersonal emphasis.

Overall, possible selves of international students and Canadian students were similar to some extent. Indeed, the results of mean analyses by content and by configuration indicated that these two student groups only differed in two of the four most frequently mentioned domains: *educational* possible selves were higher for international students and *intrapersonal* possible selves were higher for Canadian students.

Looking from the cross-cultural perspective, Canadian students' frequent mention of intrapersonal possible selves (e.g., *confidence in my abilities, determination, happy and fulfilled, accomplished, strong-willed, jaded, underachiever, quitter*) are consistent with previous research (Unemori et al., 2004; Waid & Frazier, 2003) and accords with the Canadian individualistic-oriented cultural emphases on uniqueness, independence, and individuality. Similarly, international students' greater emphasis on education-related possible selves is not surprising. As noted in Chapter 1, international students constitute a prominent group of sojourners making cross-cultural transition whose purpose is to fulfill their educational objectives and gain professional qualifications (Bochner, 2006). It is this motive that distinguishes international students from other intercultural sojourners, thereby making academic performance and adjustment a significant component of their cross-cultural adaptation (Arthur, 2004; Ward et al., 2001).

Further, given that international participants mostly came from the interdependent/collectivistic cultures, the strong emphasis on academic-achievement related possible selves may reflect the great significance accorded to education in the development and advancement of the individuals embedded in the interdependent-collectivistic cultures (Triandis, 1995; Unemori et al., 2004). As well, given the relatively frequent mention of career-focused possible selves made by international students, it can be suggested that international students' academic objectives and attainment in the host institution might be inextricably tied to the prospect of their career planning and enhancement of their professional expertise in the future (Arthur, 2004).

However, from the life-span developmental perspective, the four major domains of possible selves (i.e., *career, education, interpersonal, intrapersonal*) reported by both international and Canadian students suggest that their future possible selves are congruent with those mentioned in research focusing on age-related possible selves that highlights this life transition experienced by young adults in many societies (e.g., *being employed right after graduation, to balance work and family, relationship with one's partner fails, divorce*) and developmental milestones (e.g., *completion of a degree, have a respectable/high paying job, start a family, being a parent, leading a active and healthy life style, being single for too long*) (Cross & Markus, 1991; Frazier & Hooker, 2006; Frazier, et al., 2002; Hooker, 1999).

Thus, despite differences in demographic characteristics between Canadian (who were mostly undergraduates) and international students (a

substantial portion of international students in Study 2 were in their late 20s or early 30s pursuing graduate study), it is reasonable to suggest that international students' possible selves not only are contingent on the immediate socio-cultural environments, but also embedded within developmental and global/historical forces as these domains of possible selves seem normative during young or middle adulthood and reflect the variations of maturational and psychological processes. As well, while cross-cultural relocation may represent a major life change or disruption for international students, envisioning possible selves in correspondence with these normative developmental tasks might be adaptive as they are blueprints for personal development and growth on the one hand, and provide them with a sense of continuity during the sojourn, on the other.

International Students' Balanced Configuration of Possible Selves

Socio-Cultural Influence. Markus and Nurius (1986) argued that construction and representation of possible selves can be affected and influenced by one's socio-cultural context: *"an individual is free to create any variety of possible selves, yet the pool of possible selves derives from the categories made salient by the individual's particular sociocultural and historical context..., and by the individual's immediate social experiences..., but they also reflect the extent to which the self is socially determined and constrained"* (p. 954).

Unemori et al. (2004) extended the notion of balanced possible selves as the individualized motivational resource to approaching optimistic and idealistic aspirations and avoiding potential threats and failures that may be relatively

common in the independent European-American culture with strong emphases on positive and optimistic self-evaluation (or self-view).

Building on these principles, the findings from the two studies which showed that both groups of international students reported more balanced possible selves than matched possible selves can be elucidated from this socio-cultural vantage. Sojourning in the relatively independent-oriented Canadian context and immersing in the evaluation-based and performance-focused higher education in North America could make them aware of a new and different set of norm and values and thus activate their independent tendency. Accordingly, international students with the pre-dominantly interdependent-oriented cultural background would generate balanced possible selves.

Balanced Possible Selves in Cross-Cultural Adaptation. According to Markus & Ruvolo (1989), a profound aspect of possible selves is the representation or visualization of an individual has of him/herself advancing towards the attainment of a goal. Further, Oyserman and colleagues (Oyserman et al., 1995; Oyserman & James, 2009; Oyserman & Markus, 1990a, 1990b) suggest that by focusing on both the positive and the potential negative consequence of a goal pursuit simultaneously, only strategies that both lead to increased chances of attaining the positive and avoiding the negative will be used and associated self-regulation will be improved (e.g., attainability, effort, behavioral persistence). In this sense, the socio-cultural influence on the construction of balanced possible selves for international students may provide a

more valuable motivational venue within which their visualization of goal attainment may be structured and realized.

As depicted in the path model of international students' cross-cultural adaptation, simultaneously holding a vivid, salient, and content-specific representation of oneself in achieving positive and desirable state (e.g., obtain the degree) with strong efficacy expectancy could counter a representation of a negative possible self (e.g., doing poorly at exams) of the identical valence appears to facilitate behavior and could potentially prevent the inaction or withdrawal when a dreadful scenario (e.g. maladjustment) occupies one's self-representation. Thus, it can be argued that the additive nature of motivation (to achieve a positive self and avoid a negative self simultaneously) conferred by balanced possible selves provides more meaning, resources, and control to the personalized goals for which international students strive to achieve than the compensatory nature of motivational tendency in the matched possible selves.

Constituents of the Balanced Possible Selves. Another issue related to the findings of the balanced configuration of possible selves reported in these studies is the constituents of balanced possible selves. In general, balance in possible selves has been explored using two approaches. While Oyserman and colleagues (e.g., Oyserman et al., 2003; Oyserman et al., 1995; Oyserman & Markus, 1990a; Unemori et al., 2004) defined a balanced configuration of possible selves as a pair of an expected self and a feared self in the similar thematic content, others (Dunkel & Anthis, 2001; Yowell, 2000) paired up a hoped-for self and a feared self in the similar thematic content as a balanced

configuration of possible selves. This dissertation employed both approaches to explore and measure motivational tendency implicated in the balanced possible selves in international students' academic sojourn - - Study 1 used expected vs. feared possible selves and Study 2 used hoped-for vs. feared possible selves.

Specifically, the findings that both groups of international students reported a high frequency of balanced possible selves compared to the virtual absence of matched possible selves appear to serve an important evaluation of both approaches. That is, both expected and hoped possible selves could share same (positive) valences and both could be considered to be on the same ends of one's self-evaluative continuum with feared possible selves on the opposite end. On a related note, the infrequent mention of matched possible selves reported by both groups of international students might suggest that the notion of matched possible selves may be irrelevant to international students' academic-focused cross-cultural context.

Possible Selves and International Students' Migration Motivation

The integration of the notion of possible selves into the process of international students' cross-cultural adaptation appears to add a fresh and complementary perspective to the contemporary research on international students' migration motivation.

First, the agentic, internal, and personalized possible selves complement the external-focused push and pull model of international students' migration motivation. As noted in Chapter 1, the notion of balanced possible selves draws on both approach (or achievement) and avoidance motives that broaden the

repertoire of behavior relevant for the desired outcome (Hoyle & Sherrill, 2006).

It can be argued that international students could only make use of the pull factors (e.g., availability of scholarships, financial support, better research facilities, and other advanced educational/professional resources) by approaching their personalized goals with a vivid self-representation of anticipatory performance and desirable outcomes while avoiding to become undesirable selves due to the push factors (e.g., limited educational/job opportunities, unstable political or socio-economic climate).

Second, the notion that people simultaneously work towards attaining desirable goals and avoiding unwanted goals also corresponds to a certain extent with the formulation of preservation and self-development goals in international students' migration motivation and adaptation research based on the Self-Determination Theory (SDT) (Chirkov et al., 2007; Chirkov et al., 2008). Although Chirkov and colleagues did not find that self-development goals alone (i.e., the desire to obtain a better education) were associated with adaptation outcomes (Chirkov et al., 2007; Chirkov et al., 2008), in the present study, in which positive (e.g., hoped-for possible selves) and negative (e.g. feared possible selves) goals combined with associated self-regulatory processes did predict international students' academic adaptation and satisfaction. It may be suggested that in general, balanced possible selves with associated self-regulatory processes provide more motivational effectiveness in promoting adaptation outcomes.

On the whole, it might be argued that examining the salient and well-conceived future-oriented and action-directed balanced possible selves not only allows international students to personalize their goals (e.g., *what do/don't I want to be when I graduate/after I complete my study in Canada?*), but also indicates pathways (e.g., *how do I get there/how do I avoid getting there?*) by putting them in action to facilitate the goal attainment and subsequently motivate behavior adaptive to their adjustment.

The Importance of Intercultural Contact with Host-nationals and Linguistic Confidence

Literature on international students has suggested that international students make up an important group of sojourners whose purpose is to study and gain educational or professional qualifications, therefore intercultural contact and communications with host-nationals is central to their adaptation process (Bochner, 2006; Zimmermann, 1995). The function of host-national interaction and communication is considered to be instrumental and pragmatic in nature in that it facilitates academic and professional aspirations (Bochner et al., 1977; Furnham & Bochner, 1982).

The final path model of cross-cultural adaptation illustrates the importance of both quantity and quality of intercultural contact with host-nationals and linguistic self-confidence in communication for international students' academic sojourn. These findings support a significant body of research that communication and time spent with host-nationals increase linguistic self-confidence and psychological and sociocultural adjustment on the

one hand (Clément et al., 2001; Gaudet & Clément, 2009; Noels et al., 1996; Yang et al., 2006), and facilitates academic adaptation and satisfaction and well-being on the other (Pedersen, 1995; Perrucci & Hu, 1995; Stoyhoff, 1997; Trice, 2004; Ward et al., 2001; Zimmerman, 1995).

Despite these benefits of host national contact, other studies revealed that international students tend to interact and communicate more with co-nationals, less with other international students, and least with the host-national students, which is associated with failure to integrate themselves into the social/educational life of a university, and also with poor academic performances (Findsen, 1987; Furnham & Bochner, 1982; Ward et al., 2001). It is thus important for student affairs professionals to be sensitive to the difficulties that international students may have in establishing and maintaining frequent and quality contact with host-national students. Student affairs professionals should seek ways to create opportunities for international students to interact and develop close relationships with host-national students. Host-national students should also be encouraged to seek interactions with international students perhaps through formal (e.g., orientation program with both international and host-national students) and informal programs (e.g., study or conversation partners).

This is in no way to suggest that international students should avoid socializing with those from the same or other cultures, but increased contact with host-national students would be a practical step to overcome barriers academically (e.g., unfamiliarity with academic system), linguistically (English

fluency), and socio-culturally (e.g., social isolation) that in turn would promote better cross-cultural adaptation.

Education and Career Goal-Setting and Planning

The finding that international students' future personalized goals showed similar patterns to their Canadian cohorts suggests that beyond the intercultural difficulties (e.g., linguistic difficulty, socio-cultural problems) often documented in research, international students have concerns and aspirations similar to those of local students, including academic challenges, personal growth and development, conflict between academic demands and family responsibility, stress associated with finance, and transition not only to a new culture but also to a new university. More importantly, career opportunities and professional development seems to take prominence besides successfully completing the education.

Although most post-secondary institutions offer abundant services and provisions for meeting international students' academic and cultural adaptation concerns (e.g., international student advisors, orientation program, conversation groups), resources that are directed at helping international students in realizing career-related possible selves seem to be lacking. Consequently, in addition to offering the typical housing, immigration or linguistic information, it would be helpful for universities to develop a more clear and in-depth understanding of international students' career aspiration, interests and provide resources related to career planning and search.

With regard to the possible selves related goal-setting, given that academic adjustment and achievement is significant component of international students' cross-cultural adaptation, helping international students select realistic, well-elaborated and desirable career or educational goals would likely increase their self-motivation and efficacy in devising effective strategies to perform behavior required to achieve the goals on the one hand, and to expand their formal and causal social network with host-nationals on the other.

Assistance in Academic Preparation

The findings also points to the importance of academic preparation for higher educational experiences for international students in relation to their academic adaptation and satisfaction. In addition to the linguistic training, communicating with faculty members and with host-national students through emails regarding the academic system (e.g., rules, concepts, and principles), teaching styles, class participation, performance expectations, and campus life or auditing classes beforehand might help international students prepare for their overseas post-secondary educational experiences (Abel, 2002).

Limitations

Future research needs to build on the following limitations of the studies. First, it should be noted that data collected in both studies was obtained from international students' self-reports, which may contain biases leading to inflating or lowering of students' ratings for themselves. Second, the strong presence of graduate students in the sample of international students in Study 2 may have compromised the comparability of possible selves descriptions with the

Canadian students who were in their undergraduate studies. While international and Canadian students may share common possible selves in pursuing success in academic studies and achieving an individual career vision, for international graduate students, their foreign status and acculturation experiences may be influential in how they envision their future and perceive their own well-being in the host country as they differ from their Canadian counterpart with respect to the relations with their supervisors, experiences as teaching assistants, communication with colleagues, and social life, etc. (Myles & Cheng, 2003).

Therefore, it is important to acknowledge that the final cross-cultural adaptation model presented in Study 2 could be sample and context specific as it pertains mostly to international graduate students with an interdependent cultural orientation. Cautions should be exercised with regard to the generalizability of the final cross-cultural adaptation model as well as external validity of comparative findings on possible selves presented in this dissertation. Additionally, the two groups of international students sampled extended another limitation that data collected from both studies is cross-sectional in nature and thus no inference should be made regarding the trajectory or long-term adjustment of international students.

Third, another limitation pertains to the coding and measurement of possible selves. Both studies presented in this dissertation used open-ended measures. This approach typically begins with a brief statement of what possible selves are and ask respondents to generate a number (usually 3, but sometimes unlimited) of their own future possible selves (Lee & Oyserman, 2009;

Oyserman & Fryberg, 2006). The strength of such measures is that they allow participants to describe their possible selves without constraint and the format can be easily adapted to suit different groups and contexts (Lee & Oyserman, 2009; Oyserman & Fryberg, 2006). Considering the purpose of this research project and the heterogeneity of individuals' backgrounds and acculturating experiences (Ward et al., 2001), the open-ended measures were deemed to be optimal for assessing international students' possible selves.

In both studies, although participants were instructed to provide a succinct open-ended possible selves description, a coding issue aroused when participants provided multiple possible selves in a single response slot (e.g., *finish my Ph. D and become a staff member in the U of A, or working boring job and have no hope to go back to my country*). Because the existing possible selves research has never really mentioned the coding or solution for such a complex response, and to facilitate coding, coders were instructed to code the first possible self that can stand alone. In the first above-mentioned example, it was "*finish my Ph.D*" which was coded as a positive education possible self and in the second example, "*working boring job*" was the first codable positive career possible self.

The downside of this type of coding is that the participant received only a content/count score of 1 for that one-time response which consequently and inevitably undermined the analysis and interpretation of results. Because the participant with the first complex possible selves clearly had the ability to imagine not only future educational self, but also a career self and an

interpersonal or familial self, the total content/count score of 3 in either positive or negative possible selves would not necessarily represent the diversity of one complex and elaborated response.

One remedy is to capture all codable possible selves in all domains, and then summing the number of possible selves references in the domains of interest and dividing this by the total number of possible selves provided for both positive and negative possible selves (Cross & Markus, 1991). Another solution is to weigh in the “specificity” of possible selves. To illustrate using the same example “*finish my Ph. D and become a staff member in the U of A, and/or bring my family over to Canada*”, in this multiple possible selves response, coders could be instructed to code “*finish my Ph. D and become a staff member in the U of A*” as “achievement-related possible selves” and “*bring my family over to Canada*” or any responses that connote interpersonal connection or relations could be specified as “affiliation-related possible selves”. Both suggestions could potentially control for differences in number of selves mentioned. The results of such coding methods in relation to adjustment measures remain unknown, however, as to date studies presented in this dissertation were the first attempt to link possible selves to cross-cultural adaptation.

Fourth, because possible selves are considered to be personalized, researchers often impose coding schemes or categories when coding open-end possible selves responses. The coding schemes employed in this dissertation were adopted from Unemori et al. (2004) study and a few categories (e.g.,

language, migration) were added to accommodate the characteristics of international students in both studies. It is important for researchers to consider the purpose of their research and characteristics of participants before applying the current coding schemes and devise coding categories appropriate to the open-ended possible selves descriptions in their future research.

Lastly, although balanced possible selves were comprised of mostly career and education selves which were strongly associated with salience/efficacy expectancy, and both of which predicted motivational intensity/behavioral engagement in the final path model in Study 2, the mixture of pairs in other domains may have contributed to the elimination of the path linking motivational intensity/behavioral engagement to academic adaptation and satisfaction in the final cross-cultural adaptation model. It is also plausible that the close-ended Likert scale question of frequency of behavioral engagement fell short of accounting for the dynamics of behavioral participation that international students engaged in to improve their academic adaptation and satisfaction. Thus, it would be premature to suggest that international students with a high count of career and education balanced possible selves specifically would have better academic adjustment overall.

Directions for Future Research

There are several future directions for this line of research. First, future research needs to examine possible selves of a particular group of international students (i.e., graduate students or undergraduate students) from a specific geographic or cultural region and recruit a comparative group of domestic

Canadian (graduate or undergraduate) students to ensure a strong equivalence of group characteristics (e.g., program of study, age, etc.) in order to enhance the generalizability of comparative findings between student groups.

Second, although the examination of international students' possible selves might be inherently personalized, self-report biases resulting from adjustment measures could be avoided by including peer-reports and an evaluation of students' grades (e.g., GPA) or a log of actual behavioral engagement in communicating with host-nationals in the host culture. These additional objective measures are particularly beneficial in the case of studying international graduate students' cross-cultural adaptation because faculty members' perspectives and peer ratings from fellow host-national graduate students could shed more light on international graduate students' adaptation outcomes.

Third, in light of finding that both groups of international students reported a higher number of balanced configuration of possible selves which could potentially be associated with their personal characteristics or acculturation experiences, it would be useful for future research to incorporate a measure of the independent self-construal and a cultural orientation scale to better account for the prevalence of balanced configuration of possible selves.

Fourth, given that international students' possible selves were mostly in career and education domains, a close-ended measure of possible selves with an emphasis on career development and education concerns that require international students to rate the salience, efficacy beliefs or motivational

intensity of these possible selves could compliment the initial use of an open-ended measure of possible selves. An advantage of using close-ended measures is that they are easy to code and the researchers can focus on possible selves relevant to the sample of interest (Lee & Oyserman, 2009; Oyserman & Fryberg, 2006).

Along the same line, the cross-adaptation model depicted in this dissertation could be advanced by focusing on international students' career or education balanced possible selves with an inclusion of an open-ended measure of specific plans or behavior performed (e.g., increased participation in class, joining a study group with other Canadian students, hours spent practicing career-related skills). The combination of an open-ended question on specific plans or behavioral strategies used and the closed-ended Likert-scale question of frequency of behavioral engagement on certain domains of balanced possible selves relevant to international students could potentially better predict academic adjustment outcomes.

Another interesting issue to consider is to examine possible selves and cross-cultural adaptation of international students from the Western cultures who are sojourning and studying in a non-Western cultural environment and to see whether different cultural values and practices would generate similar or reverse patterns of possible selves responses or adjustment outcomes.

Finally, although resource intensive, future research could attempt to undertake a longitudinal study by comparing international students (making cross-cultural transition) with domestic students of equivalence (making

within-cultural transition) on their possible selves as well as on important adjustment dimensions (e.g., psychological, socio-cultural, academic). This approach could provide a clear picture of how international and domestic students may differ in their possible selves over time, and how possible selves as motivational incentives encourage self-regulatory behaviors for individuals undergoing different types of cultural transitions. As well, it could provide a better picture of international students' cross-cultural adaptation model because of time dimensions.

An Ethical Issue Related to the Research of Possible Selves

According to possible selves literature, the hallmark of possible selves is the “possibilities”, thus individuals can create and have rich networks of possible selves (Markus & Nurius, 1986). Rossiter (2007) points out that these possibilities are not unlimited. Specifically, she argues that a sense of what is possible is defined and bounded by a person's “situated perspective” (Rossiter, 2007). For example, individuals who are socio-economically or socio-culturally disadvantaged (e.g., low income, discriminated against, limited educational or career opportunities) or migrating individuals adjusting to a new culture who feel marginalized in a new society, may have a limited sense of possibility about what the future could hold for them. Thus, it is important to note that when examining possible selves with such individuals, extra cautions need to be taken because instead of producing positive feelings by describing future goals, negative emotions may unwittingly triggered because of current life conditions.

Conclusions

International students face many academic and cross-cultural challenges when they pursue their educational objectives and professional qualifications in the host institution. Rather than looking at international students' cross-cultural adaptation from a problem-focused or stress-oriented vantage, a closer look at their future personalized goals in relation to their migration motivation may provide a more positive picture of their cross-cultural academic sojourn. The positive experiences of cross-cultural transition and academic sojourn may prompt changes in ways that international students view themselves, other people, and the world around them (Arthur, 2004).

Clearly, the studies presented in this dissertation are only a beginning to understanding the role of motivational significance and effectiveness of possible selves play in international students' cross-cultural adaptation. Although findings should be interpreted with caution, they provide indications regarding international students' personalized future goals while pursuing an education abroad. Images of positive career outlook, the advancement of one's education, concerns for intrapersonal growth, and interpersonal relationships are important future possible selves that international students strive to achieve.

The findings also provide a more insightful and comprehensive theoretical model of international students' cross-cultural adaptation through the consideration of motivational properties implied in possible selves, particularly in the balanced possible selves. Successful cross-cultural adaptation can be pursued through envisioning balanced possible selves with high salience and

efficacy beliefs that in turn facilitates academic adaptation and satisfaction, leading to better psychological adjustment on the one hand, and through having frequent and satisfying intercultural contact with host-nationals to increase linguistic self-confidence which consequently promotes a fulfilling and satisfying sojourn with fewer sociocultural difficulties on the other.

Give the importance of the research topic and limited amount of previous research on international students' future-oriented and motivational-based possible selves and cross-cultural adaptation, it is hoped that studies presented here will invite others to pursue this line of inquiry. This line of research is crucial to furthering our understanding of the educational, motivational, psychological, and socio-cultural aspects of cultural transitions and adjustment, and our insight into the goal pursuit and challenges involved in attainment of goals faced by international students.

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APPENDIX 1

Materials for Study 1

Background Information

1. Age: _____ years
2. Sex (check one): Male _____ Female _____
3. Country of Birth: _____
4. Country of Citizenship: _____
5. I have lived in Canada for _____ years.
6. I have lived in this province for _____ years.
7. When did you arrive in Canada? Year _____ Month _____
8. My native (first) language is _____ (Please fill in the blank).
9. Other than my native language, I can fluently speak _____
(Please fill in the name of the language(s) you can speak fluently).
10. Did you take the Test of English as Foreign Language (TOEFL)?
Yes _____ No _____
If yes, what was your TOEFL score (Please indicate test format)?
Paper Test _____ Computerized Test _____
11. I identify my cultural/ethnic background as (e.g., Taiwanese, Italian, Korean, etc.)

12. I am (check one) _____ a naturalized Canadian citizen
_____ a landed immigrant
_____ international student
_____ other
If other, please specify _____
13. My mother's ethnicity is: _____
a. Was your mother born in Canada (Circle One): Yes No
b. If no, in which country was she born?

14. My father's ethnicity is: _____
a. Was your father born in Canada (Circle One): Yes No
b. If no, in which country was he born?

15. Do you have any family in Canada? Yes _____ No _____

If yes, please indicate their relations to you (e.g., parents, siblings, sons/daughters, spouse, uncle/aunt/cousin)? _____

Do they live in the same city as you? Yes _____ No _____

16. Do you plan to return to your country of origin after you complete your studies?
Yes _____ No _____ Undecided _____

Section 1: Possible Selves in Canada

Everyone think about the future to some extent. When doing so, we usually think about the kinds of experiences that are in store for us and the kinds of people we might become. Some of these experiences are probably quite likely to occur and others are much less likely. Some of these future experiences are very much desired, hoped-for, and expected, and others are worried about or feared.

Think a minute about your time/experiences as **an international student in Canada**. What do you *expect* you will be like or *fear* of being like by the time you finish your studies in Canada? In the space below, please list **three expected possible selves** and **three feared possible selves** that you currently imagine for yourself **by the time you finish your studies in Canada.**

Expected Possible Selves in Canada

1. _____
2. _____
3. _____

Feared Possible Selves in Canada

1. _____
2. _____
3. _____

Section 2: Academic Satisfaction in Canada

Think about a minute about your academic life in Canada and answer following five statements carefully. Use the 1-7 scale below to indicate your agree or disagreement with each statement. Please be open and honest in your responses.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ 1. Up until now, I have obtained the important things that I wanted to in my academic life in Canada.
- _____ 2. If I could begin my studies again in Canada, I would change almost nothing.
- _____ 3. In general my academic life in Canada closely corresponds with my ideal.
- _____ 4. The conditions of my academic life in Canada are excellent.
- _____ 5. I am satisfied with my academic life.

Section 3: Satisfaction with Life in Canada

Think a minute about your life in Canada and then answer the following five statements carefully. Use the 1-7 scale below to indicate your agreement or disagreement with each statement. Please be open and honest in your responses.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ 1. In most ways, my life in Canada is close to ideal.
- _____ 2. The conditions of my life in Canada are excellent.
- _____ 3. I am satisfied with my life in Canada.
- _____ 4. So far I have gotten the important things I want in life in Canada.
- _____ 5. If I could live my life in Canada all over again, I would change almost nothing.

Section 4: Socio-cultural Adaptation

Please indicate how much difficulty you experienced in each of these areas since you have been in Canada, using the following 1 to 5 scales.

1	2	3	4	5
No Difficulty	Slight Difficulty	Moderate Difficulty	Great Difficulty	Extreme Difficulty

- _____ 1. Making friends.
- _____ 2. Finding food that you enjoy.
- _____ 3. Following rules and regulations.
- _____ 4. Dealing with people in authority.
- _____ 5. Taking a Canadian perspective on the culture.
- _____ 6. Using the transport system.
- _____ 7. Dealing with bureaucracy.
- _____ 8. Understanding the Canadian value system.
- _____ 9. Making yourself understood.
- _____ 10. Seeing things from a Canadian point of view.
- _____ 11. Going shopping.
- _____ 12. Dealing with someone who is unpleasant.
- _____ 13. Understand jokes and humor.
- _____ 14. Accommodation/Housing.
- _____ 15. Going to social gatherings.
- _____ 16. Dealing with people.
- _____ 17. Communicating with people of a different ethnic group.
- _____ 18. Understanding ethnic or cultural differences.
- _____ 19. Dealing with unsatisfactory service.
- _____ 20. Worshipping.
- _____ 21. Relating to members of the opposite sex.
- _____ 22. Finding your way around.
- _____ 23. Understanding the Canadian political system.

- _____ 24. Talking about yourself with others.
- _____ 25. Dealing with the climate.
- _____ 26. Understanding the Canadian worldview.
- _____ 27. Family relationships.
- _____ 28. Being able to see two sides of an inter-cultural issue.

Section 5: Your Thoughts about Yourself

Please think about how you have been feeling about yourself **during the past week**, use the scale below and indicate the appropriate number on the line preceding that item.

0	1	2	3
Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)

- _____ 1. I was bothered by things that usually don't bother me.
- _____ 2. I had trouble keeping my mind on what I was doing.
- _____ 3. I felt depressed.
- _____ 4. I felt that everything I did was an effort.
- _____ 5. I felt hopeful about the future.
- _____ 6. I felt fearful.
- _____ 7. My sleep was restless.
- _____ 8. I was happy.
- _____ 9. I felt lonely.
- _____ 10. I could not "get going".

APPENDIX 2

Materials for Study 2

Section 1: Background Information

1. Age: _____
2. Gender (check one): Male _____ Female _____
3. Country of Citizenship: _____
4. How long have you been in Canada?
Please indicate how many months: _____ months
5. Before your current stay in Canada, have you lived in a country where English is the primary language for more than a 6-month period? _____ yes _____ no
6. Your native (first) language is (Please fill in the blank)

7. Your ethnicity (e.g., Chinese, Irish, Mexican):

- 8 Marital Status (Please check one):
_____ Single
_____ Engaged
_____ Married/No Children
a) Is your spouse here with you? _____ yes _____ no
_____ Married/with Children
a) Are your spouse in Canada with you? _____ yes _____ no
b) Is your child (children) in Canada with you _____ yes _____ no
c) Are any of your or your spouse' parents in Canada with you?
_____ yes _____ no
9. Your main reason for coming to the University of Alberta (Please check one)?
_____ undergraduate degree
_____ graduate degree
_____ post-doc
_____ exchange student
_____ other (please specify) _____
10. What Faculty at the U of A are you currently in? (Please check one)
_____ Agriculture/Forestry/Home Economics
_____ Business
_____ Engineering
_____ Native Studies
_____ Pharmacy & Pharmaceutical Sciences
_____ Physical Education & Recreation
_____ Rehabilitation Medicine
_____ Science
_____ Arts
_____ Education
_____ Medicine & Dentistry
_____ Nursing

11. Did you plan to work in Canada after completing your studies?

yes no undecided

12. Do you plan to return to your country of origin after you complete your studies?

yes no undecided

13. Do you plan to become a permanent resident of Canada?

yes no undecided

Section 2: Possible Selves

Everyone thinks about the future to some extent. When doing so, we usually think about the kinds of goals that we might possibly achieve and the kinds of people we might possibly become. Some of these future goals are very much desired, hoped for and expected, and others are worried about and feared. These possible selves might be related to your personality characteristics, lifestyle/health, education/career, interpersonal relationships, social activities, and attainment of material goods, or anything else that might be important to you.

Think a minute about your time/experiences as an international student at the U of A. What possible selves do you imagine for yourself by the time you finish your stay in Canada? In the space below, please list three possible selves that you hope to become and three possible selves that you fear to become (with a word or a short phrase). After you have done this, please rate each possible self on statements that follow using the 7-point scale.

Hoped-for Possible Selves in Canada

1. First Hoped-for Possible Self _____

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ This possible is important to me.
- _____ It is easy for me to image this possible self.
- _____ I frequently think of this possible self.
- _____ I frequently engage in behaviors that would aid in attaining this possible self.
- _____ I am motivated to attain this possible self.
- _____ I am willing to work hard to attain this possible self.
- _____ I expect to attain this possible self.

2. Second Hoped-for Possible Self _____

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ This possible is important to me.
- _____ It is easy for me to image this possible self.
- _____ I frequently think of this possible self.
- _____ I frequently engage in behaviors that would aid in attaining this possible self.
- _____ I am motivated to attain this possible self.
- _____ I am willing to work hard to attain this possible self.
- _____ I expect to attain this possible self.

3. Third Hoped-for Possible Self _____

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ This possible is important to me.
- _____ It is easy for me to image this possible self.
- _____ I frequently think of this possible self.
- _____ I frequently engage in behaviors that would aid in attaining this possible self.
- _____ I am motivated to attain this possible self.
- _____ I am willing to work hard to attain this possible self.
- _____ I expect to attain this possible self.

Feared Possible Selves in Canada

1. First Feared Possible Self _____

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ This possible is important to me.
- _____ It is easy for me to image this possible self.
- _____ I frequently think of this possible self.
- _____ I frequently engage in behaviors that would aid in avoiding this possible self.
- _____ I am motivated to avoid this possible self.
- _____ I am willing to work hard to avoid this possible self.
- _____ I expect to avoid this possible self.

2. Second Feared Possible Self _____

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

_____ This possible is important to me.

_____ It is easy for me to image this possible self.

_____ I frequently think of this possible self.

_____ I frequently engage in behaviors that would aid in avoiding this possible self.

_____ I am motivated to avoid this possible self.

_____ I am willing to work hard to avoid this possible self.

_____ I expect to avoid this possible self.

3. Third Feared Possible Self _____

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

_____ This possible is important to me.

_____ It is easy for me to image this possible self.

_____ I frequently think of this possible self.

_____ I frequently engage in behaviors that would aid in avoiding this possible self.

_____ I am motivated to avoid this possible self.

_____ I am willing to work hard to avoid this possible self.

_____ I expect to avoid this possible self.

Section 3: Frequency/Satisfaction of Intercultural Contact

Please indicate how much contact you have had with people of different cultures since your arrival in Canada and how satisfied are you with the quality of contact using the 7-point scale. Please circle "Not Applicable" for *Satisfaction of Contact* if you have had no contact with particular individuals in a given circumstance.

1. With Canadian Professors, Teaching Assistants, University Offices, etc.

Frequency of Contact

Strongly Disagree							Strongly Agree
1	2	3	4	5	6	7	

Satisfaction with Quality of Contact

Not Applicable	Not at all Satisfied						Very Satisfied
	1	2	3	4	5	6	7

2. With Canadian Students.

Frequency of Contact

Strongly Disagree							Strongly Agree
1	2	3	4	5	6	7	

Satisfaction with Quality of Contact

Not Applicable	Not at all Satisfied						Very Satisfied
	1	2	3	4	5	6	7

3. With local people in the community (e.g., salesclerks, landlord, bus drives, and government officials, etc.).

Frequency of Contact

Strongly Disagree							Strongly Agree
1	2	3	4	5	6	7	

Satisfaction with Quality of Contact

Not Applicable	Not at all Satisfied						Very Satisfied
	1	2	3	4	5	6	7

Section 4: Socio-cultural Adaptation

Please indicate how much difficulty you experienced in each of these areas **since you have been in Canada**, using the following 1 to 5 scales.

1	2	3	4	5
No Difficulty	Slight Difficulty	Moderate Difficulty	Great Difficulty	Extreme Difficulty

- _____ 1. Making friends.
- _____ 2. Finding food that you enjoy.
- _____ 3. Following rules and regulations.
- _____ 4. Dealing with people in authority.
- _____ 5. Using the transport system.
- _____ 6. Dealing with bureaucracy (e.g., university administration, government office).
- _____ 7. Understanding the Canadian value system.
- _____ 8. Making yourself understood.
- _____ 9. Seeing things from a Canadian point of view.
- _____ 10. Going shopping.
- _____ 11. Dealing with someone who is unpleasant.
- _____ 12. Understand jokes and humor.
- _____ 13. Accommodation/Housing.
- _____ 14. Going to social gatherings/events.
- _____ 15. Be able to see two sides of an inter-cultural issue.
- _____ 16. Communicating with people of a different ethnic group.
- _____ 17. Understanding ethnic or cultural differences.
- _____ 18. Dealing with unsatisfactory service.
- _____ 19. Getting used to the pace of life..
- _____ 20. Finding your way around.
- _____ 21. Talking about yourself with others.
- _____ 22. Dealing with the climate/weather.

Section 5 Your Feelings about Yourself

Please think about how you have been feeling about yourself **during the past week**, use the scale below and indicate the appropriate number on the line preceding that item.

0	1	2	3
Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)

- _____ 1. I was bothered by things that usually don't bother me.
- _____ 2. I had trouble keeping my mind on what I was doing.
- _____ 3. I felt depressed.
- _____ 4. I felt that everything I did was an effort.
- _____ 5. I felt hopeful about the future.
- _____ 6. I felt fearful.
- _____ 7. My sleep was restless.
- _____ 8. I was happy.
- _____ 9. I felt lonely.
- _____ 10. I could not "get going".

Section 6: Academic Preparation, Adaptation, and Satisfaction

Please think about your performance at the University of Alberta so far, and comment on the following items using the scale below.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

- _____ 1. I was aware of the curriculum content and course workload before starting my academic program at the U of A.
- _____ 2. I felt that I was well-prepared for my academic program prior to my arrival at the U of A.
- _____ 3. I was aware of different teaching methodologies before starting my academic program at the U of A.
- _____ 4. When I came to the U of A, I was aware of expectations people have of students at the U of A.
- _____ 5. I feel I have adjusted well to the different teaching methods/styles of courses I have taken at the U of A.
- _____ 6. The conditions of my academic life at the U of A are excellent.
- _____ 7. I am satisfied with the level at which I am performing academically.
- _____ 8. In general, my academic life closely corresponds with my ideal.
- _____ 9. I am pleased now about my decision to come to the U of A.
- _____ 10. I am quite confident that I will be able to deal in a satisfactory manner with future challenges at the U of A.
- _____ 11. So far, my experiences in the program meet my expectation.
- _____ 12. I have good communication with fellow students.
- _____ 13. I am skilled academically as the average undergraduate/graduate student.
- _____ 14. I feel that my grades are an accurate measure of my academic ability.
- _____ 15. Up until now, I have obtained the important things that I wanted in my academic life.

_____ 16. I have good communication with faculty members.

_____ 17. If I could begin my studies again, I would change almost nothing.

_____ 18. I am satisfied with my academic life at the U of A.

Section 7: Communicating in English

Please read each statement carefully and use the 6-point scale and indicate the appropriate number that best corresponds to the extent to your opinion on the line preceding that item.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

- _____ 1. When I make a telephone call, I get mixed up if I have to speak English.
- _____ 2. In my opinion, I know enough English to be able to write comfortably.
- _____ 3. I feel uneasy whenever I speak English.
- _____ 4. In a restaurant, I feel calm when I have to order a meal in English.
- _____ 5. I feel confident and relaxed when I have to ask for directions in English.
- _____ 6. I get shy speaking English with a person in authority.
- _____ 7. I am very confident in my ability to write English correctly.
- _____ 8. I feel comfortable when I speak English among friends where there are people who speak English and people who speak my native language.
- _____ 9. I feel that I can understand someone speaking English quite well.
- _____ 10. I really believe that I am capable of reading and understanding most text in English.
- _____ 11. Every time that I meet an English-speaking person and I speak with him/her in English, I feel uneasy.
- _____ 12. Personally, I believe that I know enough English to speak correctly.
- _____ 13. I get nervous every time I have to speak English to a sales clerk.
- _____ 14. I believe that my knowledge of English allows me to cope with most situations where I have to use that language.

Section 8: Satisfaction with Life in Canada

Think a minute about your life in Canada and then answer the following five statements carefully. Use the 1-7 scale below to indicate your agreement or disagreement with each statement. Please be open and honest in your responses.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

- _____ 1. In most ways, my life in Canada is close to ideal.
- _____ 2. The conditions of my life in Canada are excellent.
- _____ 3. I am satisfied with my life in Canada.
- _____ 4. So far I have gotten the important things I want in life in Canada.
- _____ 5. If I could live my life in Canada all over again, I would change almost nothing.