MOTIVATION AND LEARNING OUTCOMES: A STUDY OF INCOMING EXCHANGE STUDENTS AT QUEEN’S UNIVERSITY

by

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ABSTRACT

The purpose of this study was to measure the relationship between the motivation and learning outcomes of incoming exchange students at Queen’s University. The majority of research on study abroad programs measures the learning outcomes of U.S. students abroad in courses and programs designed exclusively for them. What is lacking is research on participants in exchange programs where incoming students study alongside, and are immersed in a similar living environment to, local students.

The present study adds to the literature on study abroad by providing information about motivation and learning outcomes resulting from participating in an exchange. Using a pre-test/post-test research design, this study examines how both motivation and learning outcomes vary by gender, program of study, region of origin, duration of study and first language. The Study Abroad Goals Scale was used to measure motivation in the pre-test (n = 182) and the Global Perspectives Inventory (GPI) measured learning outcomes in both the pre- and post-test of incoming exchange students to Queen’s university in the 2009-2010 academic year (n = 98).

Results indicate that the strongest motivation of the incoming exchange students was Cross-Cultural, followed by Academic and Personal/Social. Motivation differences were found in each independent variable except for gender indicating that motivation to study on exchange is not uniform among all participants. Findings from the measures of the GPI did not indicate any significant changes between the pre- and post-test. This suggests that participation in an exchange program does not necessarily lead to student development and that program administrators may need to implement proactive learning interventions to enhance the exchange experience for students.
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CHAPTER 1: INTRODUCTION

As noted by Gurin, Dey, Hurtado, and Gurin (2002), in times of increasing global interdependence, having interculturally competent citizens who can engage in informed, ethical decision-making is becoming an urgent educational priority. Intercultural competence is the acquisition or “increased awareness of subjective cultural context (world view), including one’s own, and developing greater ability to interact sensitively and competently across cultural contexts as both an immediate and long-term effect of exchange.” (Bennett, 2009). Intercultural competence helps us navigate relationships and interactions with others, especially those from different ethnic and cultural backgrounds. Universities can play a vital role in helping students prepare for careers, lives and relationships in societies more interconnected and multicultural than ever before. Unfortunately, although the degree of cultural diversity on university campuses is increasing (Keller, 2001), the presence of diverse communities on campuses does not necessarily lead to broader global perspectives or educational benefits (Vande Berg, 2009). In order for students to develop a more global perspective about their education, politics and relationships, they must be positioned in environments in which they can actively engage, interact, discuss, and reflect. (Deardorff, 2009). ‘Studying abroad’ exposes students to an environment where they can engage and interact in a culture and education system that differs from their own (Fry, Paige, Jon, Dillow, & Nam, 2010; Lou & Bosley, 2008; Vande Berg, Connor-Linton, & Paige, 2009).

Study abroad is a common and often high-profile activity of many universities looking to highlight their internationalization efforts. However, understanding the role study abroad programs play in a larger internationalization strategy requires
consideration of more than the number of study abroad programs offered or the percentage of students who participate.

The assessment of the impact of study abroad on campus is frequently limited to descriptive data about trends in enrolment. These data provide only a snapshot of the most rudimentary impacts of study abroad. In a study of 20 universities in the United States (U.S.) with the most study abroad students, Durrant and Dorius (2007) reported that while 95% of those universities assessed satisfaction, less than 40% assessed gains in language proficiency, less than a third assessed personal development and less than 15% assessed cross-cultural proficiency. The focus these universities place on measuring satisfaction with their students’ study abroad experience ignores the changes and development that occur within students while they are abroad. The failure of these and other institutions to examine comprehensively the experiences of students abroad is curious in light of reports from students that studying abroad was a transformative learning experience and that their times abroad ‘changed their lives’ (Angulo, 2008; Fry et al., 2010; Golay, 2006). According to Dwyer and Peters (2004), the time a student spends studying abroad “is usually a defining moment in a young person’s life and continues to impact the participant’s life for years after the experience” (p. 1). If the experience is as profound and seminal as many claim, a closer examination of those participating and their experiences are warranted.

**Queen’s University Study on Exchange Students**

The 2006 Queen’s University Strategic Plan, *Engaging the World*, explicitly calls for greater numbers of Queen’s University students to be involved in study abroad and exchange programs (Queen’s University, 2006). In consideration of this goal, and in an
effort to learn more about the experience of both outgoing exchange students from Queen’s University and incoming exchange students coming to Queen’s University, a project was initiated in the summer of 2008. This project included participation and financial support from the Associate Vice-President: Academic and International, the Queen’s University International Centre (QUIC), the Student Affairs Research and Assessment Office (SARA), and staff from each of the faculties involved in exchange programs. I was hired as a Research Associate for the study due to my previous study and work abroad experience, and several years working with exchange and international students. The title of the GREB-approved study is “Evaluating the Experiences of Participants in Queen's University's International Exchange Program,” (See Appendix A – General Research Ethics Board approval letter).

Initially, the project’s vision was primarily focussed on gauging the levels of satisfaction with the services used and activities that incoming and outgoing students engaged in during their exchange. A survey was created with items pertaining to support services and academic programs, pre-departure planning, orientation programs, housing and health insurance assistance and course registration. The study also planned to examine students’ experience on campus, their interactions with faculty and staff and involvement in the university community at Queen’s University or their host institution. Overall, a study not dissimilar from the type of ‘assessment’ that Durrant and Dorius found many universities to be undertaking on their own study abroad programs (2007). For my own research, I proposed two additions to the original assessment plan. These additions included a section in the survey on motivation and influences to study abroad and a standardized, previously used set of survey items designed to capture student
development and learning outcomes. Thus two sets of questions were included in a single survey: one pertains to service utilization and daily on-campus experiences that were for the benefit of university staff and QUIC; the other focussing on the motivation and learning development of students participating in the exchange. Though students received all of these items in a single survey, it is the last two sets of questions that are the foundation for my thesis. I hoped that the motivation and learning outcomes section could help to understand the overall impact and contribution, and the added value towards student learning for incoming and outgoing study abroad students.

**Student Exchanges at Queen’s University**

Study abroad and student exchanges have been present at Queen’s University for nearly fifty years (QUIC, 2008). Currently, Queen’s has exchange agreements with more than 140 partner universities in over 40 countries. Some of these agreements are faculty-specific. That is they are only open to students enrolled in specific faculties such as Business, Arts and Science, Applied Science, or Law. Decisions about admittance into these agreements are managed within those specific faculties, while university-wide exchange agreements are managed by the University Exchange Coordinator.

Data from the QUIC annual reports indicate an increased participation in exchanges among incoming and outgoing students from 2004 to 2008 (QUIC, 2004; QUIC 2008). As noted in Table 1, there has been a 64% increase in the number of terms that outgoing Queen’s University students are studying abroad and a 21% increase in the number of terms that incoming exchange students are studying at Queen’s University in this time frame.
<table>
<thead>
<tr>
<th>Year</th>
<th>Outgoing Students</th>
<th>Incoming Students</th>
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<tbody>
<tr>
<td>2004/2005</td>
<td>261</td>
<td>288</td>
</tr>
<tr>
<td>2008/2009</td>
<td>429</td>
<td>349</td>
</tr>
<tr>
<td>% Change</td>
<td>64%</td>
<td>21%</td>
</tr>
</tbody>
</table>

No national or provincial/territorial data exist in Canada to understand if these changes are reflective of any larger trends or movement. However, during the same four-year period the number of U.S students going abroad increased by 45% and the number of European students studying abroad within Europe increased by 35% (Bhandari & Chow, 2009; European Union, 2009).

While the terms exchange and study abroad are often used interchangeably, discussions of the number out of outgoing U.S. students participating in study abroad can occur without consideration of how many incoming students are studying abroad in the U.S. However, when discussing exchange students, both incoming and outgoing student participation should be discussed in tandem. Exchange programs, at their operational and philosophical basis, are underpinned by the principle of reciprocity among institutions; the equal exchange and provision of opportunities for students to study at each other’s institutions is inherent and fundamental. In an exchange agreement, when one institution sends too many students on exchange without receiving a similar number of incoming students to their campus in return, the sending institution may be restricted or prohibited from sending additional students until the agreement reaches or approaches reciprocity again.
Although the number of students participating in both outgoing and incoming exchanges at Queen’s is increasing, they still represent only three to four percent of all students at Queen’s University. Queen’s institutional participation rate is in line with other estimates that suggest that between 1% to 9% of students in Canada, the U.S and Europe participate in an exchange annually (Association of University and Colleges of Canada, 2007; Bhandari & Chow, 2009; Bond, Girgrah, Burrow, Vander Meulen, Spaling, & Areepattamannil, 2009; Maiworn & Teichler, 2002; Williamson, 2010). While the participation rate remains minimal, a study of eight Canadian post-secondary institutions found that 85% of students indicated an interest in studying abroad (Bond et al., 2009). This strong interest in study abroad is encouraging to professionals in the field, but the gap between the population of students interested in studying abroad and the population that take advantage of a study abroad opportunity remains substantial.

While it cannot be said conclusively that increased participation in student exchanges at Queen’s University represents a continuing trend, the larger number of students participating in exchanges from and to Queen’s University, combined with the development of a new strategic plan, suggest that this is an appropriate time for a deeper investigation of the student exchange programs at Queen’s University. Understanding the areas of learning development of exchange participants could help to lessen the gap between those who demonstrate interest and those who actually go abroad.

**Purpose and Research Questions**

While, the focus of the Queen’s University project is primarily intended to assess the services, programs and activities available to incoming and outgoing exchange students, the purpose of my study was to measure the experiences of incoming exchange
students coming to Queen’s University. My intention is to understand the potential impact of the exchange on these incoming students’ learning outcomes and the motivations that led these students to come to Queen’s University as part of an exchange. My research explores the potential relationships between motivation to study abroad and three specific areas of learning development: cognitive learning, intrapersonal learning and interpersonal learning. Three research questions guide this research:

1. What are the primary motivations of incoming Queen’s University exchange students and do these motivations vary based on independent variables?
2. To what degree does studying on exchange lead to changes in learning outcomes and do these learning outcomes vary by independent variables?
3. To what degree does motivation predict incoming exchange students’ learning outcomes?

**Significance of Study**

To date, the overwhelming majority of research conducted on study abroad programs has focused on the experience of U.S. students studying abroad in Western Europe. My research differs as it is based on exchange students, and more specifically on incoming students rather than outgoing students, a population rarely examined in the literature. As addressed earlier, the experiences of incoming and outgoing exchange students are equally important, especially given the reciprocal agreements in place between universities. Without students coming to a host institution (like Queen’s University), opportunities for their own students to go abroad are limited. A greater understanding of the motivation of the current incoming exchange students may inform strategies designed to encourage more incoming exchange students to Queen’s
University in the future. A focus on learning development can aid in understanding specific changes that students undergo while they are participating in an exchange. My research will also provide a unique insight into the single term and year-long immersive exchange models where students study alongside full-degree students. This perspective differs greatly from the majority of studies that focus on U.S. students who are in unilateral programs abroad and are enrolled courses designed especially for them.

**Definitions**

Three terms will be used repeatedly throughout this paper.

**Exchange student:** Refers to a student studying away from the country of their home university for “a period of study for one semester or a year, through a pre-arranged bilateral, or consortia agreement between their home university and the university where they plan to study” (Barnick, 2006, p. 3).

**Study abroad student:** Refers to a student studying away from the country home university for a period from one week to a full year in an overseas program that charges differential tuition fees, in which there is no reciprocal movement of students back to the home institution.

**Learning outcomes:** Refers to the measured “change in student affective, cognitive or interpersonal characteristics” of post-secondary students (Pascarella & Terenzini, 2005, p. 627).

**Overview of the Study**

This chapter provided an overview of the purpose of my own research study and how it relates to the larger study at Queen’s University. The current chapter also serves to introduce the purpose, the three research questions and key terms that will be used
throughout the study. Chapter 2 provides background for my research, including the history of study abroad and the role of government in supporting study abroad. This chapter also includes literature highlighting previous studies that examined motivation and student development arising from participating in study abroad and student exchange programs. Chapter 3 outlines the methodology I employed, including the participants and their demographic characteristics, the instruments used in the study, the methods of data collection and the planned data analyses procedures. Chapter 4 provides the findings of the research itself, while Chapter 5 provides a discussion of the findings and their implications.
CHAPTER 2: LITERATURE REVIEW

Three areas of study abroad research and literature were examined to inform my research and help to provide an understanding of the development of study abroad and student exchange as well as an overview of seminal research in the field. The first section of this chapter explores the history of study abroad as well as the role government and educational institutions played in its advancement. This examination considers the U.S. (the site of most study abroad research), the European Union (the primary destination for North American students studying abroad and the primary region of origin for most students in this study) and Canada (the host country of study). Examining the history and development of study abroad and exchanges in these three locales provides a context for how the activity has developed in three different locations and highlights the role of government in supporting the promotion and advancement of study abroad and student exchanges. The second section describes the existing research on student motivation to study abroad, focussing on American and European cases. This overview illustrates the narrowness of the research on the topic to date. The final section focuses on student learning outcomes resulting from study abroad on the cognitive domains, intrapersonal domains, and interpersonal domains. Outcomes research has dominated the literature on study abroad overall and this section primarily examines the research on these three areas of outcomes research and the contexts that they were carried out.

History of Study Abroad and Exchanges

While formal study abroad programs and student exchange agreements are relatively new phenomena, students have independently sought out academic
opportunities outside of their home country for centuries (Dhondt, 2008). In Europe, records of students from the Nordic countries travelling to study on the continent have been found dating back to the 12th century. These students were primarily from elite families associated or affiliated with the Church and later went on to become part of the ruling classes themselves. The proliferation of Latin as the language of instruction throughout much of Europe enabled Nordic students to continue studying on the continent for several hundred years (Dhondt, 2008). Later, between the 17th and 19th centuries, it became popular for male children of upper-class English families to engage in the Grand Tours of Europe (Brennan, 2004). Students participating in the Grand Tours typically had a greater focus on cultural exposure and enlightenment, than the Nordic students were focused primarily on developing academic skills. However, these groups highlight two of the most frequently cited benefits of studying abroad; academic and cultural development for career enhancement.

The first formal, university-sponsored study abroad program is commonly understood to have originated at the University of Delaware in 1923, when eight students from the university participated in a year-long program at the Sorbonne in Paris, France (Hullihen, 1928). The program was designed to provide an opportunity for students to immerse themselves in full-time study at another university so that they could both improve their language skills and understand another culture. Initiated by Professor Raymond Kirkbride and partially funded by the DuPont family, the Sorbonne program was successful enough to be replicated by eight other U.S. universities by the end of the decade (Abrams & Hatch, 1960). However, none of these programs were bilateral exchange programs. Rather, they were one-way study abroad programs as there were no
incoming students to the U.S in their place. Unfortunately, these study abroad programs occurred during the Great Depression and study abroad program growth was minimal until the end of the end of the Second World War (Abrams & Hatch, 1960).

Due to a lack of documentation, the roots of study abroad and exchanges are far more challenging to trace in Canada. The precursors to the current university-sponsored study abroad programs were advanced by Lewis Perinbaum in the 1950’s and 1960’s (Bond & Lemmanson, 1999), who helped establish the first on-campus study abroad offices. These offices served to facilitate participation in, and the development of, what is now the Canadian University Service Organization (CUSO). CUSO serves to place Canadian scholars and technical experts in strategically important emerging nations. Now, more than 50 years after Perinbaum’s efforts, nearly all universities in Canada, and many individual faculties, have established study abroad and exchange offices.

Just as the origins of study abroad and exchange vary among Canada, the U.S. and Europe, so too does the level of government involvement and promotion of these programs. Within Europe, student exchanges are supported by a high-profile intergovernmental program commonly known as the ERASMUS programme (European Regional Action Student Mobility). ERASMUS was developed by the European Union in 1987, was designed to increase the volume and improve the ease of student exchange within Europe, strengthen relationships amongst universities, and ultimately relationships amongst countries. While the ERASMUS program is approved and funded by the member countries, participation is determined by individual universities. The budget provided annually in scholarships and awards for students, staff and faculty participating in Erasmus sponsored exchange programs is equivalent to equivalent of
$CDN 600,000,000. This funding supported the exchange of more than 160,000 students among EU member countries in 2006/2007 (European Union, 2009).

The European model for supporting and developing student mobility is strongly promoted at the trans-national level and identifies student development and institutional relationship building as its priorities. In the U.S., government support for study abroad identifies global competitiveness, national security and international leadership as reasons for enhancing study abroad opportunities for university students (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005). The Simon Study Abroad Act (SSAA) was introduced to the U.S. Congress in 2006 in order to meet these governmental goals. The overarching vision of the SSAA is to increase the number of American students participating in study abroad programs from the current 250,000 to 1,000,000 by 2017. In addition, the SSAA aims to help increase the quality of study abroad experiences, create more certainty for credit transfer, and enhance the diversity of programs and variety of the students participating in study abroad programs. Funding to support these goals will be earmarked for institutional grants to support the development of unique academic programs, programs in non-traditional locations, and/or those serving non-traditional populations of students.

The role of the government as it pertains to study abroad in Canada differs significantly from the United States and Europe. Neither broad institutional co-operation, nor federal support and promotion are present in Canada. In fact, Canada may be more noteworthy for its lack of a nationwide international higher education agenda. There has been a failure to develop a vision and agenda for international education, even though there is a growing awareness that both are urgently needed (Barrow, Didou-Aupetit, &
Malia, 2003). While higher education is largely overseen by the provinces, foreign affairs and international trade are federal responsibilities. Given the division of educational and international affairs responsibilities in Canada, nationwide initiatives like the Fulbright and Killiam Programs in the United States and the Erasmus program in Europe are improbable. The combination of provincial resistance to “strings-attached,” federal funding and the absence of a credible policy coordination mechanism at the national level are the primary reasons that a national vision does not exist for student exchanges in Canada (Desai-Trilokekar & Schubet, 2007).

**Motivation for Students Participating in Exchanges**

Students’ goals and reasons for participating in study abroad or exchanges have received relatively little attention in published research. In a 2006 paper, the Council on International Educational Exchange (CIEE) wrote that,

> While there is a good deal of folk wisdom about what motivates students to go abroad, there is very little hard data. We don’t know the extent to which students are aware of their own goals when they decide to go abroad (p. 2).

Unfortunately, the research on study abroad motivation to date is limited and published studies have primarily examined the case of outgoing U.S. Students. With an increasing number of students participating in study abroad from Canada, the United States and Europe, research focusing on the students’ motivation, reasons for participating and expectations for their sojourns abroad is required to understand how more students can be encouraged to participate. The following section will review research examining the three common, recurring themes on motivation to study abroad: cross-cultural, cognitive, and career enhancement. While the overwhelming majority of studies published in
English on study abroad motivation focus on U.S. students in programs designed for and managed by U.S. administrators, this literature review attempts to highlight other studies on motivation which include students from other locations.

**Cross-Cultural Motivations**

The first area of motivation to study abroad is a desire to gain cross-cultural skills and/or to have an intercultural experience. Brewer (1983) was one of the first to examine motivation to study abroad in researching 88 U.S. students in Europe and China. She found that a desire to travel and to live in a new culture were the two most popular reasons to study abroad. Carlson, Burn, Useem, and Yachimowicz (1990) found that the three strongest motivations for studying abroad were a desire for a cross-cultural experience along with meeting new people and travelling. A study of ERASMUS students in Poland and Italy, added that students were primarily motivated by the opportunity to have a new experience, learn about culture and new people (Krzaklewska, 2008). However, no details were provided in this study about the country of origin of the students. These three studies relied solely on descriptive statistics to summarise their findings. Conversely, a comparative examination of students from the U. S, France and China found that motivation to study abroad varied by country of origin (Sánchez, Fornerino, & Zhang, 2006). Utilizing factor analysis of a 97-item survey, motivation factors for each country were developed. Results indicated that the opportunity to have a new cultural experience was the most popular response among the U.S. and French students, but significantly less important for students from China.
Cognitive Motivations

Aside from cross-cultural motivations, cognitive motivations such as second language acquisition and academic subject motivations have also been noted as important amongst study abroad students. Caudrey, Petersen, and Shaw (2008) focussed on the motivations of incoming exchange students in Denmark and Sweden and found that a desire to improve spoken English was the most common reason to study in those countries. Possible explanations for this finding include the large number of participants who were enrolled in commerce programs, which are primarily taught in English throughout continental Europe. When examining motivation by region of study, Brewer (1983) found that students going to Germany or France were strongly motivated by the opportunity to improve or learn a second language, while students travelling to the United Kingdom (U.K.) and China did not view language as important. Outgoing study abroad students in the U.K. and China were instead motivated by general academic factors. Like studies above, Krzaklewska (2008) found a strong motivation to learn a foreign language among ERASMUS students. However, there was no indication if these students were motivated to learn the language of the host country, English, or a combination of the two. Conversely, a study by Van Der Meid (2004) on Asian-Americans studying abroad, found that while improving second language skills was somewhat important to participants, general academic motivations (taking courses in the major, minor or elective subjects) were the second lowest rated items. This study is contrasted by Ho (2009) who found in her study of minority students abroad that expanding knowledge was very important (97%) to these participants.
**Career Enhancement Motivations**

The final theme in the literature on motivation to study abroad is based on career enhancement. Overall, the importance of career development as a motivation to study abroad is unclear. While some studies suggest it has great importance, some found the opposite, and still other studies on motivation (Brewer, 1983) did not inquire about career-related motivations at all. Sánchez et al. (2006) noted that both American and French students were strongly interested in studying abroad as a means to career advancement, but students from China were not. Carlson et al. (1990) reported that among American students abroad, career motivation ranked lower than foreign language acquisition or cultural experiences. In contrast, Caudrey et al. (2008) found that career development was relatively unimportant to a group of Erasmus students they followed. This finding is peculiar as the study included a group of students going abroad as language assistants; presumably a group interested in furthering their career prospects.

Rather than view career motivation as a single type of motivation, Krzaklewska (2008) viewed it as integrating academic, linguistic, and cross-cultural motivations. She merged the primary motivations in suggesting that as one of the primary rationales for participation in higher education is to develop competencies and skills (cultural, academic and linguistic) for later use in the labour market. In contrast, Ho (2009) found that less than a third of students cited obtaining a better job or salary in the future as a rationale for participating in study abroad.

**Summary**

The above studies provide a broad survey of motivation to study abroad in different populations of students and from different countries. Cross-cultural motivations
appear to be the strongest, most popular motivation to study abroad. Cognitive motivations vary greatly depending on the population examined: in some instances developing a second language was of paramount importance, while for others it was not a consideration at all. However, the vast majority of studies on the topic focus on outgoing American students in largely American-run programs. It may not be appropriate to say that incoming exchange students to Canada are similarly motivated. In addition, some studies on motivation to study abroad (Ho, 2009; Kitsantas, 2004; Murphy-Lejeune, 2002) were conducted primarily, or entirely, retroactively and asked about motivation to study abroad, after the program had ended. These types of surveys can lead to reliability concerns as they depend on participants’ ability to recall events and thought patterns from several months ago. Another concern with reliability can be seen in the studies by Ho (2009) and Brewer (1983) who collapsed 5-point Likert scales to 2-point scales. This change reduces data from continuous to dichotomous, removing the degrees of agreement or disagreement with certain statements. With the exception of Brewer (who used only descriptive statistics) and Sánchez et al. (2006), all other studies generalized their motivation findings across the entire sample. No attempts were made to investigate if motivation differed by gender, program of study, duration of study, first language, or region of origin.

**Learning Outcomes**

Sutton and Rubin (2004) said that student learning is the *raison d’être* for the entire higher education system. Thus understanding what students learn while at university is vital for those who wish to improve the learning opportunities for all groups of students. For those participating in study abroad and student exchanges, the
assessment of learning outcomes can help to highlight unique benefits of these international programs. Learning outcomes measured in study abroad and exchange programs can be divided into three categories: cognitive, intrapersonal, and interpersonal development. These categories are not unique to student exchange programs; rather, they are recognized components of student learning identified in a variety of higher education outcomes research (Kauffmann, Martin, Weaver, & Weaver, 1992; Metcalfe, 2007; Pascarella & Terenzini, 2005). The following sections will provide a brief summary of research relating to these three categories of study abroad outcomes research. While the motivations and learning outcomes in study abroad research is not perfectly aligned, they include many of the same constructs. First of all, cognitive development outcomes are presented. These outcomes typically include second language development and changes in academic subject knowledge. Secondly, Intrapersonal development outcomes which often include personal and career related development. The last area of outcomes research examines Interpersonal development. These outcomes include intercultural understanding and global mindedness. Taken together these three areas encompass a spectrum of learning and development outcomes.

**Cognitive Development Outcomes**

Cognitive development arising from participation in study abroad programs can include second language acquisition and academic or subject knowledge as well as changes in how one understands knowledge and how it is gained. The first and most commonly assessed area of cognitive research is second language acquisition. Coleman (1998) found significant correlations between study abroad students post-test proficiency in second languages and the total time spent in foreign language countries. In addition,
the number of visits to the host country also correlated with stronger proficiency levels. Freed, Segalowitz, and Dewey (2004) went beyond the typical abroad/at-home design and measured students who participated in short-term intensive language-only programs, regular semester or year-long study abroad programs as well as those who studied languages on a regular class schedule at home. Their study found that gains in oral proficiency were most significant in the intensive abroad group, followed by the regular study abroad and finally at home group. Writing in a second language outside of class also had a significant correlation with oral language development. The Georgetown Consortium study (Vande Berg et al., 2009) also examined language development as a result of participation in study abroad but used the Simulated Oral Proficiency Interview (Stansfield, 1991; 1996). They found that study abroad students showed more advancement in oral proficiency than did students who studied languages at home. The researchers also found that among study abroad students that females demonstrated more significant oral proficiency gains than did males. All three studies indicate gains in numerous aspects of second language acquisition as a major benefit of study abroad. They also highlight the myriad of factors that can be assessed in second language acquisition including pronunciation, oral fluency, communication strategies, grammatical skills, vocabulary breadth and depth, reading speed, and comprehension.

The other area of research in cognitive development examines subject learning, the development of critical thinking, and changing attitudes towards learning. Sutton and Rubin (2004) found that study abroad students demonstrated a higher degree of functional knowledge of their subject upon return home than did non-participants over the same period. The authors also highlighted the absence of research examining changes
in functional/subject knowledge of study abroad students compiled to date. Opper, Teichler, and Carlson (1990) discovered that study abroad students reported less concern with achievement of grades and memorization of facts than did a control group of students who remained at home during the semester. They also found that study abroad students had a greater concern for “learning for learning’s sake.” Students returning from abroad seem to be more focused on their remaining studies, and are more likely to study “for the sheer pleasure of learning than obtaining a high grade” (Hadis, 2005, p. 58). McMillan and Opem (2004) found that 80% of students reported that their study abroad program enhanced their interest in academic study, while 63% of participants added that study abroad had prompted them to expand or change their academic majors. Dwyers and Peters (2004) added that 64% had enrolled in graduate school as a result of studying abroad.

**Intrapersonal Development Outcomes**

Whereas interpersonal learning outcomes examine interactions between and amongst individuals, intrapersonal development examines individuals’ own beliefs, values, and sense of self (Kegan, 1994). Studying abroad is believed to help participants develop their conceptions of personal values, personal understanding of strengths and weaknesses, and self-identity. In a mixed-methods study of more than 1000 exchange students from Michigan State University, it was found that returning students demonstrated an increase in their personal growth, defined as a combination of enhanced independence, self-reliance, and comfort with unfamiliarity (Ingraham & Peterson, 2004). Using the same survey items, Angulo (2008), found no significant differences in personal growth when comparing study abroad participants to students who remained at
home but had strong intentions to study abroad (2008). This non-significant result suggests that the learning outcome is not uniform for all study abroad participants.

Hadis’ (2005) examination of intrapersonal development in study abroad programs found that students who participated in a study abroad reported greater self-awareness, flexibility, and openness when they returned home. Furthermore, this personal development was positively correlated with the duration of study abroad: students participating in a program for longer than 12 weeks had reported higher levels of personal autonomy, flexibility, and openness compared to students who had studied for less than 12 weeks abroad. Using the Global Perspectives Inventory, Doyle (2004) found that students participating in an immersive, summer-long study abroad program reported enhanced decision-making, independence and awareness of their own cultural identity. Also using the GPI, Braskamp et al. (2009) found that study abroad participants showed significant growth in identity development and emotional confidence. Of the three outcomes categories, intrapersonal development has received the least attention in terms of published research to date. Valid and reliable assessment tools to examine this area of research are still lacking and it is possible universities have a greater interest in examining interpersonal and/or cognitive development abroad. In addition, academic or subject learning is more commonly assessed by and at, the faculty level, rather than study abroad professionals.

**Interpersonal Development Outcomes**

In this study, interpersonal development is defined as the change in “how one views oneself in relationship to and with other people” (King, Baxter-Magolda, 2004, p. 574). The ability to interact with others, especially in different cultural contexts, is likely
the most researched outcome in study abroad research. However, as noted by Deardorff (2004; 2006), an array of terms including global perspectives, intercultural development, and cross-cultural development are used in attempting to describe interpersonal development. This section will examine outcomes that use several of these phrases, acknowledging they may not represent identical constructs.

Zielinski (2006), in a study attempting to relate intercultural learning to specific characteristics of study abroad programs, used the Cross-Cultural Adaptability Inventory (CCAI, Kelly & Meyers, 1995). The CCAI attempts to quantify the dimensions known to be associated with “cross-cultural effectiveness (Zielinski, 2006). This inventory consists of 50 questions in four dimensions (emotional resilience, flexibility/openness, perceptual acuity and personal autonomy). The study found that studying abroad for a minimum of four weeks resulted in significant improvements in all dimensions among participants. Kitsantas (2004) also used the CCAI in researching a group of U.S. students in Europe enrolled in programs that ranged between three and six weeks in length. Similar to Zielinski’s findings, Kitsantas found that study abroad students in Europe reported significant improvements in three of the dimensions, suggesting that short-term study abroad programs can still provide an opportunity for significant cross-cultural development.

Additional studies of students in short-term programs abroad have used the Intercultural Development Inventory [IDI] to measure cross-cultural sensitivity (Hammer & Bennett, 1998). The IDI contains five subscales which flow on a continuum from very simplistic (Denial/Defense) to very complex worldviews (Encapsulated Marginality). Using the IDI, Williams (2005) found that study abroad programs had a positive effect
on the development of cross-cultural sensitivity, that students reduced their simplistic views, and began to understand the more complex situations. Similar results were reported by Anderson, Lawton, Rexeisen, and Hubbard (2006) in another study of short-term study abroad programs. However, Anderson et al. (2006) only found significant ($p < .05$) improvements in two of five scales. An overall significant improvement in IDI scores was found but only by relaxing the $p$-value to .1. With small sample sizes in both studies ($N < 25$) and an absence of published effect sizes, findings in these two studies should be interpreted cautiously.

A much larger study of 1300 students (Vande Berg et al., 2009) investigated intercultural learning of U.S. students enrolled in various types of study abroad programs world-wide. Students enrolled in study abroad programs averaged more progress in IDI scores than did a control group who remained at home, but the gains were only significant for female students. This study is unique in that it published effect sizes of significant findings. Unfortunately effect sizes are rare in study abroad research, making comparisons of significant findings very challenging.

The three studies above focus on the cases of U.S. students abroad in island programs with other U.S. students; not integrated with other exchange or host nationals. Its applicability to a more integrated environment is unclear. The IDI is a tested and reliable instrument (Paige, Jacobs-Cassuto, Yershova, & DeJaeghere, 2003); however, the tool is expensive to use, and all students who take the IDI must participate in a 3-hour seminar before beginning the pre-test. This may not be a realistic expectation in exchange programs which lack the central coordination of many of the large study abroad programs in the U.S.
Lastly, a final study sought to examine global learning and holistic development of 242 study abroad participants utilizing the Global Perspective Inventory (Braskamp, Braskamp, & Merrill, 2009). In addition to interpersonal learning, the GPI also examines intrapersonal and cognitive learning. Their study highlighted that students studying abroad reported statistically significant gains in two interpersonal domains after being abroad. Both social interaction (degree of engagement with others who differ from you) and social responsibility (interdependence and concern for others) were significantly higher after the time abroad than prior to their experience abroad.

Summary

Three prominent areas of study abroad learning outcomes dominate the published research and are highlighted in this review. Overall, compared with those students who remain at home, studying abroad appears to lead to enhanced cognitive, intrapersonal, and interpersonal learning outcomes. Challenges in the existing research include a lack of standardized test instruments, especially for measuring intrapersonal and cognitive development. With the exception of studies examining interpersonal development and second language development (cognitive development outcomes), untested surveys and survey items are used to measure outcomes.

Additionally, these studies focus almost exclusively on the experience of the U.S. student abroad in Europe, and many of those examine programs less than a term in length. In nearly all cases, the U.S. students abroad are not immersed in regular classes with students in the host country; rather, they are enrolled in courses specifically designed for and restricted to them. This isolation-model is not comparable to the experience of incoming exchange students to Queen’s University who take the same
courses alongside local students for a minimum of one term or possibly a full academic year. Thus many of the findings in the review of literature on motivation and learning outcomes may not be applicable to a single-institution study and they do not speak to the effect that one institution can have on the development of a sample of students. Moreover, the research on motivation and learning outcomes (with the exception of Georgetown Consortium Study) ignores the context of the study abroad program and the characteristics of the learners. Only rarely are variables such as duration of study or gender of the participants utilized in statistical analysis. Although the significance of the learning outcome could vary among study abroad participants, results are generalized to the entire sample.

To understand properly how different groups of incoming exchange students are motivated, and the learning outcomes of these students from a host institution perspective, additional research must be conducted. The following chapter will outline the methodology used to conduct my research.
CHAPTER 3: METHODOLOGY

In attempting to understand motivation and learning outcomes associated with student exchanges, I am influenced by two guiding principles. These help me to understand the predominant mindset of study abroad professionals and the state of study abroad research. They also provide an understanding of how the two key constructs in my research, motivation and learning outcomes, are related to each other. The first is a master narrative of study abroad and exchanges summarized by Vande Berg (2009):

Students are normally transformed through studying abroad. They learn through experience, through being exposed to things that are new and different. The students themselves confirm that this is true: they tell us that going abroad has “changed their lives.” Since the more they’re exposed to the new and different the more they learn, colleges and universities should work to send as many of them abroad as possible. And since students learn best when they’re immersed in their new experience, they should go abroad for longer, rather than short, period of time. They should enrol directly in university courses at renowned universities, and they should be taught by well credentialed faculty (p. 16-17).

Though the above statement is positioned from the perspective of study abroad not exchange programs, I feel it accurately reflects the situation that incoming exchange students face at Queen’s University. They enrol directly in regular courses, alongside domestic students, are taught by the same professors as these local students and they are here for at least one term.

The second guiding principle is based on the work of Locke and Latham and their research on the influence of motivation on outcomes and performance (2002). They note
that goals and motivation help to create a directive function by focusing attention and effort towards relevant activities and away from irrelevant activities. The authors report that motivation affects action and leads to the enhancement, use or discovery of knowledge and strategies that aid in achieving desired outcomes. While abroad, students are often challenged to develop new or utilize existing skills in their new academic, cultural, and social environments. Locke and Latham found that individual goals and motivation significantly impacted the development of skills, performance, and created a focusing effect on behaviour. Their ideas were tested by Kitsantas (2004) in examining if there was a relationship between motivation and learning outcomes. The relationship of motivation to outcomes, as advanced by Locke and Latham could be utilized to understand why changes in learning outcomes vary among study abroad and exchange students. Students with stronger cross-cultural motivations may report more significant interpersonal growth than intrapersonal growth. Similar to Kitsantas, I am interested in examining the relationships between incoming exchange student motivation and their learning development while on exchange.

**My Role in the Research**

As noted in Chapter 1, my research is part of a larger research project at Queen’s University which examines the experiences of all incoming and outgoing exchange students. The entire study encompasses four primary areas of inquiry. The first is the motivation to study on exchange. The second examines the early arrival experience in terms of pre-departure/arrival support, orientation to campus and housing. Thirdly, the research examines the activities and engagement in campus life throughout time a student was participating in an exchange. The final section includes a section designed to
measure the learning outcomes during the course of the exchange program. The entire research project included cooperation from staff at QUIC, SARA and the individual faculties. I was responsible for putting together the survey based on the needs identified by Student Affairs, and I contacted the students on behalf of Student Affairs to distribute the surveys. I was also involved in the instrument recommendation, primary analysis, and interpretation of the data. For the purposes of this thesis however, the data I am presenting only focuses on the incoming exchange students, their motivation and learning outcomes.

**Participants**

The target population for this study were the incoming exchange students to Queen’s University for the 2009-2010 academic year. The participants were recruited from the total population of 390 incoming exchange students. In this research study, two samples were examined. The first sample included the 182 students (47%) who completed the Study Abroad Goals Scale (SAGS) in the pre-test. The SAGS was the basis for the research question related to motivation and this sample is used specifically for that purpose.

The second sample consisted of the 98 students (25%) who completed the SAGS as well as the pre-test and post-test Global Perspectives Inventory survey items. Demographic characteristics, including region of origin, gender, year of study, program of study, duration of study, and first language of both samples are reported in Table 2. Differences in the totals are due to non-response, or responses not listed in the table. Examining the data from both samples using one-sample t-tests showed no significant differences between them and the entire population of students who received surveys in
terms of program of study and duration of study. The gender split present in this study, is reflective of the findings of many other studies on study abroad and student exchange participants (Bond et al., 2009; Dwyer, 2004; Sutton & Rubin, 2010).

Table 2

Demographic Information of Participants

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Sample 1 (N = 182)</th>
<th></th>
<th>Sample 2 (N = 98)</th>
<th></th>
</tr>
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<tr>
<td></td>
<td>Count</td>
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<td>Count</td>
<td>Percentage</td>
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<tr>
<td>Region of Origin</td>
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<tr>
<td>Asia</td>
<td>58</td>
<td>32%</td>
<td>31</td>
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<td>53</td>
<td>54%</td>
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<td>Australia/New Zealand</td>
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<td>12%</td>
<td>11</td>
<td>11%</td>
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<tr>
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<td>6</td>
<td>3%</td>
<td>3</td>
<td>3%</td>
</tr>
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<td>Gender</td>
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<td></td>
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<tr>
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<tr>
<td>Female</td>
<td>106</td>
<td>58%</td>
<td>54</td>
<td>55%</td>
</tr>
<tr>
<td>Year of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Year</td>
<td>21</td>
<td>11%</td>
<td>14</td>
<td>14%</td>
</tr>
<tr>
<td>3rd Year</td>
<td>105</td>
<td>58%</td>
<td>51</td>
<td>53%</td>
</tr>
<tr>
<td>4th Year</td>
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<td>25%</td>
<td>27</td>
<td>28%</td>
</tr>
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<td>5</td>
<td>5%</td>
</tr>
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<td>Program of Study</td>
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<td>7%</td>
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<td>36</td>
<td>37%</td>
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<tr>
<td>Business</td>
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<td>55%</td>
<td>51</td>
<td>52%</td>
</tr>
<tr>
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<tr>
<td>First Language</td>
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<td></td>
</tr>
<tr>
<td>English</td>
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<td>32</td>
<td>33%</td>
</tr>
<tr>
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<td>66</td>
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</tr>
<tr>
<td>Term of Study</td>
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<td>74</td>
<td>76%</td>
</tr>
<tr>
<td>2-terms</td>
<td>44</td>
<td>24%</td>
<td>23</td>
<td>24%</td>
</tr>
</tbody>
</table>
Research Design

For the survey questions relating to motivation, this research study used a pre-test only design. The motivation questions pertain only to initial motivation for studying on exchange; thus they were only administered at the start of the exchange period in the pre-test. However, to measure the learning outcomes, a single-group pre-test/post-test design was used (Campbell & Stanley, 1963; Mitchell & Jolley, 2004). The design allows for motivation data to be collected in the pre-test and learning outcomes data to be collected in the pre-test and post-test so that changes can be measured over the duration of the exchange.

There are three reasons why a control group is not required for this study. First of all, the research question relating to motivation only requires a single data collection point. Secondly, the third research question, the examination of the relationship between motivation and learning, is exploratory and using a control group before some evidence that a relationship exists is premature and adds unnecessary complexity to the study. The final reason is the challenge in finding a control group to adequately match that of the incoming exchange students to Queen’s University. In most research on learning outcomes in study abroad and exchange programs, the control group includes students who remain on the home campus for the same amount of time as the abroad (experimental) group. Attempts are made to have a sample that matches the abroad group in terms of gender, program of study and year of study (see Carlson et al., 1991; Sutton & Rubin, 2010; Vander Berg et al., 2009). However, this study focuses on incoming exchange students. To obtain a comparable control group would require contacting more
than 150 partner universities in over 40 different countries to ask for contact information of students who may be interested in participating in the survey.

Another challenge in research on exchange students is that the sample studied is not randomly selected. That is, exchange students self-select to apply for an exchange and, to a large degree place themselves into exchange programs. However a few common characteristics are present among all participants in the exchange programs at Queen’s University. Students are 1) selected by their home university/department for exchange based on a competitive process and their applications were confirmed for enrolment by Queen’s University; 2) only required to pay tuition fees to their home institution with no additional fees; and 3) in at least their second year of study. These characteristics serve to enhance validity as they are shared across the sample (McMillan & Schumacher, 2006).

The pre-test surveys were administered during the first two weeks of the exchange period and provided baseline measurements, enabling the post-exchange survey to be used to identify changes in key variables during the exchange period (McMillan & Schumacher, 2006). The post-test survey was emailed to participants at the end of the exchange. The pre/post design is superior to the retrospective methods used in previous studies (e.g., Brewer, 1983; Hadis, 2005; Ho, 2009; Kitsantas, 2004). These designs are prone to a desirability bias among participants to show learning or an effect (Hill & Betz, 2005). They also require participants to provide responses about what their opinions or beliefs of their skills, were months earlier when the program or intervention began (Pratt, McGuigan, & Katzev, 2000).
The contact and arrival information for the incoming exchange students was obtained from the University Exchange Coordinator in the Office of the University Registrar. This office provided an Excel file containing the names and email address of all incoming exchange students in the 2009-2010 academic year. Relevant information included students’ gender, full name, Queen’s University email address, faculty of study at Queen’s University, name of home institution, and study dates at Queen’s University (Fall, Winter, or Full Year).

**Data Collection**

All incoming exchange students were sent an email message containing an invitation to participate in the research at the start of their exchange at Queen’s University. The invitation was sent via StudentVoice, an online survey-hosting and assessment company, from the email account of the Associate Vice-Principal: Academic and International. Four measures were used to help to increase or encourage participation in this research. First of all, it was expected that the formal association of the study with a senior administration member likely positively influenced the response rates. Secondly, seven prize draws were made for students who completed the survey. These prizes were all paid for by the Office of Student Affairs Research and Assessment at Queen’s University. Thirdly, the pre- and post-test surveys remained open for three weeks to allow as many respondents to complete the survey as possible. Finally, two follow-up reminder e-mails were sent to non-respondents after the first and second week of the study. The invitation to participate included the scope of the research project, the rationale and its importance, the ethics and privacy measures employed, potential data uses, as well as whom to contact to ask questions or withdraw from the survey. This
email included a link to the survey that required a 4-digit, student-specific PIN number to begin the survey. The PIN number also provided confidentiality and allowed for the matching of pre- and post-exchange results. Consent to participate was confirmed when the “I agree to participate” option was clicked on the first webpage. Copies of the invitation letter and reminder emails are found in Appendices B and C.

**Instruments**

According to Durrant and Dorius (2007), surveys are the most commonly-used tool in study abroad and student exchange research. Surveys provide an effective tool to collect data confidentially from a large number of participants. They also allow for accurate information to be obtained quickly, with minor inconvenience to participants, and in a cost-effective manner (McMillan & Schumacher, 2006). Furthermore, they permit later investigation of the relationships between the variables in the survey items (McMillan & Schumacher, 2006).

**Study Abroad Goals Scale**

The Study Abroad Goal Scale (SAGS) is based on earlier work by Carlson, Burn, Useem, and Yachimowicz (1991), Carlson and Widaman (1988), and Opper, Teichler, and Carlson (1990). The SAGS is a 13-item survey asking students to indicate how significant each item is in their decision to study abroad. The original version of the SAGS was used to assess several study abroad programs simultaneously (Kitsantas, 2004). In this research, as only the incoming exchange students at Queen’s University were assessed, several modifications were made to the survey to improve the readability of the items. First of all, any use of the words “study abroad” or “study abroad program” were changed to “exchange program” or “exchange program at Queen’s University.”
This was done to ensure that students were aware they were being asked about their motivation to study at Queen’s University specifically, rather than motivation to participate in an exchange program in general. Other modifications included replacing the words “host country” with “Canada” and “foreign language” with “English/French.” Two examples of items in the SAGS are: I participated in a student exchange at Queen’s because of a, “Desire to develop my own perspective of Canada and "Desire to enhance my understanding of Canada.” The survey used a 5-point Likert-type scale: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree. The SAGS was completed by the exchange students at the beginning of their exchange to determine their motivation for participating in a student exchange at Queen’s University. See Appendix D for a full list of survey items in the SAGS.

The SAGS has previously been used only once in published research and reliability data on the instrument is limited to that single study (Kitsantas, 2004). In that study, factor analysis of the 13-item survey produced three scales. The first scale, Cross-Cultural motivation ($N = 5$) explained 28% of the variance and had a reliability of .82. The second, Subject Interest and Competence scale ($N = 4$) accounted for 19% of the variance and had a .72 reliability score. The final factor, Social Gathering ($N = 4$) accounted for 15% of the variance and had an $\alpha$ value of .80.

**Global Perspectives Inventory**

The Global Perspectives Inventory (GPI) was developed by Braskamp, Braskamp, and Merrill (2007) to measure student learning development in three domains of global learning: cognitive, intrapersonal and interpersonal development. The GPI was developed specifically to examine post-secondary students and their development. It is a
40-item survey based on earlier theoretical work by both Kegan (1994) and King and Baxter-Magolda (2005) (see Appendix E for survey items). Kegan suggested that as individuals develop, they rely on their own thinking, feeling and relations with others as they attempt to make meaning of their experiences. Later, King and Baxter-Magolda transformed the thinking, feeling and relations domains advanced by Kegan into cognitive, intrapersonal and interpersonal development. In sum they considered the development in these three areas as representing intercultural maturity and development for students in post-secondary institutions. The authors of the GPI used the theoretical work of these authors to develop the domains and survey items of the GPI survey instrument.

The GPI survey instrument consists of three domains, each of which includes two subscales. The first domain, Cognitive development examines knowledge and understanding of what is true and important to know from an individual perspective (Braskamp, Braskamp, and Merrill, 2007). This domain consists of two scales: Knowing \((N = 9)\) and Knowledge \((N = 5)\). An example of a survey item in this domain is “I am informed of current issues that impact international relations.” It should be noted that in this survey instrument and in this research study, foreign language development and subject functional knowledge are not and will not be measured. The measurement of either of these constructs would require at least two kind of specific language tests (English and French) as well as individual subject tests in each faculty. Neither of these tests are feasible nor realistic in this study due to the time involved for the researcher and participants. The Intrapersonal domain examines personal awareness, personal values and self-identity (Braskamp et al., 2007). In this domain the two scales are Identity \((N = \)
5) and Affect \((N = 9)\). An example of an item from this domain is “I often get out of my comfort zone to better understand myself.” The final domain, Interpersonal, is centred on the willingness to interact with people with different social or cultural backgrounds and an individuals’ ability to relate with others (Braskamp et al., 2007). This domain includes two scales: Social Interaction \((N = 6)\) and Social Responsibility \((N = 6)\). A survey item in this domain is “I intentionally involve people from other cultural backgrounds in my life.” For all survey items in the GPI an identical 5-point Likert scale was used: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; and 5 = strongly agree. Unlike the SAGS, no modifications were made to the GPI survey items. Table 3 provides means, standard deviation and reliability coefficients of the six subscales for the 2008-2009 version of the survey \((N = 7130)\). To date, four versions of the GPI have now been produced and the tool is currently used by 22 colleges and universities and more than 23,000 students have taken the survey.

Table 3

_GPI Descriptive and Psychometric Characteristics_

<table>
<thead>
<tr>
<th>Scale</th>
<th>(M)</th>
<th>(SD)</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive—Knowing</td>
<td>3.41</td>
<td>0.49</td>
<td>.59</td>
</tr>
<tr>
<td>Cognitive—Knowledge</td>
<td>3.57</td>
<td>0.58</td>
<td>.73</td>
</tr>
<tr>
<td>Intrapersonal—Identity</td>
<td>4.10</td>
<td>0.50</td>
<td>.69</td>
</tr>
<tr>
<td>Intrapersonal—Affect</td>
<td>3.73</td>
<td>0.45</td>
<td>.68</td>
</tr>
<tr>
<td>Interpersonal-- Social Responsibility</td>
<td>3.76</td>
<td>0.53</td>
<td>.72</td>
</tr>
<tr>
<td>Interpersonal-- Social Interaction</td>
<td>3.56</td>
<td>0.52</td>
<td>.69</td>
</tr>
</tbody>
</table>
Data Analyses

Analyses of the data were completed using SPSS 17.0 and were performed at the \( \alpha = .05 \) level of significance. However, before the analyses began, the data were scanned for missing data.

Of the 390 pre-tests sent to students, 194 were returned. Of those returned four did not answer any questions, except for “I agree to participate,” and eight additional students answered 11 or fewer of the 13 items in the SAGS which is equal to 85% of the items in the instrument. These twelve cases were dropped, leaving a total of 182 usable responses for the SAGS. In examining the data for the pre- and post-test version of the GPI, a similar procedure was followed. These 182 students each completed at least 85% of the GPI survey items in the pre-test. 85% (or 34 items) was chosen as it would allow up to six items, the number of scales in the GPI survey, to be missing and still retain the data.

Of the 390 post-tests sent to incoming exchange students, 163 were returned. Included in the 163 were eleven students who began to answer questions but stopped before they had completed 85% or 34 of the GPI items. As with the missing data in the SAGS, these eleven cases are examples of non-random missing values, thus their data were excluded from analysis. SPSS was used to merge the pre-test and post-test GPI data sets resulted in 98 students who completed both. Data from these 98 students were used in analysis of research questions two and three.

Data Preparation
To understand if there were underlying dimensions in the SAGS similar to those found by Kitsantas (2004), Factor Analysis (FA) was performed on the SAGS data. This technique allows the researcher to find correlations among survey items that can be grouped into factors (Vogt, 2006). Factor analysis can demonstrate patterns of responses where participants answered items in a similar way and reduce data to a more manageable size and to classify data in a more meaningful way (Field, 2005). It is a very commonly used technique in survey research relating to student exchanges and study abroad (Carlson et al., 1991; Ingraham & Peterson, 2004; Sutton & Rubin, 2004).

Analysis of the 13 SAGS items was performed using principal axis factoring with varimax rotation. Varimax was chosen as the rotation method, as the factors were presumed to be independent from each other. In addition, varimax rotation attempts to load a smaller number of strongly correlated variables onto each factor; appropriate for a survey with a small number of items (Field, 2005). Per Kaiser’s criterion, only factors with eigenvalues greater than one were retained in the analysis (1960). This criterion is consistent with the majority of studies that use FA in study abroad research. Finally, absolute values lower than .31, which represents approximately 10% of the variance, were suppressed.

Initial attempts to produce a model with all 13 items were unsuccessful as the factor structure produced six factors. Three survey items were loaded onto more than one factor. Overall, the structure could not be interpreted easily into identifiable or logical themes. The two items “improve career prospects” and “use/improve my English/French language skills” had the weakest commonalities (.16 and .18 respectively) and factor loadings (.42, and .34 respectively) and they lowered the reliabilities of the scales in
which they were originally included. Dropping the “improve career prospects” item and re-running the analysis did not produce a cleaner factor structure with the remaining 12 items. In this case the “use/improve my English/French language skills” item still had the weakest communality (.18) and factor loading (.41), thus it was dropped from analysis.

The two items dropped from the factor analysis were retained as standalone items and final factor analysis produced a clean model with the 11 items loading onto three factors. These three factors accounted for 59.91% of the variance among the 11 items and produced a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of .65, above the recommended value of .60 recommend by Tabachnick and Fidell (2007). This three-factor model also had a significant result ($p < .001$) on Bartlett’s test of sphericity which supports the factorability of the 11 items. The factor loadings and reliability coefficients for each of the three factors are presented in Table 4. The first factor contained five items and accounted for 25.12% of the variance. These five items are interpreted as Cross-Cultural motivation. The second factor is interpreted as Personal/Social motivations for studying on exchange and, included four items and accounted for an additional 20.21% of the variance. The final factor, Academic motivation, included two items accounted for another 14.58% of the variance.

Table 4

Factor Loadings and Reliability Coefficients of the SAGS

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-Cultural motivation</td>
<td></td>
<td>.76</td>
</tr>
<tr>
<td>Make acquaintances from Canada</td>
<td>.59</td>
<td></td>
</tr>
<tr>
<td>Enhance understanding of Canada</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>Interact with Canadian people, customs and traditions</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>Score</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Gain insight into Canadian culture</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>Develop my own perspective of Canada</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>Personal/Social motivation</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>Establish ties with family/ethnic heritage</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>Be with friends participating in an exchange</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>Recommended by previous participants</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>Travel to countries near Canada</td>
<td>.59</td>
<td></td>
</tr>
<tr>
<td>Academic motivation</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>Learn more about my subject area</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>Gain strength in other subjects</td>
<td>.93</td>
<td></td>
</tr>
</tbody>
</table>

Internal consistencies were calculated for each of the three factors using Cronbach’s alpha. This analysis provides a measure of the reliability or consistency of items in a scale (Vogt, 2006). Scores can range from 0 to 1.0, with alpha scores above .9 considered excellent and below .6 unacceptably low (Vogt, 2006). The first scale, Cross-Cultural motivation had a Cronbach’s alpha value of .76. The Personal/Social motivation scale produced an alpha value of .70. The final scale, Academic motivation, had an alpha value of .77. These values all meet or exceed the minimum acceptable level of .70 (Kline, 1999; McMillan & Schumacher, 2006). For each factor, dropping any of the included items did not significantly increase the alpha value, thus the three factors produced in the factor analysis were deemed reliable and were used in the subsequent analyses.

Unlike the SAGS, the GPI contains several negatively worded items; 11 in total. Examples of these include “Volunteering is not an important priority in my life” and “Most of my friends are from my own ethnic background.” These items were scored on the same Likert-type scale where 1 = strongly disagree and 5 = strongly agree, as all
other items in the GPI. Strongly agreeing with these items indicates that the participant does not see volunteering as important and that most of their friends are from the same ethnic background. Strongly agreeing to the negatively-worded responses is associated with a less developed global perspective. Thus, before statistical analysis of the GPI was initiated, these eleven items were transformed so that positive responses in the survey were all associated with the same rankings. In the 11 negatively worded-items the following transformation was used (1 became 5, 2 became 4, 3 remained the same, 4 became 2, and, 5 became 1). Following this transformation, the data could be prepared for analysis.

According to Nunnally (1978) and Field (2005) factor analysis researchers should have at least 10 participants for each variable. With only 98 participants and 40 items in the GPI, this criterion is not met and factor analysis to confirm the factor loadings for the current data could not be done. Instead reliability analysis, using Cronbach’s alpha was performed on the existing factor structure. Thus the existing data were analyzed for reliability using the factor structure presented by the GPI authors.

The first scale, Cognitive Knowing, was originally structured with nine survey items. Reliability analysis performed on this factor produced an alpha value of .44, which is unacceptably low. However, of the nine items, six were negatively-worded and three positively-worded. Dropping all of the negatively-worded items would result in a scale, not at all similar to the original intention; and the reliability of that scale was only .55. Dropping the positively worded items and conducting reliability analysis of the remaining six items produced a Cronbach’s alpha of only .59. This value is also below
the minimum acceptable value of .60. As scales with low reliability can lead to incorrect interpretations and inferences, this scale was dropped entirely from further analysis.

The second scale, Cognitive Knowledge, originally contained five items; none of which were negatively-worded. Results of reliability analysis of these five items produced a value of .74. Removing any of the five items would not significantly enhance reliability, so this factor remained the same as the original structure.

Intrapersonal Identity, the third scale, was comprised of five items. All which were positively-worded. A reliability analysis of this five-item scale produced a Cronbach’s alpha value of .75, and removing any of the items would not improve the reliability of the factor. Therefore this factor was retained in its original structure.

The original structure of the fourth factor, Intrapersonal Affect included nine items, three of which were negatively worded. A reliability analysis of those nine items resulted in an alpha value below .60, which is unacceptably low. Removing the three least reliable items, which were the negatively-worded items, increased the reliability value to .66. While still low, this value falls within the acceptable bounds of use and the six-item scale was in the later analyses.

The Interpersonal Social Responsibility scale was originally designed with six items, one of which was negatively-worded. The reliability of that scale was below .60, however removing the negatively-worded item increased the scales reliability to an acceptable .63. As removing additional items did not improve the internal consistency of the scale, analyses were conducted with the five-item scale.

The final factor, Interpersonal Social Interaction, was a six-item scale that included one negatively-worded item. In its original structure, the scale had a reliability
of .61; however removing the negatively-worded item increased the reliability to .66. Therefore it was decided to proceed with a five-item scale.

Of the original six scales, five were retained for analysis in this study. The Cognitive Knowing scale was dropped due to its low internal consistency. In the five remaining scales a total of five individual items (all negatively-worded) were removed which improved scale reliability. All further analysis on the GPI scales were conducted using the factors and outlined in the preceding paragraphs.

**Descriptive and Inferential Statistics**

The first research question sought to understand the primary motivations of incoming exchange students and how, if at all, they varied by independent variables. Descriptive statistics \( (n, M, SD) \) as well as skewness and kurtosis statistics were computed for each of the motivation factors and remaining two items. After that the factors and items were analyzed for differences using the following independent variables; gender (male or female), region of origin (Asia, Europe, or Australia/New Zealand), program of study (Arts & Science or Business), duration of study (one term or two terms), and first language (English or other). All of the analyses were carried out using independent \( t \)-tests, except for analysis by region of origin. For this test, 1-way Analysis of Variance (ANOVA) was used as there were three groups.

Analysis of the second question also required computation of pre- and post-test mean scores for each of the five GPI scales. Descriptive statistics \( (n, M, SD) \) as well as skewness and kurtosis statistics were produced each pre- and post-test scale. Following that, paired \( t \)–tests were performed on each of the five pre- and post-test GPI scales to identify any significant differences among the participants during the exchange. Next, a
repeated measures ANOVA was conducted using each pair of pre- and post-test GPI scores as within-subject variables and the five independent variables as between-subjects variables. As with the analysis of the SAGS, these five variables were; gender (male or female), region of origin (Asia, Europe, or Australia/New Zealand), program of study (Arts & Science or Business), duration of study (one term or two terms), and first language (English or other). Repeated Measures ANOVA has reduced chance of unsystematic variability and has greater power to detect effects due to the use of the same participants (Field, 2005). This analysis indicated if any significant differences in pre-test and post-test GPI subscales could accounted for by the independent variables.

Preliminary ANOVA analysis only demonstrates that significant differences exist among the groups. Post-hoc tests are required to learn which groups are significantly different from each other (Vogt, 2006). These tests control the Type I error rate when conducting significance tests with more than two groups. In this study all post-hoc analysis will use the Bonferonni correction, which is a conservative method, but advantageous when relatively small numbers of comparisons are made (Field, 2005).

The final research question intersects the two previous questions. It examines the predictive relationship between the motivation factors and items identified in the first research question and the post-test scores in the GPI subscales from question two. To test for relationships between the motivation and outcomes measures, step-wise multiple regressions were used. Stepwise regression was used as no theory about the entry order that the predictors, in this case the motivation factors and items, should be entered into the model (Tabachnick & Fidell, 2007). Lacking any guiding theory, the three motivation factors: Academic, Cross-Cultural and Personal/Social, as well as the two
single items “Learn more about my subject area” and “Gain strength in other subjects” were entered simultaneously as predictors. Five regressions, one for each GPI subscale were conducted with these five predictors to investigate the relationship between motivation and learning outcomes.

Lastly, where statistical difference between or within groups were discovered, effect sizes were produced to describe the magnitude of the difference, or effect. Effect sizes allow cross-study comparison, especially where unfamiliar scales are used. They also maintain the direction of the effect and finally they are independent of sample size. This study will use Cohen’s $d$ (Cohen, 1988) in reporting effect sizes from independent and paired sample $t$-tests using the following scale; findings below 0.2 will be considered negligible, 0.2 to 0.5 to be small, 0.5 to 0.8 to be medium, and 0.8 and above larger effects (Field, 2005). In correlation and ANOVA tests $r^2$, and $\omega^2$ will be used respectively with the following scale; findings below .01 will be considered negligible, .01 to .06 to be small, .06 to .14 to be medium, and .14 and above are large effect sizes (Field, 2005).
CHAPTER 4: RESULTS

The results from the data analyses are presented in three sections; one pertaining to each research question. First, descriptive statistics, results of factor analysis, $t$-tests, and Analysis of Variance (ANOVA) of the Study Abroad Goals Scale is presented. Next, descriptive statistics, paired $t$-tests and repeated measures ANOVA (RM) of the pre- and post-test Global Perspectives Inventory are reported. Finally, step-wise regression results of the predictive capabilities of the Study Abroad Goals Scale on the GPI outcomes are presented.

Research Question 1: What are the primary motivations of incoming Queen’s University exchange students and do these motivations vary based on independent variables?

Descriptive statics of the responses to the 13-item, 5-point Study Abroad Goal Scale (SAGS) are in Table 5. The data highlight that the two highest-rated items, and the two items with the lowest standard deviation, are to “gain insight into Canadian culture” ($M = 4.71$, $SD = 0.55$) and to “interact with Canadian people, customs and traditions” ($M = 4.58$, $SD = 0.63$). These two items also had the largest negative skew and kurtosis scores indicating a very strong agreement among participants regarding the importance of these reasons to study abroad. Conversely, the two lowest rated items, and two items with the highest standard deviation were to “establish ties with family/ethnic heritage” ($M = 2.60$, $SD = 1.21$) and to “be with friends participating in an exchange” ($M = 2.87$, $SD = 1.45$). This indicates that these are relatively neutral motivations for studying on exchange as a group but among individual students, the importance of this item varies significantly.
Table 5

*Study Abroad Goals Scale Descriptive Statistics*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn more about my subject area</td>
<td>3.92</td>
<td>0.83</td>
<td>-0.67</td>
<td>0.48</td>
</tr>
<tr>
<td>Gain strength in other subjects</td>
<td>3.92</td>
<td>0.84</td>
<td>-0.71</td>
<td>0.49</td>
</tr>
<tr>
<td>Make acquaintances from Canada</td>
<td>4.71</td>
<td>0.55</td>
<td>-1.81</td>
<td>2.33</td>
</tr>
<tr>
<td>Enhance my understanding of Canada</td>
<td>4.20</td>
<td>0.81</td>
<td>-0.76</td>
<td>-0.05</td>
</tr>
<tr>
<td>Improve my career prospects</td>
<td>4.23</td>
<td>0.81</td>
<td>-0.89</td>
<td>0.31</td>
</tr>
<tr>
<td>Interact with Canadian people, customs and traditions</td>
<td>4.58</td>
<td>0.63</td>
<td>-1.78</td>
<td>5.01</td>
</tr>
<tr>
<td>Gain insight into Canadian culture</td>
<td>4.42</td>
<td>0.60</td>
<td>-0.47</td>
<td>-0.65</td>
</tr>
<tr>
<td>Use/improve my English/French language skills</td>
<td>4.08</td>
<td>1.18</td>
<td>-1.02</td>
<td>-0.06</td>
</tr>
<tr>
<td>Establish ties with family/ethnic heritage</td>
<td>2.60</td>
<td>1.21</td>
<td>0.24</td>
<td>-0.82</td>
</tr>
<tr>
<td>Be with friends participating in an exchange</td>
<td>2.87</td>
<td>1.45</td>
<td>0.08</td>
<td>-1.37</td>
</tr>
<tr>
<td>Recommended by previous participants</td>
<td>3.40</td>
<td>1.12</td>
<td>-0.60</td>
<td>-0.23</td>
</tr>
<tr>
<td>Travel to countries near Canada</td>
<td>3.79</td>
<td>1.19</td>
<td>-0.88</td>
<td>-0.07</td>
</tr>
<tr>
<td>Develop my own perspective of Canada</td>
<td>4.31</td>
<td>0.72</td>
<td>-0.90</td>
<td>0.69</td>
</tr>
</tbody>
</table>

*Note. $N = 182$, SE_{skewness} = .18, SE_{kurtosis} = .36*

While the results provide insight into the motivations of visiting exchange students, the purpose of administering the SAGS was to create a set of factors that would enable a comparison of motivation among different independent variables. As noted in Chapter 3, the final model of the SAGS contained three factors, and two individual items. Descriptive statistics for these factors are reported on Table 6. The Cross-Cultural motivation scale ($M = 4.44$, $SD = 0.48$) was the highest rated, and Personal/Social motivation factor ($M = 3.16$, $SD = 0.91$) was the lowest rated factor, indicating that
students are significantly more cross-culturally motivated than academically or personally/social in their decision to study on exchange.

**Table 6**

*Motivation Factor and Item Descriptives*

<table>
<thead>
<tr>
<th>Factors and Variables</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Goals</td>
<td>3.92</td>
<td>0.75</td>
<td>-0.83</td>
<td>1.13</td>
</tr>
<tr>
<td>Cross Cultural Goals</td>
<td>4.44</td>
<td>0.48</td>
<td>-0.71</td>
<td>-0.08</td>
</tr>
<tr>
<td>Personal/Social Goals</td>
<td>3.16</td>
<td>0.91</td>
<td>-0.19</td>
<td>-0.61</td>
</tr>
<tr>
<td>Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve career prospects</td>
<td>4.23</td>
<td>0.81</td>
<td>-0.89</td>
<td>0.31</td>
</tr>
<tr>
<td>Use/improve my English/French language skills</td>
<td>4.08</td>
<td>1.18</td>
<td>-1.02</td>
<td>-0.06</td>
</tr>
</tbody>
</table>

*Note. N = 182, SEskewness = .18, SEkurtosis = .36*

**Group differences in motivation.** To investigate if motivation varied by independent variable, four independent *t*-tests and one 1-way ANOVA were conducted. In these analyses, five independent variables were considered; gender (male or female), region of origin (Asia, Europe or Australia/New Zealand), program of study (Arts & Science or Business), duration of study (one term or two terms), and first language (English or other).

No gender differences were found across the three motivation factors and two individual items. Similarly, based on a series of one-way ANOVA’s, there were no significant regional differences for cross-cultural goals, academic goals, or career prospects. However, significant differences were found in the personal/social goals of students depending on their region of origin $F(2, 56.446) = 20.28, p < .001, r = 0.44$. 

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Post-hoc tests revealed that students from Asia had stronger personal motivations ($M = 3.69$, $SD = 0.63$) than did students from Europe ($M = 2.86$, $SD = 0.88$) or Australia/New Zealand ($M = 2.91$, $SD = 0.89$). These differences produce large effect sizes of $d = 1.12$ and $d = 0.99$ respectively. There was also a significant difference in terms of desire to use/improve their English/French skills among the regions ($F(2, 44.748) = 22.374$, $p < .001$, $r = 0.42$). Not surprisingly, students from Europe ($M = 4.28$, $SD = 1.18$) and Asia ($M = 4.19$, $SD = 0.93$) had stronger motivations to improve their English/French skills than did students from Australia/New Zealand ($M = 2.73$, $SD = 1.03$) which are two English-speaking countries. These differences also produced large effect sizes, in these cases $d = 1.05$ and $d = 1.31$, respectively. It should be noted that in each region of origin there are some students whose first language is English. Thus, it may be interpreted that for some of those students part of their motivation in coming to Queen’s on exchange was to use/improve their French language skills.

Independent $t$-tests identified significant differences in three of five motivation categories based on program of study. The first difference was that students in Business were more motivated to go on exchange for the purposes of improving their career prospects ($M = 4.33$, $SD = 0.74$), than were Arts and Science students ($M = 3.98$, $SD = 0.93$) where $t(158) = 2.603$, $p = .01$. However, the effect size was relatively small ($d = 0.41$). The second significant difference is a greater motivation to use/improve English/French skills by Business students ($M = 4.42$, $SD = 0.98$) than Arts and Science students ($M = 3.67$, $SD = 1.30$) with $t(158) = 3.885$, $p < .001$. This is a medium effect size ($d = 0.62$). The final significant difference was that business students ($M = 3.36$, $SD = 0.85$) had stronger personal/social motivations than Arts and Science students ($M = $
2.91, $SD = 0.91$), $t(158) = 3.115$, $p = .002$. The effect size was 0.50, also a medium effect size. While the effect size was medium, it should be noted that personal/social motivations for both groups are close to neutral and the practical significance of this difference is unclear.

In comparing incoming exchange students who studied at Queen’s University for one term or two terms (full-year), two significant differences were found. One-term students reported stronger personal/social motivations ($M = 3.27$, $SD = 0.89$), than full-year students ($M = 2.86$, $SD = 0.87$), $t(179) = 2.691$, $p = .008$. This is a small effect size ($d = 0.40$). One-term students also reported a stronger desire to use/improve their French/English skills ($M = 4.24$, $SD = 1.06$), than full-year students ($M = 3.64$, $SD = 1.35$), $t(61.033) = 2.716$, $p = .009$. This difference was found to have a medium effect size ($d = 0.70$).

In examining differences between students whose first language was English and students whose first language was not English, the only difference between the groups was their desire to study on exchange to improve or use their English/French skills. Unsurprisingly, non-native speakers were significantly more motivated to improve their English/French skills ($M = 4.62$, $SD = 0.75$) than native English speakers ($M = 2.91$, $SD = 1.10$), $t(82.823) = 10.738$, $p < .001$. The effect size was very large, ($d = 2.36$).

In summary, the analysis of motivation, based on the SAGS, indicated that Cross-Cultural motivation was the strongest factor, followed by Academic while Personal/Social motivation was the weakest factor for incoming exchange students at Queen’s University. However, the importance of the personal/social goals factor varied across groups of students. While there were no significant differences between males and
females, all other independent variables highlighted at least one significant difference. This suggests that the motivation of incoming exchange students is not uniform across the five independent variables.

**Research Question 2: To what degree does studying on exchange lead to changes in learning outcomes and do these learning outcomes vary by independent variables?**

All pre- and post-test descriptive statistics for the individual GPI items can be found in Appendix F. Though the model GPI has six subscales, this analysis used only five; Cognitive Knowledge, Intrapersonal Identity, Intrapersonal Affect, Interpersonal Social Responsibility and Interpersonal Social Interaction. Due to low internal consistency, the sixth scale in the GPI survey, Cognitive Knowing, was not used in this analysis. The factor structure of the other five scales is not identical to the published versions of the GPI as the structure used in this research was determined by the analysis of internal consistency (see Chapter 3). Descriptive statistics for the pre- and post-test results for the five scales of the GPI are presented in Table 7. The pre-test means ranged from a low of 3.45 (Interpersonal Social Responsibility) to a high of 3.97 (Intrapersonal Identity). The post-test means ranged from a low of 3.53 (Interpersonal Social Responsibility) to a high of 3.95 (Intrapersonal Identity). A series of five paired-sample t-tests, one for each pre- and post-test GPI scale score, did not highlight any significant differences. This is not to say that among the incoming exchange students, no changes or learning occurred. Instead, these non-significant findings only indicate that based on the items and scales contained within the GPI survey instrument, that no significant changes were measured.
Table 7

Pre- and Post-test Scores of GPI Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Test</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Knowledge</td>
<td>Pre-test</td>
<td>3.79</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>3.86</td>
<td>0.50</td>
</tr>
<tr>
<td>Intrapersonal Identity</td>
<td>Pre-test</td>
<td>3.97</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>3.95</td>
<td>0.55</td>
</tr>
<tr>
<td>Intrapersonal Affect</td>
<td>Pre-test</td>
<td>3.84</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>3.85</td>
<td>0.43</td>
</tr>
<tr>
<td>Interpersonal Social Responsibility</td>
<td>Pre-test</td>
<td>3.45</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>3.53</td>
<td>0.46</td>
</tr>
<tr>
<td>Interpersonal Social Interaction</td>
<td>Pre-test</td>
<td>3.85</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>Post-test</td>
<td>3.90</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Repeated measures ANOVA were conducted to determine if any systematic group differences (gender, region of origin, program of study, duration of study, and first language) existed between or within the participants pre- and post-test scores (i.e. males and females). However, no differences were found among any combination of the independent variables for the pre- and post-test measures of the GPI. These results indicate that GPI scores do not differ when accounting for the interaction of any of the independent variables. Students of different gender, regions, program, duration of study, or first language do not have significantly different pre-test/post-test GPI scores.

**Research Question 3: To what degree does motivation predict incoming exchange students’ learning outcomes?**

Kitsantas (2004) used regression techniques to examine the hypothesis that students’ cross-cultural motivation would predict the degree of change in cross-cultural
learning outcomes. However, in this study no significant differences were observed in the five measured GPI scales (learning outcomes). Thus the analyses in this section examined if and to what degree, the motivation factors and items, predicted the post-test GPI scale scores. That hypothesis was extended in this section to examine the predictive relationship between students’ motivations, from the SAGS, and the GPI outcomes measures.

Initially, Pearson product-moment correlation coefficients were computed to assess the relationship between the five motivation and five GPI scales. The correlation table can be found in Appendix G. Numerous significant correlations were found; however, only three were found between the SAGS and GPI scales. There was a significant, negative relationship between Personal/Social motivation and Intrapersonal Identity, $r = -.29, p < .01$. There was a significant, negative relationship between Personal/Social motivation and Interpersonal Social Responsibility $r = -.24, p < .05$. In both cases these suggests a small inverse relationship between the motivation and respective learning outcomes score. This would indicate that lower Personal/Social motivation scores are associated with slightly higher Interpersonal Social Responsibility scores. Lastly, Cross-Cultural motivation and Interpersonal Social Responsibility were positively correlated, $r = .24, p < .05$. This finding indicates that increasingly high Cross-Cultural motivation scores are correlated with increases in Interpersonal Social Responsibility.

To understand the predictive capabilities of the SAGS to explain the levels of GPI scores, stepwise regression was used. Table 8 provides unstandardized and standard errors of the Beta, standardized coefficients of the beta, and $R^2$ values for the significant
models that were created. The first stepwise regression analysis did not result in any motivation factors and items significantly predicting students’ Cognitive Knowledge. In contrast, Personal/Social motivation statistically predicts Intrapersonal Identity, $R^2 = .08$, $F(1, 98) = 8.2, \ p < .01$. However, the finding indicates that increasing levels of Personal/Social motivation are more likely to have lower Intrapersonal identity scores.

Cross-cultural motivation statistically predicted Intrapersonal Affect, $R^2 = .04$, $F(1, 98) = 4.05, \ p < .01$. In this case, cross-cultural motivation is a weak positive predictor of Intrapersonal Affect and that higher levels of this motivation are more likely to also have higher levels of Intrapersonal Affect. It was also found that Cross-Cultural and Personal/Social motivation were weak predictors of Interpersonal Social Responsibility, $R^2 = .1, F(1, 98) = 5.22, \ p < .01$. Lastly, none of the motivation factors predicted Cognitive Knowledge.

Table 8

*Predictors of GPI Subscale Score*

<table>
<thead>
<tr>
<th>GPI Scale</th>
<th>Variable</th>
<th>$B$</th>
<th>$SEB$</th>
<th>$\beta$</th>
<th>$R^2$</th>
<th>$\Delta R$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrapersonal Identity</td>
<td><em>Step 1</em></td>
<td>Constant</td>
<td>4.4</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal/Social</td>
<td>-0.2</td>
<td>0.06</td>
<td>-.28**</td>
<td>.08</td>
</tr>
<tr>
<td>Intrapersonal Affect</td>
<td><em>Step 1</em></td>
<td>Constant</td>
<td>3.1</td>
<td>0.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross-Cultural</td>
<td>0.2</td>
<td>0.08</td>
<td>.20*</td>
<td>.04</td>
</tr>
<tr>
<td>Interpersonal Social Responsibility</td>
<td><em>Step 1</em></td>
<td>Constant</td>
<td>2.5</td>
<td>0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross-Cultural</td>
<td>0.2</td>
<td>0.09</td>
<td>.24*</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td><em>Step 2</em></td>
<td>Constant</td>
<td>2.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross-Cultural</td>
<td>0.2</td>
<td>0.09</td>
<td>.21*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal/Social</td>
<td>0.1</td>
<td>0.05</td>
<td>.20*</td>
<td>.10 .04</td>
</tr>
</tbody>
</table>

*Notes. *$p < .05$, **$p < .01$*
In the three cases where significant predictors were found, they all explained 10% or less of the variance in scores. This leaves 90% or more of the variance in the three respective GPI scores unexplained. All other variance is explained by variables other than the motivation factors. In this model large increases, or decreases in any of the motivation factors would result only in very small changes in GPI measures. Thus the framework advanced by Locke and Latham (2002), and demonstrated in Kitsantas’ (2004) research, is not applicable or replicated in the current study.
CHAPTER 5: DISCUSSION

The purpose of this study was to measure the motivation and learning outcomes of incoming exchange students at Queen’s University. The discussion is presented in five sections: discussion of research findings, limitations and methodological issues, implications for research and finally the conclusion.

The Research Questions

The first research question in this study focused on exchange students’ primary motivations for coming to Queen’s University as exchange students. The findings of the analysis of the Study Abroad Goals scale was represented by 3 factors and two single scale items: Cross-Cultural motivations, Academic motivations, Personal/Social motivations, the desire to improve English/French skills and the desire to enhance career prospects. Very strong Cross-Cultural motivations of incoming exchange students at Queen’s University are in line with previous research on study abroad students (Brewer, 1983; Carlson et al., 1991; Krzaklewska, 2008). In addition moderately strong Academic motivations echo earlier findings of U.S. study abroad students (Brewer, 1983; Ho, 2009). Neither the Cross-Cultural motivation nor Academic motivation findings varied significantly when examined by the five independent variables. This indicates that in these two motivation factors that incoming exchange students do not differ when analysed by the five independent variables, nor does the strength of their motivation in these areas differ from previous study abroad and outgoing exchange students. The implication is that these two motivations and their relative importance are similar across different contexts and situations.

However, the findings in this study relating to the importance of other motivations including desire “to enhance career prospects” and “to use/improve
English/French skills” as well as Personal/Social motivations, challenge some existing research. With the exception of Carlson et al. (1991), the current study found incoming exchange students to have stronger motivation for enhancing career prospects by participating in an exchange than existing research indicated (Brewer, 1983; Caudrey et al., 2008; Ho, 2009). Students in this study also noted a greater motivation to use/improve their second language skills than did students in much of the previous compiled research (Brewer, 1983; Krzaklewska, 2008). These stronger motivations could partially be attributed to the greater number of students in Business, a professional program, present in this study. As noted earlier, students in Business reported stronger motivations in both career motivations, and in their desire to improve English/French skills than did students in Arts and Science. The importance of enhancing language skills in this study, confirm the literature that suggests that it is a strong motivating factor for Asian (Ho, 2009) and, to a lesser extent, European students (Caudrey et al., 2008; Krzaklewska, 2008). Not surprisingly, as found in other studies, improving second language skills for students who are English speakers is not a significant motivation (Brewer, 1983; Carlson et al., 1991). The rationale for this is not clear, but movement towards English being the lingua franca in higher education, especially in Business schools, could explain the lack of interest or motivation of students whose first language is English to learn or develop additional foreign language capabilities (Luijten-Lub, van der Wende, & Huisman, 2005).

This study is unique in that it examined how motivation varied among five independent variables. While no gender differences in motivation were found, a topic that does not appear to have any previous research, motivation by region of origin did

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produce some significant results. To begin with students from Asia reported the strongest Personal/Social motivations, supporting the findings of Sánchez et al. (2006) who found that students from China were motivated by a search for a new experience and for liberty/pleasure. There are three specific barriers for students from Asia that could help to explain their stronger Personal/Social motivations. First, obtaining a visa for travel purposes is relatively difficult in some Asian countries, while it is relatively simple or not required for many from Europe, Australia, and New Zealand. Secondly, as noted by Sanchez et al., students from China have stronger family barriers to studying abroad than do students from the U.S. and France. Lastly, the cost of studying abroad for many students from countries in Asia is prohibitive due to cost of travel and living. It is possible that overcoming these logistic, social and financial barriers increases their personal desire to study abroad or on exchange.

This study also found that motivation varied by the faculty of study that incoming exchange students were enrolled in. As noted earlier, students in Business were significantly more motivated by the potential career enhancements of an exchange program than were students in Arts and Science. This finding could indicate a specific motivation to be associated with the Queen’s School of Business, or that studying on exchange in general can provide evidence of the international experience desired by future employers. Furthermore, Business students were also more motivated to improve their English/French skills, although this is partially explained by the greater proportion of second-language exchange students in that program as compared to Arts and Science. The importance of enhancing career prospects and improving language skills, at least for students in Business, could support a theory advanced by Krzaklewska (2008) that career
motivations include both the acquisition of competencies from coursework (specific and linguistic skills) and the experience of living in another country. These are subsequently used to position oneself more favourably in the labour market upon graduation.

Additionally, one-term students reported stronger Personal/Social motivation and desire to improve language skills than those exchange students staying for two terms at Queen’s University. This finding is difficult to interpret as to date no research has been conducted on how motivation varies based on the duration of exchange; however, there is considerable learning outcomes research that reports that longer durations are associated with greater second language gains (Dwyer, 2004; Dwyer & Peters, 2004; Vande Berg et al., 2009). Students motivated to improve their second language skills would be expected to participate in two-term rather than one-term exchanges. However, it should be remembered that students from Asia, the ones most wanting to improve their second language skills, also face considerable financial and family barriers in studying away from home (Sánchez et al., 2006). Thus it is possible that while the motivation to improve their language skills is strong, the cost and family pressures to return home quickly outweigh their motivation.

While Cross-Cultural and Academic motivation did not vary among groups of students, desire to enhance career prospects, improve second language skills, and Personal/Social motivations did. Overall, this study highlights that motivation to study on exchange should not be viewed as a single uniform construct. Instead, this study highlights that motivation to study at Queen’s does vary by subgroup.

The second research question focused on the extent to which studying abroad would lead to changes in learning outcomes. Assumptions implicit in this question, and
found in the narrative described by Vande Berg (2009), is that after their study abroad students have greater cognitive, intrapersonal and interpersonal skills compared to when they began their study abroad program. To measure these constructs in this study the Global Perspectives Inventory survey was given to students at the start and end of their exchange. The small sample made it impossible to conduct factor analysis of the survey items, thus, the factor structure used in previous research was used and modifications were made to enhance internal consistency. The negatively-worded items in the survey resulted in consistently lower internal consistencies in the GPI scales. Hence, these items were removed to improve scale consistency. The Cognitive Knowing scale had the lowest internal consistency ($\alpha = 0.59$) and was not used in further analysis.

The pre- and post-tests of the five scales (Cognitive Knowledge, Intrapersonal Identity, Intrapersonal Awareness, Interpersonal Social Responsibility and Interpersonal Social Interaction) did not differ. There were no significant differences in the pre- and post test scores, even for the students who participated in year-long exchanges. The lack of a significant result in this situation is contrary to most published literature which indicates that longer study abroad and exchange durations are associated with greater positive changes in learning outcomes (Dwyer, 2004; Dwyer & Peters, 2004; Steinberg, 2002).

These exchange students did not report any significant changes in these factors related to their global perspectives. This lack of change while completing an exchange runs counter to much of the published study abroad literature on learning outcomes that has reported significant changes in cognitive (Hadis, 2005; Sutton & Rubin, 2004) intrapersonal (Angulo, 2008; Ingraham & Peterson, 2004) and interpersonal (Anderson
et al., 2006; Vande Berg et al., 2009; Zielinski, 2006) measures. However, the Georgetown Consortium Study (Vande Berg et al., 2009) also highlighted that the impacts of study abroad are not uniform for all participants. For example, Vande Berg et al., (2009) reported that while females made significant improvements in interpersonal score, males did not show any significant differences.

Repeated measures ANOVA were conducted to determine if there were significant differences in the pre- and post-test GPI scales that could be accounted for by the five independent variables used in this study (gender, region of origin, program of study, duration of study, and first language). No differences were found across groups, indicating that these variables do not impact the learning outcomes individually or interactively. Thus, changes that may occur during an exchange are not accounted for by these variables. If changes do occur, they may be accounted for by other variables (previous travel experience or second language skills) or the actual experience itself may affect students similarly. It is also possible that the end of the exchange program is not the ideal time to survey students. Instead it may not be that until students have had an opportunity to reintegrate into their home universities and countries, and begin to reflect on their experience that they are able to understand or notice changes in their views. Surveys administered at that time could provide results that do in fact indicate the changes in the learning outcomes measures are observable.

Collectively, the absence of significant results contradicts much of the published literature and the master narrative constructed by Vande Berg (2009). Studying abroad on exchange is supposed to be a transformative experience for students, changing their lives, leading them to develop in a wide range of areas. This is especially true in
situations with longer durations (a full academic term or longer) and in full immersion environments, like at Queen’s (Dwyer, 2004). The results from my research, while not contradictory since no negative results were found, do not support the theory that an academic exchange is necessarily associated with enhanced cognitive, intrapersonal, or interpersonal development.

The final research question sought to investigate if student motivation predicted the post-test learning outcomes (GPI scores). The rationale for this question was based on the work of Locke and Latham (2002), who theorized that goals and motivation focus and direct behaviour towards desired outcomes. As with the second research question, this question was predicated on the belief that some significant learning outcomes development would be measurable over the course of the exchange, and that the degrees of development would be predicted by the motivation factors and items identified in the first research question. More specifically, there was an assumption that Academic motivation would predict cognitive outcomes, Personal/Social motivation would predict intrapersonal outcomes and Cross-Cultural motivation would predict interpersonal outcomes.

However, in examining the stepwise regression data from the five GPI scales, two (Cognitive Knowledge and Intrapersonal Identity) did not have any predictive relationship with the motivation factors or items. This implies that the motivation factors were not associated with the GPI scores. Of the remaining three scales, they had very low $R^2$ values and predicted only between 4% and 10% of the final GPI scale scores. These $R^2$ values are all considered to represent small effect sizes (Field, 2005). Thus, while they are statistically significant, these findings suggest that if there is a relationship
between motivation and GPI outcomes, the relationship is weak. Admittedly, the relatively low internal consistencies for the GPI scales may have lowered the associations found in the regression analyses. Nevertheless, the small or insignificant findings suggest that the framework advanced by Locke and Latham may not be appropriate in university student exchange programs. This conclusion also challenges the findings of Kitsantas (2004) who found that cross-cultural motivations explained 31% of the variance in cross-cultural outcomes. However, the Kitsantas (2004) study used retrospective pre-tests, which are prone to social desirability bias. Thus, comparing those findings to the current study may not be appropriate due to significant differences in research design.

**Limitations**

The length of the survey used in this research, estimated to take 20-25 minutes to complete, may have reduced the final sample used in the study which impacted the quality of the data used in the analyses. The relatively small usable sample prevented analysis of the factor structure of the GPI scales. Only tests of internal reliability could be utilized in this research. These tests indicated that the negatively-worded items needed to be removed from the factor structure to enhance internal consistency. Further, one entire factor was dropped completely. These reduced scales have lower internal consistencies, and it is not clear how representative the reduced scales are of the intended constructs.

As mentioned in Chapter 1, the data presented here represent approximately half of the items in the survey; the rest pertained to how incoming exchange students use, access, and are satisfied with the programs and services offered to them while they are at
Queen’s University. Concerns about survey fatigue as well as ethical concerns about surveying the same population on multiple occasions resulted in a combined single survey on each occasion. Though steps were taken to increase participation in the survey, additional personal contact with the incoming exchange students during their orientation and welcome events may have encouraged greater participation and helped to establish a level of trust with potential participants.

Finally while the groupings of independent variables were based on important differentiations amongst students, the groups were unequally distributed. Region of origin is not evenly distributed as Queen’s has more exchange agreements with European universities than Asian ones. In addition, students self-select their faculty of study. Thus findings which highlight differences between faculties may not actually be attributed to their faculty of study, rather the characteristics of the students themselves. Similarly, while Business and Arts and Science are the proper names of the faculties that students were enrolled in, the former has only a single program of study while the latter includes more than 80 undergraduate programs ranging from Biochemistry to Sociology. Hence the Arts and Science program likely represents a very diverse group of students. Still, there were not sufficient numbers to further divide the Arts and Science population of students by their individual program of study.

**Implications for Research**

This study provides three contributions to the existing research. The first is that it demonstrates the Study Abroad Goal Scale (SAGS) is a reliable instrument in terms of understanding students’ motivation to participate in an exchange. The items loaded cleanly onto three factors (statistically and theoretically) and with moderate to good
reliability (despite the small sample). Further, the study identified motivational differences among incoming exchange students based on their program of study and region of origin. Future replications of the SAGS and the findings presented in this study would create opportunities for confirmation and analysis of the magnitude of differences in motivation among different groups of exchange or study abroad participants. Such findings would indicate the types of relationships between student motivation and the type of exchange programs students choose (see also Engle & Engle, 2003).

Secondly, this study highlighted some reliability and validity concerns in the use of the Global Perspective Inventory as a measurement tool in study abroad and student exchange program assessment. First of all, the low published (see Table 3) and observed reliability coefficients of the GPI make analyses of change and inferences problematic. It is not clear to what extent the GPI instrument and the items within it can measure changes in learning outcomes. It is possible that it is an instrument more effective at analyzing an audience of participants than measuring development and changes. The inclusion of negatively-worded items should be revisited, or they should be spread to scales throughout the survey rather than the current model which has nine of the eleven negatively-worded items in two specific scales. Finally, further refinement of the items in the scales appears to be warranted to ensure that the items provide a consistent measure of the intended constructs. As noted by Metcalfe (2007), and from my own personal experiences at conferences, researchers and practitioners engaged in study abroad outcome assessment rely largely on personal judgement in devising item groupings rather than using statistical procedures to verify the functioning of the items and scales. Without consistent scales, the validity of the observed results cannot be
considered trustworthy, and the ability to conduct subsequent analyses is limited. Of
greater importance are the theoretical underpinnings that scales are based on and the
degree to which the items in the survey measure the constructs that the framework
suggests. Future research using the GPI should proceed with caution unless
improvements in reliability are made.

Finally, while few significant differences were found in this study, in each case a
relevant effect size was produced. Researchers examining learning in higher education in
general (Pascarella & Terenzini, 2005), as well as those focusing on student exchanges
and study abroad (Metcalfe, 2007), have identified the need to provide effect sizes so
that results can be compared directly and that the magnitude of differences in the
findings can be understood. Recently completed studies by Vande Berg et al. (2009) and
Sutton and Rubin (2010) provide effect sizes for future comparative research. By sharing
effect sizes of the motivation data in the current study, future studies can compare their
findings to understand if and to what degree motivation varies by the type of program
that students are enrolled in.

Implications for Practice

The data from the SAGS highlight that incoming exchange students are coming
to Queen’s University in search of a cross-culturally, academic-enriching, and career
enhancing experience. As outgoing exchange students currently outnumber incoming
exchange students, data from this study can be used to balance the flow. Specifically
findings at the faculty level can used to target future exchange students. For example,
students in Business are especially motivated to enhance career prospects, suggesting
that information sessions on how to highlight international experience and international
work opportunities could be conducted by the School of Business. In addition, testimonials from former incoming exchange students could highlight how these students have used their international experience to obtain work positions and support their current work. Finally, structured opportunities for students studying in the School of Business to improve their English/French skills can be highlighted. These opportunities could include ensuring that exchange students are working with local students in groups, or that they are invited to participate in co-curricular activities like clubs in the School of Business.

Of greater significance is the absence of development in learning outcomes. While the incoming exchange students have strong cross-cultural and to a somewhat lesser extent, academic motivation, it is unclear what activities are present at Queen’s for these motivations to be realized. Undoubtedly, universities are sites where learning occurs; however, as measured by the instruments in the current study, it is not evident. The interpersonal learning of incoming exchange students at Queen’s University is presently left to chance, reinforcing the narrative that while abroad students develop on their own, simply by being present in the classroom and culture. For some this may be an effective learning style, however the data in the current study suggest otherwise. In addition, as some exchange agreements are managed entirely within individual faculties, while others are managed centrally, some confusion remains as to who or what groups are “responsible” for exchange student experiences and learning.

On their own, exchange programs are not designed to promote cognitive, intrapersonal or interpersonal learning or development; they simply allow students from two or more universities to take courses at partner institutions without additional tuition
fees and with some degree of administrative support. While the support and mechanisms for the learning outcomes are not present, the narrative and rhetoric of the benefits of participating remain. Without intentional programming for exchange students before, during and after their exchange, incoming exchange students may be more observers and participants in cross-cultural situations, rather than learners and interpreters of the meaning of these situations. Queen’s University has an opportunity to engage exchange and local students in understanding the meaning of their cultural interactions.

This learning opportunity includes three phases: orientation, in-country support, and departure discussion and reflection. Orientation programs could include opportunities for small-group discussions about expectations with former outgoing exchange students. These discussions would serve to both create relationships between incoming and outgoing exchange students and to begin dialogue about cultural and academic expectations. During the term, periodic discussion sessions can provide students with an opportunity to share concrete examples of their experiences at Queen’s with trained facilitators like those at QUIC. Facilitators can guide students in making meaning of, and understanding some of the cultural tendencies involved in their experiences. Finally, at the end of the exchange a large group workshop which helps to prepare students to re-enter their home culture and plan the next steps in their intercultural development can be made. This model of active cultural mentoring rather than the current model of student advising is growing in popularity in many U.S. programs but to my knowledge is not yet used in Canada, or by Canadian programs abroad. Moreover, a unique cross-cultural exchange opportunity such as this may
increase demand for exchanges to Queen’s University, thereby creating additional opportunities for Queen’s University students to study abroad.

**Conclusion**

The results of this study add to the small, but growing body of research on students’ motivations to study abroad and provide a unique contribution from the incoming, or host institution’s perspective. While some of the findings regarding motivation correspond with existing research on study abroad students, others indicate that students who participate in a term- or year-long exchange have different motivations. The absence of development in the GPI scores is an important finding that needs further study. This absence made it difficult to explore the associations between motivations and outcomes. It also highlights a potentially important need to better help these exchange students meet their educational needs. Certainly, continued interest and participation in student exchanges is likely to occur. If international education administrators at Queen’s University and other similar institutions are focused on ensuring that these exchanges are valuable experiences for their students, an exploration of models and activities to increase the learning potential of exchanges is warranted.
REFERENCES


Deardorff, D. K. (2004). *The identification and assessment of intercultural competence as a student outcome of internationalization at institutions of higher education in*


http://php.scripts.psu.edu/users/s/l/slc126/Eportfolio/Evidence/Literature%20Review.pdf


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December 7, 2009

Ms. Jennifer Massey
Dean of Student Affairs Office
Queen’s University

GREB ref. #: GDSAO-009-09
Title: “Evaluating the Experiences of Participants in Queen’s University’s International Exchange Program”

Dear Ms. Massey:

The General Research Ethics Board (GREB) has reviewed and approved your request for renewal of ethics clearance for the above-named study. This renewal is valid for one year from January 4, 2010. Prior to the next renewal date you will be sent a reminder memo and form to reapply.

You are reminded of your obligation to advise the GREB, with a copy to your unit REB if applicable, of any adverse event(s) that occur during this one year period (details available at webpage http://www.queensu.ca/orc/researchethics/GeneralREB/forms.html - Adverse Event Report Form). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes in study procedures or implementations of new aspects into the study procedures on the Ethics Change Form that can be found at http://www.queensu.ca/orc/researchethics/GeneralREB/forms.html - Research Ethics Change Form. These changes must be sent to the Ethics Coordinator, Gail Irving, at the Office of Research Services or irvingg@queensu.ca prior to implementation. Mrs. Irving will forward your request for protocol changes to the appropriate GREB reviewers and / or the GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

Joan Stevenson, Ph.D.
Professor and Chair
General Research Ethics Board
APPENDIX B

Invitation Letter

Dear First Name Last Name (PIN #: ABCD)

I am writing on behalf of Queen’s University International Centre and Student Affairs to invite you to participate in the Queen’s University International Exchange Survey. All undergraduate and graduate students taking part in an international exchange program with Queen’s are being invited to participate. The survey will measure the level of satisfaction incoming undergraduate and graduate exchange students experience with the support services provided to prepare them for international exchange, and will help us evaluate the experiential learning associated with international study.

The questions in the survey are focused on your preparation for exchange, and your arrival at Queen's. By taking about 20 minutes to complete the survey you will help us improve and develop the services available to support and serve you and your fellow students better. By participating in this survey, you will be contributing to exciting research on the learning outcomes of participation in exchange, a topic that has had relatively little systematic study. This study will help us gain a better understanding of the learning associated with international exchange.

This research may result in the publication of various types, including books, journal articles, thesis, professional publications, newsletters, and policies, and professional development materials made available to other students, faculty, and staff. Your name will not be attached to any form of the data that you provide, neither will your name or identity while tabulating or analyzing the data, nor will these appear in any publication created as a result of this research. A pseudonym will replace your name on all data that you provide to protect your identity. If the data are made available to other researchers for secondary analysis, your identity will never be disclosed.

All questions on the survey are optional. If, for any reason, you do not wish to respond to any item or items on the survey, you are under no obligation to do so. You may simply select "decline to answer."

All students who complete the survey will be entered into a draw for the following prizes:

• One $100 gift certificate
• Two $50 gift certificates
• Five $10 Gift certificates

Please be assured that survey responses will be held in the strictest confidence. Survey results will be stored, analyzed and presented in aggregate only.

I also want you to know that your participation is voluntary, and that you can withdraw...
by signing off at any time with no impact on your academic standing.

To access the survey please click [here](http://ca.studentvoice.com/p/?uuid=215d652693ca48408f361ee1ed366a74&p=1). If the survey does not open automatically, please copy and paste the following link to your internet browser's address bar:

http://ca.studentvoice.com/p/?uuid=215d652693ca48408f361ee1ed366a74&p=1

If you have any difficulty logging in, please e-mail info@studentvoice.com or call 1-716-652-9400 for assistance.

If you have any questions regarding the content of the survey, wish to withdraw from the survey or want to know how we intend to use the data, you can contact Ms Jennifer Massey, Coordinator of Assessment, Evaluation & Outreach at 613-533-6000 ext. 74022 or at jennifer.massey@queensu.ca. As well, the Queen’s General Research Ethics Board has cleared this project; feel free to contact them at 613-533-6081 or at greb.chair@queensu.ca if you have any concerns.

Once again I want to thank you for considering this request. The information provided by you and other students will help us to identify how we can improve the range and quality of services that are currently available to students at Queen’s.

This is a longitudinal study and therefore you will receive an invitation to participate in a second survey at the end of your exchange experience. While we encourage students to complete both surveys, please note that an invitation to participate in the next survey is not dependent upon participation in this survey. An interim survey report will be published in the spring, with the final report in autumn 2010. All reports will be posted on the Student Affairs website [www.queensu.ca/studentaffairs/assessment.html](http://www.queensu.ca/studentaffairs/assessment.html).

Sincerely,

Dr. John M. Dixon  
Associate Vice-Principal (Academic & International)  
Queen's University
APPENDIX C
Reminder Invitation Letter

Dear First Name Last Name (PIN#: ABCD),

I am writing on behalf of Queen’s University International Centre and Student Affairs to invite you to participate in the Queen’s University International Exchange Survey. All undergraduate and graduate students taking part in an international exchange program with Queen’s are being invited to participate. The survey will measure the level of satisfaction incoming undergraduate and graduate exchange students experience with the support services provided to prepare them for international exchange, and will help us evaluate the experiential learning associated with international study.

All questions on the survey are optional. If, for any reason, you do not wish to respond to any item or items on the survey, you are under no obligation to do so. You may simply select "decline to answer."

All students who complete the survey will be entered into a draw for these prizes:

• One $100 gift certificate
• Two $50 gift certificates
• Five $10 Gift certificates

Please be assured that survey responses will be held in the strictest confidence. Survey results will be stored, analyzed and presented in aggregate only.

I also want you to know that your participation is voluntary, and that you can withdraw by signing off at any time with no impact on your academic standing.

To access the survey please click here. If the survey does not open automatically, please copy and paste the following link to your internet browser's address bar:

http://ca.studentvoice.com/p/?uuid=215d652693ca48408f361ee1ed366a74&p=1

If you have any difficulty logging in, please e-mail info@studentvoice.com or call 1-716-652-9400 for assistance.

Sincerely,

Dr. John M. Dixon
Associate Vice-Principal (Academic & International)
Queen's University
## APPENDIX D

Study Abroad Goals Scale Items

<table>
<thead>
<tr>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learn more about my subject area</td>
</tr>
<tr>
<td>2. Gain strength in other subjects</td>
</tr>
<tr>
<td>3. Make acquaintances from Canada</td>
</tr>
<tr>
<td>4. Enhance my understanding of Canada</td>
</tr>
<tr>
<td>5. Improve my career prospects</td>
</tr>
<tr>
<td>6. Interact with Canadian people, customs and traditions</td>
</tr>
<tr>
<td>7. Gain insight into Canadian culture</td>
</tr>
<tr>
<td>8. Use/improve my English/French language skills</td>
</tr>
<tr>
<td>9. Establish ties with family/ethnic heritage</td>
</tr>
<tr>
<td>10. Be with friends participating in an exchange</td>
</tr>
<tr>
<td>11. Recommended by previous participants</td>
</tr>
<tr>
<td>12. Travel to countries near Canada</td>
</tr>
<tr>
<td>13. Develop my own perspective of Canada</td>
</tr>
</tbody>
</table>
APPENDIX E

Global Perspectives Inventory Survey Items

<table>
<thead>
<tr>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When I notice cultural differences, my culture tends to have the better approach.</td>
</tr>
<tr>
<td>2. I have a definite purpose in my life.</td>
</tr>
<tr>
<td>3. I can explain my personal values to people who are different from me.</td>
</tr>
<tr>
<td>4. Most of my friends are from my own ethnic background.</td>
</tr>
<tr>
<td>5. I think of my life in terms of giving back to society.</td>
</tr>
<tr>
<td>6. Some people have a culture and others do not.</td>
</tr>
<tr>
<td>7. In different settings what is right and wrong is simple to determine.</td>
</tr>
<tr>
<td>8. I am informed of current issues that impact international relations.</td>
</tr>
<tr>
<td>9. I know who I am as a person.</td>
</tr>
<tr>
<td>10. I feel threatened around people from backgrounds very different from my own.</td>
</tr>
<tr>
<td>11. I often get out of my comfort zone to better understand myself.</td>
</tr>
<tr>
<td>12. I tend to judge the values of others based on my own value system.</td>
</tr>
<tr>
<td>13. I understand the reasons and causes of conflict among nations of different cultures.</td>
</tr>
<tr>
<td>14. I am confident that I can take care of myself in a completely new situation.</td>
</tr>
<tr>
<td>15. People from other cultures tell me that I am successful at navigating their cultures.</td>
</tr>
<tr>
<td>16. I work for the rights of others.</td>
</tr>
<tr>
<td>17. I see myself as a global citizen.</td>
</tr>
<tr>
<td>18. I do not see cultural differences as important to my daily life.</td>
</tr>
<tr>
<td>19. I understand how various cultures of this world interact socially.</td>
</tr>
<tr>
<td>20. I get offended often by people who do not understand my point-of-view.</td>
</tr>
<tr>
<td>21. I am able to take on various roles as appropriate in different cultural and ethnic settings.</td>
</tr>
<tr>
<td>22. I put my beliefs into action by standing up for my principles.</td>
</tr>
<tr>
<td>23. I can evaluate issues from several different perspectives.</td>
</tr>
<tr>
<td>24. The role of the student is to receive knowledge from authority figures.</td>
</tr>
<tr>
<td>25. I know how to analyze the basic characteristics of a culture.</td>
</tr>
<tr>
<td>26. I am sensitive to those who are discriminated against.</td>
</tr>
<tr>
<td>27. I do not feel threatened emotionally when presented with multiple perspectives.</td>
</tr>
<tr>
<td>28. I prefer to work with people who have different cultural values from me.</td>
</tr>
<tr>
<td>29. I am accepting of people with different religious and spiritual traditions.</td>
</tr>
<tr>
<td>30. Cultural differences make me question what is really true.</td>
</tr>
<tr>
<td>31. I put the needs of others above my own personal wants.</td>
</tr>
<tr>
<td>32. I can discuss cultural differences from an informed perspective.</td>
</tr>
</tbody>
</table>
33. I am developing a meaningful philosophy of life.
34. I intentionally involve people from many cultural backgrounds in my life.
35. I prefer complex rather than straightforward interpretations of debatable issues.
36. I constantly need affirmative confirmation about myself from others.
37. I enjoy when my friends from other cultures teach me about our cultural differences.
38. I consciously behave in terms of making a difference.
39. I am open to people who strive to live lives very different from my own life style.
40. Volunteering is not an important priority in my life.
## APPENDIX F

Global Perspective Inventory Items and their Descriptive Statistics

<table>
<thead>
<tr>
<th>Items</th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Skewness</td>
<td>Kurtosis</td>
</tr>
<tr>
<td><strong>Cognitive Knowing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I notice cultural differences, my culture tends to have the better approach.*</td>
<td>2.89</td>
<td>.80</td>
<td>-.33</td>
<td>.68</td>
</tr>
<tr>
<td>Some people have a culture and others do not.*</td>
<td>3.93</td>
<td>1.05</td>
<td>-.92</td>
<td>.24</td>
</tr>
<tr>
<td>In different settings what is right and wrong is simple to determine.*</td>
<td>3.39</td>
<td>1.10</td>
<td>-.41</td>
<td>-.65</td>
</tr>
<tr>
<td>I tend to judge the values of others based on my own value system.*</td>
<td>2.99</td>
<td>.90</td>
<td>-.08</td>
<td>-.90</td>
</tr>
<tr>
<td>I do not see cultural differences as important to my daily life.*</td>
<td>2.87</td>
<td>1.09</td>
<td>-.10</td>
<td>-.82</td>
</tr>
<tr>
<td>I can evaluate issues from several different perspectives.</td>
<td>4.02</td>
<td>.62</td>
<td>-.72</td>
<td>2.95</td>
</tr>
<tr>
<td>The role of the student is to receive knowledge from authority figures*</td>
<td>3.17</td>
<td>.90</td>
<td>-.43</td>
<td>-.15</td>
</tr>
<tr>
<td>Cultural differences make me question what is really true.</td>
<td>3.36</td>
<td>1.02</td>
<td>-.20</td>
<td>-.51</td>
</tr>
<tr>
<td>I prefer complex rather than straightforward interpretations of debatable issues.</td>
<td>3.51</td>
<td>.94</td>
<td>-.11</td>
<td>-.69</td>
</tr>
<tr>
<td><strong>Cognitive Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am informed of current issues that impact international relations.</td>
<td>3.74</td>
<td>.85</td>
<td>-.48</td>
<td>.03</td>
</tr>
<tr>
<td>I understand the reasons and causes of conflict among nations of different cultures.</td>
<td>3.65</td>
<td>.71</td>
<td>-.37</td>
<td>.06</td>
</tr>
</tbody>
</table>
I understand how various cultures of this world interact socially.  3.91  .69  -.39  .33  3.88  .71  -.79  1.71
I know how to analyze the basic characteristics of a culture.  3.74  .71  -.34  .11  3.81  .61  -.57  1.00
I can discuss cultural differences from an informed perspective.  3.85  .68  -.14  -.14  3.54  .82  -.35  -.05

**Intrapersonal Identity**
- I have a definite purpose in my life.  3.56  .96  -.38  -.52  3.54  .99  -.43  -.45
- I can explain my personal values to people who are different from me.  4.02  .69  -.45  .45  4.03  .71  -.91  2.29
- I know who I am as a person.  4.11  .81  -.92  1.12  4.05  .78  -1.51  5.40
- I am confident that I can take care of myself in a completely new situation.  4.23  .66  -.30  -.76  4.28  .68  -.67  .36
- I am developing a meaningful philosophy of life.  3.80  .74  -.15  -.32  3.77  .79  -.23  -.33

**Intrapersonal Affect**
- I feel threatened around people from backgrounds very different from my own.*  3.97  .91  -.62  -.33  3.92  .86  -.71  .39
- I often get out of my comfort zone to better understand myself.  3.50  .87  -.14  -.65  3.70  .82  -.18  -.47
- I see myself as a global citizen.  3.99  .78  -.43  -.19  4.11  .76  -.55  -.07
- I get offended often by people who do not understand my point-of-view.*  3.65  .77  -.47  .32  3.79  .63  -.10  -.04
- I am sensitive to those who are discriminated against.  3.87  .74  -.77  1.73  3.98  .72  -.62  .75
- I do not feel threatened emotionally when presented with multiple perspectives.  3.89  .78  -.76  1.05  3.35  .80  .26  -.33
- I prefer to work with people who have different cultural values from me.  3.41  .81  .44  .01  4.16  .63  -.45  .84
- I am accepting of people with different religious and spiritual traditions.  4.22  .65  -.38  -.13  3.35  .79  -.32  .13
I constantly need affirmative confirmation about myself from others.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
<th>Value 5</th>
<th>Value 6</th>
<th>Value 7</th>
<th>Value 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think of my life in terms of giving back to society.</td>
<td>3.49</td>
<td>.82</td>
<td>-.17</td>
<td>.12</td>
<td>3.56</td>
<td>.76</td>
<td>-.17</td>
<td>-.27</td>
</tr>
<tr>
<td>I work for the rights of others.</td>
<td>3.40</td>
<td>.71</td>
<td>.21</td>
<td>.43</td>
<td>3.49</td>
<td>.69</td>
<td>.10</td>
<td>-.19</td>
</tr>
<tr>
<td>I put my beliefs into action by standing up for my principles.</td>
<td>3.67</td>
<td>.69</td>
<td>.21</td>
<td>-.46</td>
<td>3.87</td>
<td>.78</td>
<td>-.86</td>
<td>1.69</td>
</tr>
<tr>
<td>I put the needs of others above my own personal wants.</td>
<td>3.20</td>
<td>.82</td>
<td>-.08</td>
<td>-.06</td>
<td>3.93</td>
<td>.61</td>
<td>-.13</td>
<td>.15</td>
</tr>
<tr>
<td>I consciously behave in terms of making a difference.</td>
<td>3.46</td>
<td>.77</td>
<td>.07</td>
<td>-.33</td>
<td>3.50</td>
<td>.77</td>
<td>-.36</td>
<td>2.00</td>
</tr>
<tr>
<td>Volunteering is not an important priority in my life.*</td>
<td>3.22</td>
<td>.92</td>
<td>-.01</td>
<td>-.31</td>
<td>3.20</td>
<td>.98</td>
<td>-.29</td>
<td>-.48</td>
</tr>
</tbody>
</table>

**Interpersonal Social Interaction**

Most of my friends are from my own ethnic background.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
<th>Value 5</th>
<th>Value 6</th>
<th>Value 7</th>
<th>Value 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>People from other cultures tell me that I am successful at navigating their cultures.</td>
<td>3.54</td>
<td>.72</td>
<td>.49</td>
<td>-.36</td>
<td>3.66</td>
<td>.81</td>
<td>.11</td>
<td>-.26</td>
</tr>
<tr>
<td>I am able to take on various roles as appropriate in different cultural and ethnic settings.</td>
<td>3.68</td>
<td>.69</td>
<td>-.11</td>
<td>-.14</td>
<td>3.71</td>
<td>.63</td>
<td>-.14</td>
<td>-.03</td>
</tr>
<tr>
<td>I intentionally involve people from many cultural backgrounds in my life.</td>
<td>3.69</td>
<td>.87</td>
<td>-.23</td>
<td>-.34</td>
<td>3.78</td>
<td>.81</td>
<td>-.40</td>
<td>.21</td>
</tr>
<tr>
<td>I enjoy when my friends from other cultures teach me about our cultural differences.</td>
<td>4.29</td>
<td>.69</td>
<td>-.66</td>
<td>.12</td>
<td>4.37</td>
<td>.63</td>
<td>-.48</td>
<td>-.64</td>
</tr>
<tr>
<td>I am open to people who strive to live lives very different from my own life style.</td>
<td>4.02</td>
<td>.72</td>
<td>-.31</td>
<td>-.23</td>
<td>3.95</td>
<td>.72</td>
<td>-.24</td>
<td>-.27</td>
</tr>
</tbody>
</table>

*Notes. * Indicates a negatively-worded item. It is presented here untransformed.
### APPENDIX G

Correlation matrix of SAGS and GPI Subscales

<table>
<thead>
<tr>
<th>Correlations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Improve my English/French skills</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Improve my career prospects</td>
<td>0.01</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Academic Motivation Scale</td>
<td>0.29**</td>
<td>0.09</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Cross Cultural Motivation</td>
<td>0.16*</td>
<td>-0.04</td>
<td>0.01</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Personal Social Motivation</td>
<td>0.06</td>
<td>0.17*</td>
<td>0.19**</td>
<td>0.13</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cognitive Knowledge</td>
<td>0.03</td>
<td>-0.15</td>
<td>0.03</td>
<td>0.05</td>
<td>-0.09</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Intrapersonal Identity</td>
<td>-0.03</td>
<td>-0.17</td>
<td>0.02</td>
<td>0.04</td>
<td>-0.29**</td>
<td>0.47**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Intrapersonal Affect</td>
<td>0.07</td>
<td>-0.11</td>
<td>0.17</td>
<td>0.20</td>
<td>0.03</td>
<td>0.43**</td>
<td>0.51**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>9. Interpersonal Social Responsibility</td>
<td>0.08</td>
<td>-0.05</td>
<td>0.09</td>
<td>0.24*</td>
<td>0.24*</td>
<td>0.30**</td>
<td>0.39**</td>
<td>0.52**</td>
<td>-</td>
</tr>
<tr>
<td>10. Interpersonal Social Interaction</td>
<td>0.13</td>
<td>-0.16</td>
<td>0.05</td>
<td>0.10</td>
<td>-0.01</td>
<td>0.42**</td>
<td>0.52**</td>
<td>0.72**</td>
<td>0.57**</td>
</tr>
</tbody>
</table>

*Notes.* *p* < .05, **p** < .01