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THE PREDICTIVE RELATIONSHIP BETWEEN CULTURAL IDENTITY, VALUE

ORIENTATION, ACCULTURATION AND THE CROSS-CULTURAL STUDENT'S

ACADEMIC MOTIVATION IN THE INTERNATIONAL SCHOOL SETTING

by

Dennis Steve Smith, Jr.

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

This predictive correlational study examined the relationships between academic motivation and cultural identity, value orientation, and acculturation for a cross-cultural student population in an international school setting. This study was conducted at an international school in Thailand and all high school students (grade 10-12) enrolled during the 2014-2015 school year comprised the sample population. Participants completed an online survey comprised of the Portraits Value Questionnaire (PVQ), Socio-Cultural Adaptive Scale (SCAS), and a subscale of the Patterns of Adaptive Learning Styles (PALS 2000) instruments as well as a short demographic questionnaire. The results of the survey were analyzed using hierarchical multiple regression statistics in order to identify any predictive relationships between the predictor variables (cultural identity, value orientation, and acculturation) and the criterion variable (student academic motivation). The results of the study suggest that personal value orientation and acculturation are the best predictors of extrinsic academic motivation.

Keywords: cultural identity, value orientation, acculturation, academic motivation, international schools, cross-cultural students, third culture kids, host nation students

Dedication

To my wife Holly, your unconditional love, encouragement, and support have enabled me to complete this journey. To my two boys, Noah and Chatchai, you two are my inspiration for wanting to better understand cross-cultural kids.

Acknowledgments

First, I would like to thank God who created within me a desire to question everything which led me to pursue this doctoral degree in order to better understand the CCK students who come into my classroom. I would also like to thank my wonderful wife, Holly, for her love and support over the past four years, which has allowed me to complete this work. Thank you for allowing me to pursue my educational goals, and for the numerous hours you have spent with the boys while I was writing late into the evenings, at night, on weekends, and during school holidays. To Noah and Chatchai, thank you for the unconditional love you have shown me throughout the dissertation process. I have missed numerous playtimes over the past few years while I sat at my computer writing, but you never held it against me and always had a hug waiting for me when I needed it. Noah, I am especially grateful of your gentle reminders that I needed to make time for you, your brother and your mom. Chatchai, I am glad you became a part of our family this year and for your willingness to always be ready with a timely hug and a kiss.

I would like to thank my parents (Dennis, Laura, and Kay) for helping foster my desire to be a lifelong learner. You let me choose my own path(s) while I was in middle and high school, which has carried over into my endless pursuit of degrees in vastly different fields. You also supported my decision to move to Asia in pursuit of a job that would lead to my passion for cross-cultural kids even though it meant I was taking your only grandson to the otherside of the world.

I would like to thank my dissertation chair, Dr. Amanda Szapkiw, for all of her hard work and guidance through this process. I truly appreciate the insight and encouragement you have offered as well as the swift responses you provided to my countless questions and

inquires. I was constantly amazed at how timely your responses were, despite the fact that we were separated by twelve time zones. Likewise, I would like to thank my committee members, Drs. Lorene Hutchinson and Elgen Hillman for all the helpful insights and revisions you gave regarding my dissertation, as well as the prayers and encouragement you offered as I worked through the trials of an international adoption.

I extend my appreciation to the countless cross-cultural kids who have come through my classroom over the past six years. I wish I could thank you all individually, but please know that each of you has made a lasting impression on me as a person, and as a teacher, so much so that I decided to spend the past four years trying to better understand what I can do in the classroom to better motivate each of you to learn. I would also like to thank those of you who made a point to ask how the dissertation was coming over this past year. This encouragement was one of the things that kept me going when the process became tedious. A special thank you goes out to those of you who were willing to complete the online survey that allowed this study to become a reality.

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List of Abbreviations

Association of Christian Schools International (ACSI)

Christian Schools International (CSI)

Council for International Schools (CIS)

Cross Cultural Kid (CCK)

European Council of International Schools (ECIS)

Grade point average (GPA)

North Central Association (NCA)

Patterns of Adaptive Learning Styles (PALS 2000)

Portraits Value Questionnaire (PVQ)

Socio-Cultural Adaptive Scale (SCAS)

Southern Association of Colleges and Schools (SACS)

Third Cultural Kid (TCK)

Variance-Inflation Factor (VIF)

Western Association of Schools and Colleges (WASC)

CHAPTER ONE: INTRODUCTION

Introduction

Globalization continues to increase due to technological advancements in communications, work-related immigration, study abroad programs, and educational exchange programs. Globalization allows for interactions between culturally diverse people, and these cultural interactions have implications for the 21st century classroom (Zhang, 2007). "With increasing globalization and the ensuing multicultural society in which we live, the need for understanding individuals as 'embedded' in their familial and cultural context has become particularly relevant" (Bodas & Ollendick, 2005, p. 66). The 21st century classroom does not contain a homogenous group of students with similar learning processes, cultural understanding, and societal backgrounds; instead it is a multicultural melting pot that occurs when numerous cultures are brought together in an unscripted manner (Lester & Roberts, 2009).

This multicultural melting pot is most readily visible in the international school setting, where there has been an influx of cross-cultural kids (CCKs). The term CCK is a generic term used to describe any person who lived in or interacted with two or more cultures during their childhood (Van Reken & Bethel, 2006). Within the CCK label, there are numerous categories used to identify the experiences of the different CCK populations; these include but are not limited to third culture kids (TCK), global nomads, and host nation students (Roberts, 2012; Van Reken & Bethel, 2006).   Due to this influx of CCKs, many international schools have global student body populations with students representing anywhere from 10-50 different nationalities and cultural backgrounds (ISC Research, 2013). Many of these CCKs have experienced numerous international moves in their brief lifespan (Grimshaw & Sears, 2008), which has been

shown to have a negative impact on academic outcomes (Dixon & Hayden, 2008; Engec, 2006; Isernhagen & Bulkin, 2011; Thompson, Meyers, & Oshima, 2011).

In spite of the growing diversity in the student body population, most international schools continue to rely on the use of Western educational curriculum taught by Western-trained teachers utilizing the English language medium (Dixon & Hayden, 2008; Roberts, 2012; Walker & Cheong, 2009; Walker & Riordan, 2010). North American schools are hindered in their attempts to offer a culturally diverse curriculum due to geographical isolation (Savva, 2013). In an effort to address this issue, many North American schools have started to hire teachers that have taught abroad in international schools with the hope that these teachers have developed a multicultural awareness and global understanding that can be integrated into the classroom (Savva, 2013). This approach is hindered due to the tendency of these teachers to remain insulated from their host country instead of developing a great cultural awareness. These teachers naturally gravitate to developing relationships with co-workers from similar cultures, and they experience otherness while interacting with nationals, which can limit their cultural awareness and development (Savva, 2013). Upon returning to the American school system, many of these teachers are equipped with an increased global understanding that could potentially influence curriculum and educational practices; however, Ortloff, Shah, Lou, and Hamilton (2012) found that most schools failed to provide ample professional development opportunities for these teachers to share their insights and understandings. Despite these attempts to improve global understanding in Western curriculum and practices, much of the curriculum that is utilized in the international school classroom remains somewhat mono-cultural which can hinder academic outcomes (Dewaele & van Oudenhoven, 2009; Simandiraki, 2006). Each of the students in the international school classroom represents a unique individual, and the

teacher's challenge is to find ways to motivate each of them to learn in a manner that is culturally sensitive and relevant (Dietz, Hofer, & Fries, 2007; Lillemyr, Søbstad, Marder, & Flowerday, 2010; Seyfried & Chung, 2002; Yang, 2008; Yin, Lee, & Zhang, 2009).

Motivating student to learn is important because it has been shown to be a strong predictor of academic achievement and Grade Point Average (McClure et al., 2011). While researchers have purported that student motivation relies heavily on whether the educational content is culturally relevant (Daniels & Steres, 2011; Ginsberg, 2009), much of the research into student motivation has overlooked the role of the students' cultural values and cultural identity, especially when it comes to CCKs enrolled in international schools (Hofer, Schmid, Fries, Kilian, & Kuhnle, 2010; Hui, Sun, Chow, & Chu, 2011).

When considering culture in relationship to motivation, there are several factors that research and theory suggest need to be examined. Cultural identity is a variable the research has demonstrated that needs to be considered when understanding student motivation in a school setting (Urdan & Maehr, 1995). Hofer (2007) reports that personal value orientation, whether a person values academic success or social well-being, greatly influences what type of classroom activities motivate students. Students with an achievement value orientation tend to be motivated by learning activities, while social well-being value oriented students tend to be motivated by leisure activities. Further, in research on CCKs, Schuarzberg and Parenteau (2004) found that the acculturation process, how well the student is adjusting to living in a new culture, is related to the student's academic success in the international school setting. Finally, demographic and experience variables such as gender (Hui et al., 2011; Korur & Eryılmaz, 2012; Tang & Neber, 2008; Van Houtte, 2004), grade level (Keklík & Erdem-Keklík, 2012; Korur & Eryılmaz, 2012; Rosário, Núñez, Valle, González-Pienda, & Lourenço, 2013; Sun, Ding, &

Chen, 2013; Tang & Neber, 2008) passport region (Gerner, Perry, Moselle, & Archbold, 1992; Pascoe, 1994), the number of years in the host country (Schuarzberg & Parenteau, 2004; Thompson, Meyers, & Oshima, 2011) and the number of international moves (Schuarzberg & Parenteau, 2004) have also been identified as being related to academic motivation. Thus, a model that considers these variables needs to be examined in order to enable international school educators to better understand the factors that influence CCKs' academic motivation and if any of these variables can be used to predict CCKs' academic motivation.

This investigation was conducted in order to better understand the predictive relationships that exist between CCKs' academic motivation, their cultural identity (Urdan & Maehr, 1995), their value orientation (Hofer, 2007), and their acculturation (Triandis, 2001), while controlling for gender, grade level, years in the host country, passport region and number of international moves. The guiding theoretical frameworks for this investigation were Hofstede's (1980) concepts of individualism and collectivism, the motivational conflict theory (Hofer, 2007), and the theory of acculturation (Berry & Kim, 1998).

Background

The international school setting has become the educational system of choice for many CCKs, including TCKs and host nation students, in an effort to develop students who are multicultural and international in their understanding (Allan, 2003). As such, the classroom environment has become increasingly diverse, which poses a great challenge for international school educators who aim to motivate each of their students to excel. While there are many positive outcomes that exist due to the globalization phenomenon, there are also potentially negative outcomes. Globalization has blurred the boundaries between social groups and cultures in international schools, and little is known about the influence of globalization on international

school students' academic motivation (Boekarts, 2006; Hofer, Kuhnle, Kilian, Marta, & Fries, 2011; Hui et al., 2011). The existing research on academic motivation has been primarily limited to schools and immigrants within the United States (Dekker & Fischer, 2008), and the findings of these studies have yielded inconclusive results. However, if international school educators fail to understand the cultural differences that exist in multicultural classrooms, they may not be able to create classroom environments where CCKs from all cultural backgrounds are motivated to excel both academically and socially (Dietz et al., 2007; Lillemyr et al., 2010).

Unfortunately, international school educators, administrators, and policy makers have overlooked cultural and personal values when designing and choosing curriculum, writing policies, and assessing student learning outcomes and development (Hui et al., 2011). This is potentially problematic because students with different cultural identities tend to exhibit different types of academic motivations (Hui et al., 2011). Hofer et al. (2010) found that the issue is further complicated because within a particular culture (e.g. German), there are parents who have high academic expectations for their children and parents who have high social expectations for their children. These differing parental expectations were found to be a contributing factor in the motivational conflicts experienced by students as they attempted to blend their cultural identity, parental expectations, and personal values in the academic setting (Hofer et al., 2010). These conflicts can become problematic in the culturally diverse international school classroom if teachers focus on one type of academic motivation over the other, as this could result in the needs of students with different motivational orientations being neglected (Abd-El-Fattah & Patrick, 2011).

Individualism and Collectivism

Any investigation into the relationship between the CCK and academic motivation should begin with Hofstede's (1980) individualism and collectivism construct. While this theory is not a unified theory, "research over the last four decades has illuminated the defining features of the constructs, their ecological, situational, and dispositional antecedents, and a wide range of consequences that they have for social psychological and organizational phenomena" (Triandis & Gelfand, 2012, p. 499). According to this construct, people with a collectivistic cultural identity, usually associated with Eastern cultures, tend to place an emphasis on the cohesiveness of the group as a whole, where people tend to work together in order to protect and support the needs of the group. On the opposite end of the cultural spectrum, people with an individualistic cultural identity, those from chiefly Western cultures, tend to focus primarily on individual successes and opportunities.

Applied to the classroom environment, students and parents from collectivistic societies prefer educational practices that result in group success such as rote memorization of information and working together as a collective on assignments (Cross & Gore, 2003; Yang, 2008). In contrast, individualistic students and parents tend to prefer classroom activities that promote critical thinking, being able to express opinions through discussion-based activities, and challenging students to synthesize new understanding (Yang, 2008). Similarly, while investigating student motivation and cultural identity, Dietz et al., (2007) found that Western cultures tend to produce more social well-being oriented students, whereas Eastern cultures tend to produce more achievement value oriented students.

International school educators would thus be remiss if they did not consider how their students' cultural identity influences their academic motivation. Hofstede's (1980) construct

suggests that people from individualistic societies are vastly different from their collectivistic peers, thus educators cannot assume that the CCKs in their classroom will be academically motivated by the same types of classroom learning activities nor will they all exhibit the same desire to learn (Cross & Gore, 2003; Urdan & Maehr, 1995). As a result of Hofstede's construct and the supporting research, it is imperative that an investigation into CCK academic motivation should consider the CCK's cultural identity as a variable of interest.

Motivational Conflict Theory

While Hofstede (1980) discusses cultural identity on a societal level, some individuals, especially CCKs, are uncertain of their cultural identity because they have grown up in a culture different than their heritage culture, or they have lived in numerous cultures during their developmental years which has lead to a blending of cultural values (Gerner et al., 1992; Pascoe, 1994; Urdan & Maehr, 1995; Van Reken & Bethel, 2006). As a result, CCKs face the unique challenge of trying to make sense of various cultures and how to integrate cultural values into their cultural identity while simultaneously having no sense of actual belonging to any particular culture (Fail, Thompson, & Walker, 2004). Thus, it is essential that the individual's personal value orientation, what one personally believes to be of importance and of value, is also considered when investigating academic motivation (Hofer, Kuhnle, Kilian, Marta, & Fries, 2011; Triandis, 1993).

When applied to the CCK population, the motivational conflict theory provides support to investigate the role an individual's value orientation plays in his academic motivation without defining him by a particular cultural identity. For instance, while investigating a sample population of German secondary students, all of whom shared a similar cultural identity, Fries, Schmid, and Hofer (2007) found that their sample contained both achievement value oriented

students who were focused on getting good grades, completing academic assignments, and

achieving success in life, and social well-being oriented students who preferred to spend time

with their friends and wanted to have fun. Despite sharing a German-centric cultural identity,

each of the students in their study experienced a unique motivational conflict as a result of their

personal value orientation when they were presented with an opportunity to participate in a new

learning activity (Fries et al., 2007). Based on these findings, personal value orientation and the

interaction between cultural identity and values should be considered when investigating student

academic motivation.

Acculturation

Closely tied to cultural identity and value orientation is the acculturation process that

CCKs must work through as they transition into new cultures and societies. Whenever a person

enters a new culture, there is a struggle between maintaining one's cultural identity while

interacting with the new cultural norms and values (Berry & Kim, 1998). A major component in

the acculturation process is the willingness of the individual to interact with the new host culture

(Searle & Ward, 1990). For some individuals it is imperative that they are able to hold on to

their cultural identity, while others readily adapt to their new host culture and adopt their values

(Berry & Kim, 1998).   While assimilation, the process of rejecting one's cultural heritage in

favor of the new culture (Cheung-Blunden & Juang, 2008; Ward & Kennedy, 1994), into the

new culture is a successful coping mechanism for many as they work through the acculturation

process, some CCKs in the international school setting will experience conflicts between their

traditional cultural values and those of the new host country as they attempt to live up to the

expectations of both their home culture and their host culture (Rudmin, 2003; Schwartz,

Montgomery, & Briones, 2006; Schwartz & Zamboanga, 2008). The acculturation process needs

to be considered when discussing student academic motivation because research has shown that the number of international moves a student has made and the years the student has spent in the new host country has a direct relationship with academic motivation and achievement (Schuarzberg & Parenteau, 2004; Thompson et al., 2011).

Achievement Goal Orientation Theory

A student's academic motivation is acquired during childhood and is related to cultural values (McClelland, 1951). There may be several ways in which one can examine motivation; however, many studies use a theory in which academic motivation can be separated into two primary categories: intrinsic, or mastery goal oriented motivation; and extrinsic, or performance goal oriented motivation (Peetsma, Hascher, van der Veen, & Roede, 2005). The performance goal orientation can be further divided into performance approach goal orientation and performance avoidance goal orientation (Ames, 1992; Deci & Ryan, 2000). Students who are intrinsically motivated and exhibit mastery goal orientation are those who are driven to perform educational exercises and tasks for the sole purpose of being able to increase their level of competence and understanding. Conversely, students who are extrinsically motivated and exhibit performance approach goal orientation tend to be academically motivated by having the opportunity to demonstrate their self worth, while those who exhibit performance avoidance goal orientation tend to be motivated by trying to avoid the possibility of looking incompetent in front of their peers, teachers, and parents (Ames, 1992: Deci & Ryan, 2000; Elliot & Church, 1997). Due to the differences between each of these motivational orientations, it is prudent that international school educators better understand what variables are related to the CCKs' academic motivational orientations. The CCKs' academic motivation cannot be easily examined from any one of the preceding theories or explained by one construct. As has been discussed

above, some CCKs are strongly influenced by their personal cultural identity and their parents' cultural identity (Hofstede, 1980), others are driven by their personal values (Bodas & Ollendick, 2005), and all CCKs experience a unique acculturation process (Berry & Kim, 1998). This suggests that in order to better understand how to motivate CCKs in the classroom, educators must consider where these students fit into the individualism and collectivism scale (Hofstede, 1980), their personal value system and the motivational conflicts that arise due to their values (Hofer, 2007), and where they are in the acculturation process (Berry & Kim, 1998). There is currently no single theory or model explaining the variables that influence academic motivation amongst CCKs in the international school environment. Thus, when all three of the aforementioned frameworks have been taken into consideration, a clearer picture will begin to emerge about how each of the predictor variables as well as the control variables influence student motivation which will allow international school educators to better understand how to properly motivate the CCKs in their classrooms.

Problem Statement

Due to globalization, international schools are becoming increasingly diverse as these schools have become the preferred educational option for parents of all types of cross-cultural students (Grimshaw & Sears, 2008). This cultural diversity in the international school classroom can potentially create issues in regards to student learning outcomes because most international school educators tend to be formally trained in Western countries, such as the United States and Great Britain, while most of the students are global citizens (Hofer et al., 2010). In regards to the students, while all cultures are concerned with learning, not all cultures share the same views and attitudes towards the learning process (Lillemyr et al., 2010). For instance, Eastern cultures tend to place an emphasis on rote memorization and learning as a collective effort, while Western

cultures tend to emphasize critical thinking and expressing individuality (Yang, 2008).

Likewise, students from cultures that encourage high academic achievement tend to be motivated

by learning activities while students from cultures that encourage social well being tend to be

motivated by fun, social activities (Hofer et al., 2010). In light of these motivational differences,

educators need a better understanding of the best predictors of student academic motivation in

the international school classroom. Despite this need, cultural identity, value orientation, and

acculturation tend to be overlooked when considering student academic motivation in the

international school setting. To date, the research that has been conducted on the relation

between academic motivation and cultural identity, value orientation, and acculturation has

focused primarily on state/government-sponsored public schools where the general student

population shares similar cultural heritage (Boekarts et al, 2006; Dekker & Fischer, 2008; Hofer

et al., 2010; Hui et al., 2011; Yang, 2008).

Purpose Statement

The purpose of this predictive, correlational study was to test the construct of

individualism and collectivism and the motivational conflict theory as they relate the CCK's

cultural identity, value orientation, and acculturation to academic motivation, while controlling

for the CCK's gender, grade level, number of years the student has lived in the host country,

passport region, and number of international moves. This study utilized a convenience sample of

cross-cultural high school students (grades 9-12) enrolled at an international school in Bangkok,

Thailand. The criterion variable, student academic motivation was defined as the student's

academic achievement goal orientation (mastery oriented, performance-approach oriented, and

performance-avoidance oriented). This variable was measured through a self-report survey. The

first predictor variable, cultural identity, was defined as individualistic (personal emphasis on

self-interest) or collectivistic (personal emphasis on the interests of the group), and was measured through a validated, self-report survey. Value orientation, the second predictor variable, was defined as the student's orientation towards pursuing academic achievement or social well-being and was measured through a validated, self-report survey. Acculturation, the third predictor variable, was defined as the socio-cultural adaptation to the host culture as a result of interaction between multiple cultures, and was measured through a validated, self-report survey. The controlling variables were defined as the student's gender, grade level, the number of years the student has lived in the host country, the student's passport region, and the number of international moves the student has made. These control variables were collected using a self-report demographic survey.

In regards to this study, the individualism and collectivism theoretical framework states that individualistic cultures tend to emphasize individual happiness due to personal independence, whereas collectivistic cultures tend to prioritize achievement as a response to interdependence on familial groups (Hofstede, 1980; Triandis, 2001). Motivational conflict theory states that students pursue goals that are directly related to their orientation towards either academic achievement or social well-being achievement (Hofer, 2007). Each of the variables of interest in this study has been shown to influence student academic achievement motivation in previous research with other populations (Bernard, Maio, & Olson, 2003; Chun, 2003; Hofer, 2007; Lillemyr et al., 2010). However, the relationships among these variables have not been considered in the international school setting where multitudes of culturally diverse students are brought together in a multicultural classroom environment and expected to succeed. As such, this study provides international school educators with a better understanding of how the stated

predictor variables influence the CKKs' academic motivation by performing a hierarchical multiple regression analysis.

Each of the predictor variables in the hierarchical multiple regression analysis, as well as the control variables, were blocked as shown in Table 1. The blocks were entered into the hierarchical model in temporal order, with block 1 containing the demographic/experience data (control variables). The control variables were considered prior to the predictor variables, as they antedate cultural identity, personal values, and acculturation. Also, the insertion of these control variables at the beginning of the hierarchical model has been the approach used by researchers in similar studies (Caldwell & Obasi, 2010; Cheung-Blunden & Juang, 2008; Hofer et al., 2011; Kilian, Hofer, & Kuhnle, 2013; Urdan, 2004). Blocks 2 through 4 of the hierarchical model consisted of the predictor variables: cultural identity, personal value orientation, and acculturation respectively. Cultural identity was chosen for the second block, while personal value orientation was placed in the third block because Hofer et al. (2011) have purported that a student's personal value orientation is influenced by their cultural identity as well as their parent's cultural identity. Finally, Ward and Kennedy (1993, 1994) found that the acculturation process is influenced by both the individual's cultural identity and personal value orientation; thus, this predictor variable was placed into block 4 (Ward & Kennedy, 1993, 1994).

Table 1

Data Source Blocks

Data Source Blocks	Unit of Measurement
Block 1	Demographic/Experience Data
	Gender
	Grade Level
	Time spent in host country
	Passport Region
	Number of international moves
Block 2	Cultural Identity
	Individualistic
	Collectivistic
Block 3	Personal Value Orientation
	Achievement Value Oriented
	Social Well-Being Value Oriented
Block 4	Acculturation

Figure 1 shows how the variables were entered into the hierarchical regression analysis.

Figure 1. Blocking of variables for hierarchical multiple regression analysis.

Significance of the Study

The international school classroom has become a multicultural melting pot because of globalization (Lester & Roberts, 2009). This increased cultural diversity means that teachers must find new approaches to make learning objectives relevant to a multitude of students with different values, cultural identities, and transitional experiences (Ames, 1992; Bernard et al., 2003; Chun, 2003; Hofer, 2007; Lillemyr et al., 2010). This research aims to identify the relationships that exist between the variables of interest in order to allow international school educators to have a better understanding regarding how to motivate the students in their classrooms. Armed with this information, educators will be better suited to raise student academic outcomes by designing learning activities that are relevant to the students' needs. This can be accomplished by understanding which of the predictor variables serves as the best predictor of academic motivation. Once educators understand the relationship between cultural identity, personal values, and the acculturation process with academic motivation, it will be easier to integrate best practice and differentiated learning activities into the curriculum that will align with student needs. In the event that cultural identity is the best predictor of motivation,

educators will be able to focus on activities that allow for individualistic students to work on their own while, collectivistic students could work in groups. Likewise, if personal value orientation is found to be the best predictor of motivation, educators could design activities such as classroom competitions for students who value academic achievement and group video projects for students who value social well-being. Finally, if acculturation serves as the best predictor of academic motivation, educators can integrate activities into their classrooms that help students work through the acculturation process. While it could be argued that teachers should already be using best practice in their classrooms, international school educators need to better understand which best practices to utilize in their classrooms. By understanding which of the predictor variables is the best predictor of academic motivation, educators will be able to focus on developing best practices for that variable. This information would be especially helpful for teachers in Advanced Placement (AP) or the International Baccalaureate (IB) programs where the teacher is limited by an external curriculum framework that is aimed at helping students pass a test. Armed with the results of this study, international school educators, including AP and IB teachers, will be able to utilize specific best practices in their multicultural classroom that directly motivate all students.

<p align="center">**Research Questions and Hypotheses**</p>

The research questions and hypotheses for this study are:

RQ1: Will there be a statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

H$_{1.0}$: There will be a statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{1.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will significantly contribute to the model for predicting cross-cultural high school students' mastery-oriented academic motivation.

H$_{1.2}$: There will be a statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{1.3}$: There will be a statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{1.4}$: There will be a statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

RQ2: Will there be a statistically significant relationship between cross-cultural high school students' performance-approach oriented academic motivation and their cultural identity, value orientation, acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

H$_{2.0}$: There will be a statistically significant relationship between cross-cultural high school students' performance-approach oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{2.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will significantly contribute to the model for predicting cross-cultural high school students' performance-approach oriented academic motivation.

H$_{2.2}$: There will be a statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-approach oriented motivation.

H$_{2.3}$: There will be a statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{2.4}$: There will be a statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

RQ3: Will there be a statistically significant relationship between cross-cultural high school students' performance-avoidance oriented academic motivation and their cultural identity, value orientation, acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

H$_{3.0}$: There will be a statistically significant relationship between cross-cultural high school students' performance-avoidance oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{3.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will significantly contribute to the model for predicting cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{3.2}$: There will be a statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{3.3}$: There will be a statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{3.4}$: There will be a statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

Null Hypotheses

The following are the null hypotheses:

H$_{01.0}$: There will be no statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{01.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural high school students' mastery-oriented academic motivation.

H$_{01.2}$: There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{01.3}$: There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{01.4}$: There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{02.0}$: There will be no statistically significant relationship between cross-cultural high school students' performance-approach oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{02.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural high school students' performance-approach oriented academic motivation.

H$_{02.2}$: There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{02.3}$: There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{02.4}$: There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{03.0}$: There will be no statistically significant relationship between cross-cultural high school students' performance-avoidance oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{03.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{03.2}$: There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{03.3}$: There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{03.4}$: There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

Identification of Variables

The criterion variable in this study was student academic motivation, which can be divided into three types of achievement goals: mastery goals, performance-approach goals, and performance-avoidance goals (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Midgley et al., 2000). The Patterns of Adaptive Learning Styles (PALS 2000) was used to measure student motivation (Midgley et al., 2000). The PALS 2000 uses 14 questions from the personal achievement goal orientation subscale that identifies the rationale a student uses to determine whether to engage in an academic behavior by having the students use a Likert-type scale from one to five to identify whether a statement is true of themselves in the classroom.

The first predictor variable for this study was the student's cultural identity: individualism and collectivism (Hofstede, 1980, Schwartz, 1990; Triandis, 1990). The Portrait

Values Questionnaire Scale (PVQ) was used to measure the students' cultural identity by having the students identify how similar they are to a particular example using a Likert-type scale from one to six. The PVQ identifies persons who would most closely identify with individualism as having an "openness to change" while those who would identify with collectivism would score high on the "conservation" scale (Schwartz et al., 2001).

The second predictor variable for this study was the student's value orientation, whether they are achievement value oriented or social well being oriented (Hofer, 2007). The PVQ was used to measure the students' value orientation by having the students identify how similar they are to a particular example using a Likert-type scale from one to six. The PVQ was also able to identify value orientation by identifying persons who would most closely identify with being academically value oriented as exhibiting "self-enhancement," while those who would identify with being socially well-being value oriented as exhibiting "self-transcendence" (Hofer et al., 2011; Schwartz et al., 2001).

The third predictor variable for this study was acculturation. Acculturation was defined as the process people go through when they move into a new society whereby they give up their traditional cultural values and heritage in order to take on the cultural beliefs and values of the new society (Atkinson, Lowe, & Matthews, 1995). The Socio-Cultural Adaptive Scale (SCAS) was used to measure how well the students perceive that they are "fitting in" with their host culture by asking them to rate the amount of difficulty they experience in various social situations using a Likert-type scale from one to five (Searle & Ward, 1990).

The control variables for this study included the students' gender, grade level, years in host country, passport region, and the number of international moves. These variables were self-reported and allowed the researcher to identify any relationships that exist between the control

variables and the criterion variable. These variables were chosen because research has shown that each variable influences student motivation: gender (Hui et al., 2011; Korur & Eryılmaz, 2012; Tang & Neber, 2008; Van Houtte, 2004), grade level (Keklík & Erdem-Keklík, 2012; Korur & Eryılmaz, 2012; Rosário, Núñez, Valle, González-Pienda, & Lourenço, 2013; Sun, Ding, & Chen, 2013; Tang & Neber, 2008), passport region (Gerner et al.,1992; Pascoe, 1994), the number of years in the host country (Schuarzberg & Parenteau, 2004; Thompson, Meyers, & Oshima, 2011), and number of international moves (Schuarzberg & Parenteau, 2004).

Definitions

Acculturation: The process of adjusting one's cultural values and beliefs to those of the individual's new host culture (Berry, 1980; Manly et al., 1998).

Achievement Goal Orientation: An individual's motivation for completing or engaging in assigned academic tasks (Ames, 1992; Pintrich & Schunk, 2002).

Achievement Value Orientation: An individual's motivation to achieve a high level of academic success and willingness to exert a significant degree of academic effort (Kuhnle, Hofer, & Kilian, 2010).

Collectivism: The societal view that people are to be integrated into society, which will help to meet their needs as long as they maintain a level of commitment and dedication (Hofstede, 1980).

Cross-Cultural Kid: "A person who has lived in or meaningfully interacted with – two or more cultural environments for a significant period of time during developmental years" (Van Reken & Bethel, 2006, p. 3).

Cultural Identity: A person's knowledge that he or she belongs to a particular group of people (Hogg & Abrams, 1988).

Culture: "The collective programming of the mind that distinguishes the members of one group or category of people from other" (Hofstede, 2011, p. 3).

Global Nomad: "A person of any age or nationality who has lived a significant part of his or her developmental years in one or more countries outside his or her passport country because of a parent's occupation" (McCaig, 1992, p. 1).

Host Nation Student: Students who reside in their passport country and their heritage culture that have chosen to enroll in an international school setting instead of a local school option (Hill, 2006).

Individualism: The societal view that individuals are responsible for their own actions, and that individuals are expected to take care of themselves (Hofstede, 1980).

International School: English-medium, tuition charging schools that usually implement curriculum that differs from the curriculum utilized in the local schools within the host country (Cottrell, 2007; Dixon & Hayden, 2008).

Mastery Goal Orientation: The motivation to perform educational exercises and tasks in order to develop one's own level of competence (Ames, 1992; Elliot & Church, 1997)

Performance Goal Orientation: The motivation to perform an educational exercise or task in order to demonstrate one's self-worth or to avoid looking incompetent (Ames, 1992: Elliot & Church, 1997).

Social Well-Being Value Orientation: An individual's preference for leisure activities and willingness to perform for immediate gratification (Kuhnle et al., 2010).

Third-Culture Kid: "A person who has spent a significant part of his or her developmental years outside the parents' culture. The TCK builds relationships to all the cultures, while not having full ownership in any. Although elements from each culture are

assimilated into the TCK's life experience, the sense of belongings is in relationship to others of similar background" (Pollock & Van Reken, 1999, p. 19).

Value: A desire, or goal that serves to guide an individual's decisions and actions (Schwartz, 1992).

Research Summary

A predictive, correlational research design utilizing hierarchical multiple regression analysis was employed for this quantitative study in order to investigate the relationships that exist between cross-cultural students' academic motivation and cultural identity, value orientation and acculturation while controlling for demographic/experience variables. This research design was chosen because it allowed for the identification of any relationships that exist between the variables while also allowing for the identification any predictive relationships that are present. The correlational design was appropriate as no treatments were applied to any of participants; instead this study investigated the existing conditions in order to explain any potential relationships amongst the variables (Warner, 2013). Hierarchal regression analysis was conducted because this analysis allowed for a stepwise analyze between the relationships that exist between the criterion variable and each of the predictor/control variables (Gall et al., 2007; Warner, 2013). Also, hierarchical multiple regression was chosen because it has been used in research studies with similar topics (Abd-El-Fattah & Patrick, 2011; Burton, Lydon, D'Alessandro & Koestner, 2006; Dekker & Fischer, 2008; Hofer et al., 2011; Inglehart & Baker, 2000).

CHAPTER TWO: REVIEW OF THE LITERATURE

Cross-cultural children (CCKs) follow their parents to new countries as their parents pursue new job opportunities, safer living conditions, better schooling options, and/or life changes (McLachlan, 2008; Paredes et al., 2008). Research is only beginning to identify the benefits and consequences of the two realities, (a) mobility, and (b) cross cultural exposure that characterize the life of a CCK. Limited research has identified a negative relationship between these student's mobility and academic outcomes (Dixon & Hayden, 2008; Engec, 2006; Isernhagen & Bulkin, 2011; Thompson et al., 2011). While investigating students who frequently change schools, Engec (2006) identified a negative relationship between student mobility and performance on standardized tests as well as classroom behavior. This finding was supported by Thompson et al. (2011) who found that highly mobile elementary students performed more poorly than their non-mobile peers on standardized tests in reading, language arts, and mathematics.

In studies focusing on monocultural populations, academic motivation has been identified as a key indicator for academic achievement (Ames, 1992; Engec, 2006; Hofer, 2007; Thompson et al., 2011); thus, it is an important factor when studying academic outcomes within any population. Regrettably, a literature search of the keywords, "international mobility," "cross-cultural kids," "third culture kids," and "academic motivation" using the EBSCO and Education Research Complete databases yielded no results. Instead, much of the research into the relationships between cross-cultural students' mobility and academic variables has focused on acceptance into the new school (Dixon & Hayden, 2008). Thus, this research study seeks to provide an understanding of what variables serve as the best predictor of academic motivation amongst CCKs in the international school environment.

Cross-Cultural Kids (CCK)

The term "cross-cultural kid" (CCK) is a generic term for any "person who has lived in – or meaningfully interacted with – two or more cultural environments for a significant period of time during developmental years" (Van Reken & Bethel, 2006, p. 3). While the experiences of CCKs are not identical, there are several general strengths that tend to be shared by most CCKs. CCKs tend to have a better understanding of other cultures than do mono-cultural children due to their increased exposure to different cultures and people groups (Cottrell, 2007; Dewaele & van Oudenhoven, 2009). CCKs also exhibit a significant amount of flexibility towards the changes and challenges that accompany the relocation process, such as making friends and transitioning into a new school (Cottrell, 2007; Fail et al., 2004). Many CCKs reference their close familial relationships as the stabilizing factor in helping them to manage the relocation process, which often causes them to consider home to be where they live as a family (McLachlan, 2005).

CCKs have a vastly different life experience due to the numerous reasons why they became CCKs (Dixon & Hayden, 2008; Limberg & Lambie, 2011). Some CCK families relocate to new countries out of fear of persecution, such as immigrants and refugees, which means it is very likely that these children will never return to their heritage culture. Therefore, it is imperative that these CCKs adapt quickly and effectively into their new culture. Other CCKs move to new countries because of a parent's temporary job assignment, such as military kids and missionaries. In these cases, the CCKs' parents usually plan on returning to their heritage cultures within a specified time period. As a result of this temporary relocation there is considerably less pressure on these CCKs to adapt to the new culture (Cottrell, 2007). That said, regardless of why their families choose to move, most CCKs are given very little say in regards to the when or where they were moving (Dixon & Hayden, 2008).

The CCK terminology can also be used in reference to host nation students; those children who live in their passport country but choose to go to school in an international school setting which provides a cultural environment different than their heritage culture (Dixon & Hayden, 2008; Galijasevic, 2012). Due to this decision to become a CCK, many host nation students relate more closely with their expatriate classmates than they do with their peers who are educated in the local school systems (Dixon & Hayden, 2008). For the purposes of this study, the CCK population will include those students who can be categorized as third culture kids, also known as global nomads, and host nation kids.

Third Culture Kids (TCKs) and Global Nomads

The concept of third culture kids (TCKs) was first introduced by Useem, Useem, and Donoghue (1963), and the term global nomad was first introduced by McCaig (1992). These two terms are often used synonymously in the literature to refer to "a person of any age or nationality who has lived a significant part of his or her developmental years in one or more countries outside his or her passport country because of a parent's occupation" (McCaig, 1992, p. 1). The rationale behind using two different terms for these children is that these terms provide a distinguishing qualification regarding their purpose for relocating to a new culture/country (Cottrell, 2007; McCaig, 1992). The TCK's parents serve as representatives of a sponsoring organization from their home country while working as expatriates in a host country, e.g. military service, diplomat, missionary, or an international organization (Cottrell, 2007). The global nomad's parents are generally regarded as employees, as opposed to representatives, of a local employer within the host country (McCaig, 1992). For the purposes of this study, the term TCK will be used to identify all expatriate CCKs enrolled in the international school setting, regardless of their parents' occupation.

As a result of having to relocate, TCKs must learn to adapt to constant transitions, new surroundings, and new cultural understandings (Grimshaw & Sears, 2008), all of which impacts his cultural identity, his belief and values system, and how he interacts with other people (Sears, 2011). With each relocation, TCKs must find a means to navigate between their heritage/passport culture (where their parents are from) and the host culture (where they currently live). This is where the "third culture" component comes into play, as the TCK creates, or finds a bridging culture that allows him to live and succeed simultaneously in both cultures (Cottrell, 2007; Fail et al., 2004; Limberg & Lambie, 2011; Pollock & Van Reken, 1999; Walters & Auton-Cuff. 2009). While the TCKs' heritage culture is usually thought of as their parents' home culture, most long-term TCKs do not see their parents' home country as their home country (Cottrell, 2007). In fact, Hervey (2009) found that the process of returning and adapting to their parents' home culture was one of the most challenging aspects of being a TCK. This heritage culture re-integration process is challenging because the bridging culture can result in their becoming culturally ambiguous (König, 2009; Sears, 2011), whereby they build "relationships to all of the cultures, while not having full ownership in any" (Pollock & Van Reken, 1999, p. 19). This desire to bridge their heritage culture and host culture leads most TCKs to find it easier to establish connections with other TCKs, who share a culturally-diverse worldview, than they do interacting with people from their heritage culture (Cottrell, 2007; Dawaele & van Oudenhoven, 2009; Fail et al., 2004; Gregory, 2002; Pollock & Van Reken, 1999; Sears, 2011) or based on geographic locations (McLachlan, 2005). The most common bridging culture for TCKs is the international school setting where they come in contact with other CCKs and internationally mobile adults (Limberg & Lambie, 2011).

Host Nation Students

The second subcategory of CCKs to be considered in this study is the host nation students. The host nation students are those students who reside in their passport country and their heritage culture; however, they, or their parents, have chosen to enroll in an international school setting instead of a local school option (Hill, 2006). In the last couple of decades, there has been a significant rise in the number of host nation students who have enrolled in the international school setting. This decision is based on the perception that attending international schools provides students with a global perspective that gives them a competitive advantage thereby increasing the possibility of gaining admission into an international university, or due to dissatisfaction with the local school options (Hill, 2006; Lowe, 2000).

While many host nation families desire to enroll their children in the international school setting, the high tuition cost associated with most international schools results in only those students from wealthy families being able to enroll (Dixon & Hayden, 2008; Hill, 2006). This, coupled with the fact that these host nation students tend to spend a vast amount of time participating in extra-curricular school activities on the international school campus, results in many of host nation students finding it difficult to relate with members of their heritage culture (Dixon & Hayden, 2008). Host nation students also have a difficult time identifying with their international CCK peers as a result of their different cultural backgrounds and experiences (Cottrell, 2007). Despite these difficulties, host nation students often serve as ambassadors between the local culture and the different cultures represented by their international classmates (Hill, 2006).

International School Setting and Environment

The English-medium, international school setting has become the educational choice for many cross-cultural families around the globe (Grimshaw & Sears, 2008). In 2013, there were over 6000 English-medium international schools worldwide serving more than 3 million students (ISC Research, 2013). Despite the abundance and popularity of the international school, trying to define them is very difficult due to several factors (Simandiraki, 2006). International schools can have a student body population ranging from less than 20 students to greater than 4500 students. Some international schools house all students (elementary through secondary) on one campus, while others have separate campuses for each of the school divisions. International schools also differ in regards to whether they are co-ed or same sex, day schools or boarding schools, faith-based or non-faith based, and accredited or not (Blandford & Shaw, 2001; Hayden, 2006).

Due to the independent nature of the international schools, each school is free to choose whether to seek accreditation and to choose which accreditation organization(s) it will use for accreditation (Fertig, 2007). Schools that follow a European curriculum tend to receive their accreditation from organizations such as the European Council of International Schools (ECIS) or the Council for International Schools (CIS), while schools that align their curriculum with a US-based curriculum tend to be accredited through the North Central Association (NCA), the Southern Association of Colleges and Schools (SACS), or the Western Association of Schools and Colleges (WASC) (Fertig, 2007). Additionally, faith-based international schools can also be accredited through organizations such as the Association of Christian Schools International (ACSI) and Christian Schools International (CSI). Each accreditation agency has unique criteria that schools seeking their accreditation must meet.

Although there are numerous types of international schools, there are several key features that can be used to describe the majority of international schools. Most international schools are private, tuition charging schools (Dixon & Hayden, 2008) that were originally started to serve international families working outside of the passport country (Grimshaw & Sears, 2008; Hill, 2006). The international school setting is important to the CCKs because it tends to become a place where they feel as if they belong (Fail, 1996) because these schools promote international understanding (Grimshaw & Sears, 2008). They provide a support system of peers with similar experiences (Dixon & Hayden, 2008). These schools also use the English medium in the classroom, and their implemented curriculum usually differs from the curriculum that is used in the local schools within the host country (Cottrell, 2007; Dixon & Hayden, 2008). International schools experience a yearly turnover of both students and faculty (McLachlan, 2007; Odland & Ruzicka, 2009). This continual turnover results in a culturally diverse classroom environment (Hill, 2006), which can either help enrich the learning environment, or it can lead to cultural conflicts (Al-Issa, 2004).

International schools share a common goal of providing a quality education to both local and ex-patriot students (Grimshaw & Sears, 2008), hence it is crucial that international school educators better understand how to enhance student academic achievement. As motivation has been identified as one of the strongest predictors of academic achievement and grade point average (McClure et al., 2011), international school educators need to better understand the variables that are associated with motivation.

Achievement Goal Orientation Theory

In order for any school, international or national, to accomplish the goal of educating students, it is imperative that educators consider the students' achievement goal orientation

(motivation) because students who believe they can succeed are more likely to engage in a learning activity than those who doubt their academic ability (Wigfield & Cambria, 2010). Similarly, student academic motivation has been shown to be a significant predictor of academic achievement (Ames, 1992; Caldwell & Obasi, 2010; Tsai & Kuo, 2008; Urdan, 2004). Caldwell and Obasi (2010) report a significant, positive relationship between being motivated towards academic achievement and grade point average (GPA). Likewise, students who exhibited an inclination towards learning were found to perform better on standardized and classroom assessments than students who were not as motivated (Tsai & Kuo, 2008).

Each student in the classroom has a personal achievement goal orientation, either mastery goal oriented (intrinsically oriented) or performance goal oriented (extrinsically oriented) (Ames, 1992; Deci & Ryan, 2000), which serves as their primary academic motivation. Students who are mastery goal oriented tend to be motivated to learn in the classroom setting due to an inherent interest in the topic being discussed (Ames, 1992), which often results in deeper learning where the students are able to apply abstract concepts (Tsai & Kuo, 2008). Students with a performance goal orientation tend to be motivated to learn in order to receive praise and recognition (performance approach goal orientation) or to avoid punishment or looking incompetent (performance avoidance goal orientation) (Ames, 1992; Deci & Ryan, 2000; Elliot & Harackiewicz, 1996). Students who are extrinsically oriented generally emphasize memorizing information and excelling on examinations instead of learning for the sake of gaining knowledge and information (Tsai & Kuo, 2008). As has been shown, student academic motivation plays a significant role in academic achievement, and numerous variables can influence academic motivation.

Demographic and Experience Factors that Influence Academic Motivation

Research has shown there are several demographic and experience variables which need to be considered when investigating CCK academic motivation. The relevant demographic information for this study was CCK gender and CCK grade level. Socio-economic status was not included in the demographic information, as the majority of the students enrolled in international schools fall into the same socio-economic status (Dixon & Hayden, 2008). In addition to collecting demographic data, information about the CCKs' life experiences (passport region and the number of international moves they have made) was also collected.

Gender

Hui et al. (2011) identified gender as a significant predictor of academic motivation while investigating whether filial piety could be used to predict academic motivation in Chinese students. Similarly, Van Houtte (2004) found that male high school students in Belgium underachieved more often and were less academically motivated than their female peers. While investigating gender differences among CCKs, Gerner and Perry (2000) found that female CCKs from the U.S. preferred group-oriented school assignments, while their male counterparts were more task oriented and wanted assignments with clear objectives that could be independently accomplished. This difference was attributed to the female CCKs being more receptive towards living overseas and to interacting with new people, languages, and cultures than male CCKs (Gerner & Perry, 2000).

Grade Level

In addition to the confounding role that gender plays on academic motivation, the CCKs' grade level also needs to be taken into consideration. Keklík and Erdem-Keklík (2012) found that 11th graders were significantly more motivated in the classroom than 9th and 10th graders in

Turkey. Tang and Neber (2008) found a similar trend amongst German students where the12[th] graders exhibited a stronger motivation towards learning chemistry than their 10th grade countrymen. However, American and Chinese 12th graders displayed a decline in academic motivation towards learning chemistry when compared to 10th graders (Tang & Neber, 2008). Korur and Eryılmaz (2012) found that 11th grade students were more extrinsically motivated in the classroom by their teachers' personality, classroom management style, and teaching techniques than were 9th and 10th grade students. The influence of grade level on motivation has also been reported in middle school students as well. Sun, Ding, and Chen (2013) purported that as US and Chinese middle school students progress from 6th grade to 8th grade, they experience a decrease in the belief that they can successfully complete upcoming assignments. Similarly, Rosário et al. (2013) support the finding that student academic motivation levels and commitment to completing assignments decreases as they progress through 7th to 9th grade.

Passport Region and International Moves

There are also several variables unique to the CCK population that should be considered when investigating academic motivation; for example, the number of international moves a CCK has made (Gerner et al., 1992; Pascoe, 1994). Schuarzberg and Parenteau (2004) found that while the number of international moves was not the most important factor for academic performance, it did influence social well-being, adaptation, and academic achievement. Clifton (2004) purports that international moves result in having to adjust to different standards of assessment and teaching methodologies, as well as developing new peer groups. Studies have also shown that students from different countries or passport regions exhibit significantly different types of academic motivation (Kelmke & Tuyet, 1999; Larson & Verma, 1999).

Van Hook (2011) investigated how different themes and images influenced academic motivation amongst university students from 35 different countries. Themes such as babies, relationships, and sports were found to have a positive influence on student motivation for all students regardless of their passport region, while themes such as humor, nationalism, and sex had a negative influence on student motivation depending on passport region. Larson and Verma (1999) purported that when students from different passport regions are compared, they display different levels of academic motivation, academic commitment, and effort while doing schoolwork, which may be due to their cultural identity.

Individualism and Collectivism

Hofstede (1980) has proposed that an individual's cultural identity greatly influences how people interact with other members of society, how they make choices, what they consider to be of value, what knowledge and information is important, and how they can contribute to society. People from individualistic cultures, such as Western cultures like the United States and European countries, tend to be more autonomous and independent in their daily routines and decision-making. Conversely, people from collectivistic cultures, like those from Asian cultures, prefer to exhibit interdependence on the groups and people within their societal groups (Hofstede, 1980, 2011; Triandis, 2001; Triandis & Gefland, 2012). However, in applying this theory, Konsky, Blue, Eguchi, and Kapoor (1999-2000) warn that no society or people group should be strictly labeled as being either individualistic or collectivistic. Instead, people within a particular society should be considered as most closely identifying with or showing preferences for one of the two cultural identities. While a particular label may be helpful for discussing cultural trends and behaviors, it is highly probable that the population under study, CCKs may identify themselves as either individualistic or collectivistic. As cross-cultural kids spend time

outside of their passport culture, their cultural identity is influenced by their host culture, the people with whom they interact on a daily basis, the school environment where they learn, their passport culture, and the international moves they have made (Fail et al., 2004; Ginsberg, 2009; Hoersting & Jenkins, 2011; Pollock & Van Reken, 1999; Sears, 2011; Sussman, 2000; Urdan & Maehr, 1995).

Each of the preceding cultural influences can potentially add a new dimension to how CCKs make sense of their identity and can potentially lead to the development of an ambiguous cultural identity (Hoersting & Jenkins, 2010; Pollock & Van Reken, 1999). As a result, some CCKs develop a cultural homelessness framework, where they lack a sense of belonging to any particular cultural or societal groups due to their repeated exposure to multiple cultures during their developmental years (Vivero & Jenkins, 1999). Becoming "culturally homeless" is problematic because it often results in a cultural disconnect from other members of their community groups, which hinders the CCK's developing cultural identity (Hoersting & Jenkins, 2011). Several variables have been identified within CCKs who have developed a cultural homelessness framework: making an international move at a young age, the length of time the CCK has spent abroad, and the more languages the CCK speaks (Hoersting & Jenkins, 2010). This cultural disconnect is further complicated by the reception that CCKs receive from their friends and acquaintances upon returning to their passport cultures. CCKs from collectivistic cultures often receive negative treatment upon returning to their heritage culture because they are culturally different, while CCKs from individualistic cultures are viewed as valuable due to their unique experiences (Cottrell, 2007; Pollock & van Reken, 1999). Thus, CCKs may identify themselves as being individualistic, collectivistic, or somewhere along the continuum of Hofstede's (1980) cultural identity construct. Due to their unique experiences, their cultural

identity as defined by Hofstede (1980) may or may not influence their academic achievement, as has been shown in research in other populations.

Individualism/Collectivism and Academic Motivation

Numerous research studies have demonstrated that Hofstede's (1980) collectivistic and individualistic labels can help educators better understand students' academic achievement and motivation. Urdan and Maehr (1995) purport that individualistic cultures tend to define academic achievement in terms of personal accomplishment and self-fulfillment, while collectivistic cultures tend to define academic achievement in terms of group success and group survival. As the key element of individualism is independence and autonomy, these students tend to be driven by the pursuit of happiness, social acceptance, self-reliance, and self-advancement regardless of the impact their choices have on other members of society (Dundes et al., 2009; Li, 2003).

Students from collectivistic cultures, which emphasize group interdependence and relationships, tend to be academically motivated by both filial piety (Hui et al., 2011) and academic success, such as passing a test or earning a good grade on an assignment,(Li, 2003; Tsai & Kuo, 2008). Filial piety has been related to academic motivation, where to go to college, and what career to choose because these children desire and are expected to take care of their parents as they get older in life (Dundes et al., 2009; Hui et al., 2011). While investigating the out-of-school activities of U.S. and South Korean students, Won and Han (2010) illustrated this. In their study, both U.S. and South Korean students spent a great deal of their leisure time playing video games and playing with friends. While a negative relationship existed between the U.S. students' academic achievement and time spent playing with peers, a positive relationship

was found to exist between playing with friends and academic achievement for South Korean students (Won & Han, 2010).

Cultural identity has been associated with student academic motivation (Deci & Ryan, 2000; Lillemyr et al., 2010). While examining 10th and 12th grade high school students from the United States, China, and Germany who were studying within their home country, Tang and Neber (2008) found a relationship between cultural identity and academic motivation. In a study on the relationship between cultural identity and academic motivation amongst Japanese undergraduates, Tanaka and Yamauchi (2004) found that individualistic students were more inclined to exhibit mastery goal orientation, while collectivistic students were more likely to exhibit performance-approach or performance-avoidance goal orientation. Urdan (2004) found that first and second generation, high school students in the United States who had migrated from collectivistic societies tend to display a performance approach goal orientation. Although the findings differed in terms of the types of motivation that were associated with the different types of cultural identities, the studies consistently demonstrated a relationship between cultural identity and academic motivation among high school and college students in monocultural classrooms.

Despite these findings, Tweed and Lehman (2002) purport that educators tend to underestimate the role cultural identity plays in the culturally-diverse classrooms which house students with different cultural identities who have different goals, expectations, and definitions for academic achievement (Deci & Ryan, 2000). In their investigation of the cultural and societal norms of Eastern and Western culture students, Lepper, Corpus, and Iyengar (2005) found that it becomes increasingly difficult to determine what constitutes mastery goal and performance goal orientation when cultural diversity is taken into consideration. For instance,

motivational techniques that a Western student might consider as performance goal oriented, such as trying to please one's teacher or parents, might be considered as mastery goal oriented motivation to an Eastern student. This difference was attributed to the concept of filial piety, where the students felt an internal obligation to please their parents and teachers, which resulted in their being motivated to excel. Eastern students exhibited a fluid overlap of mastery (they wanted to understand and learn) and performance goal (they wanted to please their parents) orientations in the classroom environment. Conversely, a negative relationship was found between trying to meet teacher expectations and mastery goal orientation for Western students. Despite these apparent connections, an individual's cultural identification does not necessitate that he or she conforms to any particular goal orientation. As was discussed previously, cultural identity is influenced by one's passport culture, host culture, daily interactions with others, school environment, and the number of international moves made (Abd-El-Fattah & Patrick, 2011; Fail et al., 2004; Ginsberg, 2009; Hoersting & Jenkins, 2011; Pollock & Van Reken, 1999; Sears, 2011; Sussman, 2000; Urdan & Maehr, 1995). This suggests that trying to identify CCKs' goal orientation based solely on their cultural identity could be futile because this relationship is difficult to define for cross-cultural students; instead educators need to also consider other variables that influence academic motivation.

Motivational Conflict Theory/Value Orientation

While cultural identity can be used to describe large cultural groups, within each cultural group one can find individuals with different personal value orientations based on their current life situation and circumstances (Hofer, 2007; Hofstede, 2011). Achievement value orientation is when people desire to succeed in their endeavors for personal gain, and social well-being value orientation is when people are primarily concerned with their personal relationships (Hofer,

2007; Hofer et al., 2007; Kuhnle et al., 2010). These different personal value orientations can be better understood using Hofer's (2007) motivational conflict theory, which states that when students are presented with a new activity or information, they experience an internal, motivational conflict where they must choose between participating in the new learning activity or continuing with their regular routine. For instance, when given the opportunity to study for an upcoming test, a student must decide whether to study for the test or do something else, such as watch television or talk on the phone with friends. Hofer's (2007) motivational conflict theory asserts that achievement value oriented students are more likely to choose to study for the test because they perceive this activity will help them achieve a higher score on the test. Conversely, social well-being value oriented students are more likely to choose the activity that has the most social benefit, such as watching television or talking on the phone with their friends, because these types of activities help them build relationships with others (Hofer, 2007).

The two factors that influence personal value orientation are parental and cultural heritage (Deci & Ryan, 2000; Kilian, Hofer, & Kuhnle, 2010) and peer expectations (Deci & Ryan, 2000; Hofer et al., 2011). Kilian et al. (2010) found that many children share value orientations that are similar to their parents as a result of cultural value transmission. Hofer (2007) suggests that this value transmission results in students from individualistic cultures being social well-being oriented, while students from collectivistic cultures tend to be more achievement value oriented. Western cultures tend to place more social expectations on students, such as participating in sports and theatrical performances and working part-time jobs (Won & Han, 2010), while eastern cultures tend to emphasize extracurricular studying (Tsai & Kuo, 2008). Peers can also influence students, and in the international school environment CCKs can be influenced by peers from numerous cultures (Hofer et al., 2011). As such, it is

possible that some students will break from the cultural norm and choose a different value orientation given the influence of their peers who are from a number of different cultures and who hold different values.

Peer pressure can influence students to choose a personal value orientation that is counter to their normal value orientation (Deci & Ryan, 2000). Masten, Juvonen, and Spatzier (2009) found that as students get older, their peer groups have a stronger influence on their personal value orientation. Similarly, many high school students choose to follow their peer groups when presented with a motivational conflict in the classroom instead of listening the advice of their parents and teachers (Hofer, 2007). Kilian et al. (2013) suggest that the individual student's personal value orientation is a conglomeration of their parents' (heritage culture) and their peer groups' value orientations. This suggestion aligns with Marcia's (1980) assertion that the identity building stage is complex and ambigiuous with adolesents either choosing their own values, incorporating previously taught parental-based values, or allowing external pressures, like peer-pressure, to influence their identity and values. As a result, it is foreseeable that students who would normally be expected to have an achievement value orientation, such as those from Eastern cultures, could display a social well-being orientation if their classmates exhibit a social well-being value orientation in the classroom and vice-versa (Matthews, Lietz, & Darmawan, 2007; Schmid et al., 2005). This blending of cultural background and interactions with peers from differing backgrounds may result in CCKs developing a personal value orientation, as defined by Hofer's (2007) motivational conflict theory, that may or may not have an influence on their academic achievement as has been shown in research in other populations.

Value Orientation and Academic Motivation

When individuals are presented with a new learning opportunity, they experience a motivational conflict where upon they must decide whether to participate in this new learning opportunity or to continue with some other activity (Hofer, 2007). Numerous studies have demonstrated how Hofer's (2007) motivational conflict theory can help educators understand how value orientation can influence academic motivation. Students with an achievement value orientation tend to be motivated to participate in academic activities that will help them to receive higher grades, while social well-being value oriented students tend to be motivated to participate in activities that contain a social element, even if these activities have a negative influence on their academic achievement (Hofer et al., 2007; Kuhnle et al., 2010; Schmid, Hofer, Dietz, Reinders, & Fries, 2005).

When trying to understand the role that personal value orientation plays within the CCKs' academic motivation, the influence of culture and peer expectations are potentially enhanced. CCKs not only have a heritage culture, they also have numerous other host cultures and bridging cultures that can potentially influence their personal value orientation. As a result, many of the stereotypical personal value orientation labels that tend to be assigned to members of different cultural groups do not necessarily fit when applied to CCKs (Berndt & Keefe, 1995; Bodas & Ollendick, 2005). For instance, the general perception is that Asian students are overtly motivated by achieving academic excellence in the classroom, while US students tend to be more concerned with social well-being. However, these stereotypes have been shown to be more closely aligned to the expectations of their heritage cultures than they are to the personal value orientations of individual CCKs as a result of their unique cultural experiences (Bodas & Ollendick, 2005). Additionally, Berndt and Keefe (1995) found that CCKs become more

academically motivated when their peer group expresses similar motivation, while these same students tend to misbehave when their peer groups are being disruptive. Due to the unique experiences of the CCK in regards to their cultural heritage and peer expectations, these students may have unexpected personal value orientations which could lead to numerous motivational conflicts within the multicultural classroom environment. As a result, educators need to also consider personal value orientation when attempting to identify approaches that will academically motivate CCKs.

Acculturation

Due to the CCKs' transient lifestyle, one must also consider that these students are constantly working through the process of acculturation. Some CCKs will make a relatively quick and seamless transition into their new cultural setting, while others will find the acculturation process considerably more difficult (McLachlan, 2008). The classic definition of acculturation was coined by Redfield, Linton, and Hershovits (1936): "acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups" (p. 149). Graves (1967) introduced psychological acculturation to refer to the psychological and behavioral changes that individuals experience when they have sustained firsthand interactions with people from other cultural groups (Graves, 1967). Berry and Kim (1988) expanded this definition to include the efforts that people make at maintaining a connection with their heritage culture while also developing relationships with their new host culture.

Individuals undergoing the acculturation process experience acculturative stress, which can result in numerous psychological and sociocultural deficiencies (Berry, 1997; Ward &

Kennedy, 1994). Psychological deficiencies are conflicts related to values, self-esteem, cognitive ability (Ward & Kennedy, 1994), and academic performance (Berry & Kim, 1988), while sociocultural deficiencies refer to problems with social interactions, performing daily tasks, and familial relationship problems (Berry & Kim, 1988; Ward & Kennedy, 1994). In response to these deficiencies, most people experiencing acculturation will seek to find an acculturation strategy that best fits their situation. Berry (1997, 2005) suggests there are four acculturation strategies that people can utilize; integration, marginalization, separation, and assimilation. Integration is the process where the person believes that both cultures are relevant; therefore, a connection needs to be maintained with both. This can be challenging because the cultures can be vastly different, however, this strategy has been shown to be the best approach available for dealing with acculturation (Eyou, Adair, & Dixon, 2000; Ying, 1995). Marginalization is the strategy where the person decides to reject both his heritage culture and the new host culture. The third strategy is separation, whereby the person rejects the new culture in favor of his heritage culture. This usually occurs when the CCK comes from a family that has strong ties to their heritage culture, or who believes that the placement in the new culture is going to be temporary (Cheung-Blunden & Juang, 2008; Paterson & Hakim-Larson, 2012; Ward & Kennedy, 1994). The final acculturation strategy is assimilation, which occurs when a person chooses to reject the heritage culture in favor for the new culture. This strategy can cause a cultural identity crisis for the person as they struggle to become a member of the new society while trying to ignore what they have been taught as cultural relevant and important (Cheung-Blunden & Juang, 2008; Ward & Kennedy, 1994).

In their investigation into college students from immigrant families, Schwartz et al., (2013) purported that students who are able to relate to both individualistic and collectivistic

cultures experience an easier acculturation process, where they report being happy with their life and situation, and they feel they can meet the demands of their daily activities and they have a sense of purpose. Additionally, a strong positive relationship was found between identifying with any group – one's home culture, the host culture or both – and a feeling of purpose and the ability to achieve one's potential. In light of fact that all CCKs experience levels and types of acculturation as they enter into new host countries process, the acculturation construct, as presented by Berry (1997), may or may not influence their academic motivation as has been shown in other populations.

Acculturation and Academic Motivation

Students who transition into new cultures during their formative childhood years experience numerous acculturative stresses, which can have a direct influence on academic performance (Cheung-Blunden & Juang, 2008). Some CCKs have exhibited a high level of academic motivation and achievement upon leaving their heritage country (Matthews et al., 2007). Similarly, students who had a positive experience with the acculturation process were found to perform better in the classroom (Cheung-Blunden & Juang, 2008; Kao & Thompson, 2003; Nguyen, Messé, & Stollak, 1999; White & Kaufman, 1997). However, Cheung-Blunden and Juang (2008) found a negative relationship between students who experienced a difficult acculturation process and academic achievement and classroom misbehavior. Chuang (2011) found a significant negative relationship between the periods of time a student has been in the acculturation process and how they perceive the purpose and methods of learning. For instance, when Chinese college students first entered the acculturation process into the American culture, they viewed education as a life-long goal designed to better them as individuals and society as a whole. As these students spent more time being acculturated, they began to desire immediate

feedback from educators and understood the education process as an individualistic endeavor (Chuang, 2011). Likewise, Paterson and Hakim-Larson (2012) found a negative relationship between Arabic students who utilized the separation strategy to cope with their acculturation and school satisfaction. These students may have found the learning process in their new culture difficult because they were expected to question and debate concepts that were presented in class which clashes with their heritage cultural values.

Nilsson, Butler, Shouse, and Joshi (2008) found that the acculturation process for Asian college students studying in the United States was influenced by a perceived prejudice in the classroom. This perceived prejudice caused the students to feel unaccepted or overlooked due to their nationality, which resulted in a strong, negative relationship between acculturation and academic stress. Additionally, it has been shown that classrooms that emphasis academic achievement create a hostile environment towards students in the acculturation process because the native students were more concerned with their personal achievement than they were with interacting with new students (Kouli & Papaioannou, 2009). In light of these studies, it is important to consider where CCKs are on the acculturation spectrum when trying to understand their academic motivation in the international school setting, as acculturation has been shown to influence academic achievement and motivation.

Summary

This study is grounded in theory and research addressing the complex relationships that exist among cross-cultural kids' academic motivation, cultural identity, personal value orientation, and acculturation. Ames' (1992) achievement goal orientation theory addresses the students' academic motivation, which can be categorized as either mastery goal oriented, performance approach goal oriented, or performance avoidance goal oriented. Hofstede's (1980)

individualism and collectivism construct has been used to link cultural identity with academic achievement and motivation (Urdan & Maehr, 1995). As CCKs encounter new cultures, new layers are added to their cultural identity, which can lead to an identity conflict and ambivalence towards their personal cultural identity (Hoersting & Jenkins, 2010; Pollock & Van Reken, 1999). This cultural ambiguity leads to cross-cultural students whose academic achievement and motivation readily fluctuates (Deci & Ryan, 2000).

Similarly, Hofer's (2007) motivational conflict theory has been used to relate academic motivation with one's personal value orientation. An individual's personal value orientation is influenced by two external factors, (a) cultural expectations (Deci & Ryan, 2000; Kilian et al., 2010) and (b) peer pressure (Deci & Ryan, 2000; Hofer et al., 2010). Both of these factors play a significant role in the CCKs' mobile lifestyle and experiences, which leads CCKs to express personal value orientations that are counter the cultural norm for their cultural identity (Schmid et al., 2005). Berry's (1997) acculturation construct has also been used to link the acculturation phenomenon with academic motivation amongst CCKs. The transitional lifestyle of the CCK results in acculturative stress, which can greatly influence their academic performance (Berry & Kim, 1988; Cheung-Blunden & Juang, 2008).

As has been discussed, as people become more culturally diverse, their cultural identity is weakened (Denman & Hilal, 2011; Hofstede, 1980), their personal value orientation is skewed (Deci & Ryan, 2001; Hofer, 2007), and they are exposed to numerous acculturative stresses (Berry & Kim, 1988). These complications are enhanced when one considers life experiences of the CCK population. In addition to facing each of these challenges in their new host culture, they also encounter the added dimension of receiving an education at an international school, which serves as an additional cultural climate that can potentially influence their academic

motivation, cultural identity, value orientation, and acculturation. While certain aspects of academic motivation can be related to cultural identity using Hofstede's (1980) individualism and collectivism construct, personal value orientation as expressed by Hofer's (2007) motivation conflict theory, and acculturation through Berry's (1997) acculturation framework, no one theory or model adequately explains which of these variables is the best predictor of CCK motivation in the international school environment. Due to these limitations, this research aims to identify the predictive relationships that exist between cultural identity, personal value orientation, acculturation, and academic motivation in order to allow international school educators to better understand how to properly motivate the CCKs in their classrooms.

CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this predictive, correlational study was to test the construct of individualism and collectivism and motivational conflict theory as they relate the cross-cultural student's cultural identity, personal value orientation, and acculturation to academic motivation, while controlling for the student's gender, grade level, number of years living in the host country, passport region, and the number of international moves the student has made. Cross-cultural high school students in grades 10-12 enrolled at an international school in Thailand were surveyed to measure the relationship the predictor variables had on student academic motivation. A hierarchical multiple regression analysis was utilized to show the individual relationships between each of the predictor variables and the criterion variable. This chapter discusses the experimental design, the research question and hypotheses, the participants, and the setting for the study. The instrumentation, experimental procedures, and data analyses are also described.

Design

A predictive, correlational research design was employed for this quantitative study in order to investigate the relationship between cross-cultural students' academic motivation and cultural identity, value orientation, and acculturation while controlling for demographic and experience variables. This research design was chosen because it allowed for any relationships that exist between the variables to be identified. The correlational design was appropriate because no treatments were applied to any of the participants; instead, existing conditions were investigated in order to explain any potential relationships that might exist amongst the variables (Warner, 2013).   The use of a predictive, correlational design was supported by the fact that it

has been used by various researchers in similar studies (Caldwell & Obasi, 2010; Cheung-Blunden & Juang, 2008; Hofer et al., 2011; Kilian et al., 2013; Urdan, 2004).

Questions and Hypotheses

The research questions and hypotheses for this study were:

RQ1: Will there be a statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

$H_{1.0}$: There will be a statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

$H_{1.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will significantly contribute to the model for predicting cross-cultural high school students' mastery-oriented academic motivation.

$H_{1.2}$: There will be a statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

$H_{1.3}$: There will be a statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

$H_{1.4}$: There will be a statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

RQ2: Will there be a statistically significant relationship between cross-cultural high school students' performance-approach oriented academic motivation and their cultural identity,

value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

$H_{2.0}$: There will be a statistically significant relationship between cross-cultural high school students' performance-approach oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

$H_{2.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will significantly contribute to the model for predicting cross-cultural high school students' performance-approach oriented academic motivation.

$H_{2.2}$: There will be a statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

$H_{2.3}$: There will be a statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

$H_{2.4}$: There will be a statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

RQ3: Will there be a statistically significant relationship between cross-cultural high school students' performance-avoidance oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

H$_{3.0}$: There will be a statistically significant relationship between cross-cultural high school students' performance-avoidance oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{3.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will significantly contribute to the model for predicting cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{3.2}$: There will be a statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{3.3}$: There will be a statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{3.4}$: There will be a statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

Alternatively, the following were the null hypotheses:

H$_{01.0}$: There will be no statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{01.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural high school students' mastery-oriented academic motivation.

H$_{01.2}$: There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{01.3}$: There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{01.4}$: There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation.

H$_{02.0}$: There will be no statistically significant relationship between cross-cultural high school students' performance-approach oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{02.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural high school students' performance-approach oriented academic motivation.

H$_{02.2}$: There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{02.3}$: There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{02.4}$: There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation.

H$_{03.0}$: There will be no statistically significant relationship between cross-cultural high school students' performance-avoidance oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).

H$_{03.1}$: The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{03.2}$: There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{03.3}$: There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

H$_{03.4}$: There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation.

Participants

A convenience sample of 110 cross-cultural students was taken from a population of high school students enrolled in grades 10-12 at a mid-sized (less than 1000 students, K-12) private, international, religion-based, Western Association of Schools and Colleges (WASC) accredited

school in Bangkok, Thailand. This sample was selected because it was convenient and accessible to the researcher (Gall et al., 2007).

The total high school student enrollment for the 2014-2015 school year was 340 students representing 28 nationalities. All of these high school students were invited to participate in this study, however, only students in grades 10-12 agreed to participate. Recruitment of participants for this study was conducted through a five-minute announcement about the study that was presented to parents and students at the school's open-house assembly. At the conclusion of the announcement, students were invited to participate in the study and letters of assent/consent were distributed by the primary researcher and select secondary homeroom teachers. The primary researcher, the high school principal, and the secondary secretary were stationed at the three auditorium exits to collect completed letters of assent/consent from the students and parents as they left the open house. The primary researcher collected the completed forms from the principal and secretary once everyone had exited the auditorium. Students and/or parents who needed additional time to decide whether to participate were allowed to return their letters to the primary researcher or secondary secretary during the three weeks that followed the recruitment presentation. Additional recruitment was done by way of sending a letter to all parents who did not attend open house by email that detailed the purpose of the study and how the results would be used. These parents were also provided with copies of the letters of assent/consent, which they were asked to complete and return to the primary researcher. A follow-up announcement was made during the next two high school chapel periods, and additional letters of assent/consent were available for the students to carry home to sign along with their parents. All students who returned the letters of assent/consent within three weeks of the initial announcement were chosen to participate in this study.

An estimation of the needed sample size using the equation $N \geq 104 + k$ (N is the minimum sample size and k is the number of predictor variables) indicated that a minimum sample size of 107 was needed for the chosen design and analysis (Warner, 2013). One hundred ten participants were secured for the study; descriptive data for this sample population is presented in Table 3.1.

Table 3.1

Frequency and Percent for Control Variables

Characteristic	Category	*n*	%
Gender	Female	61	55.5
	Male	49	44.5
Passport Region	Australia	1	.9
	Central Asia	17	15.5
	India	7	6.4
	North America	7	6.4
	South America	1	.9
	Southeast Asia	76	69.1
	Western Europe	1	.9
Years Living in Thailand	1	2	1.8
	3	2	1.8
	4	4	3.6
	5	4	3.6
	7	1	.9
	9	2	1.8
	10	6	5.5
	12	3	2.7
	13	3	2.7
	14	8	7.3
	15	11	10.0
	16	26	23.6
	17	25	22.7
	18	13	11.8
Number of International Moves	0	23	20.9
	1	50	45.5
	2	13	11.8
	3	12	10.9
	4	5	4.5
	5	3	2.7
	6	1	.9
	10	3	2.7

Setting

Cross-cultural students in grades 10-12 from a mid-sized (less than 1000 students, K-12) private, international, religious, Western Association of Schools and Colleges (WASC) accredited school in Bangkok, Thailand were used for this study. This school was used because it was convenient and accessible (Gall et al., 2007). The school is an open-enrollment Christian school, meaning that students from any faith background are allowed to enroll. During the 2014-2015 school year only 20% of the student body were from Christian families; the remainder of students were from families of various faith systems, such as Buddhism, Hinduism, Jainism, Sikhism, Islam, Agnosticism, and Atheism. An American-based curriculum has been implemented, and currently there are ten Advanced Placement courses offered each year. All of the teachers, with the exception of Thai language teachers, are required to hold at least a bachelor's degree from an accredited, western-based university. Thai language teachers must be Thai nationals who have graduated from an accredited Thai university with a degree in teaching Thai language/culture. There were 36 high school teachers, 25 from the United States, four from Thailand, three from Canada, and one each from China, South Korea, New Zealand, and South Africa. The total student population for the 2014-2015 school year was 944 students in grades K-12, with 248 students in grades 10-12. The average number of high school students per grade was 85 students. The high school student body was comprised of students from 28 different nationalities representing numerous different faith backgrounds.

The dominant student passport region at this school is Asian. While it might seem that all people Asian descent are culturally similar, this is not the case. As was shown in table 3.1, this study's student population was comprised of students from the three primary regions of Asia (Central Asia, India, and Southeast Asia); however each of these regions have vastly different

cultural heritages, political structures, religious faith systems, familial expectations, and socio-economic standards. Similarly, within the Southeast Asian region, there are numerous cultural, socio-economic, political, and worldview differences (Keyes, 1995). Due to these differences, when families move into Bangkok there is a tendency to congregate with people who are culturally similar. For instance, Bangkok has many neighborhoods that are predominantly Korean, Indian, Chinese, expatriate, etc… Within these neighborhoods, the local eateries and shops cater to the cultural expectations of the specific cultural groups. Likewise, houses of worship based on the primary religious convictions of the local cultural groups tend to be centered in the different neighborhoods. These monocultural neighborhoods allow families to maintain a close connection to their cultural heritage, while limiting the amount of interaction with individuals from other cultures. As a result, many of the non-Thai students who spend most of their developmental years living in Thailand never learn the Thai language and do not regularly interact with people of other nationalities, except when they go to school.

This cultural disconnect allows many students to live in Thailand without ever embracing the Thai culture and lifestyle. The Thai culture tends to center around two Thai words – *mai pen rai* and *sanuk* – which do not necessarily resonate with students from other cultures. *Mai pen rai* implies the belief that things will eventually work out, so worrying about them is pointless. The concept of *sanuk* suggests that life should be enjoyed (Young, 2013). These two cultural concepts result in a society that tends to be easygoing, especially in regards to the academic classroom (Fry, 2002), which stands in direct conflict with many of the other Asian cultures and the American-based international schools that focus on hard work and academic excellence.

The student survey was hosted by Google Drive and taken via personal technological devices (computer, iPad, tablet, smartphone) during two consecutive homeroom periods. The

school was a "bring your own device" school, so each student had equal access to the survey. There was a weekly 40-minute homeroom period designed to allow teachers a chance to build relationships with students outside of the tradition classroom environment. The students were placed into homeroom classes based on their grade level. This period was also used to distribute important school-wide, or grade-wide, information. As this period had become a 'catch-all' for school activities, it was easy to integrate the student survey into the homeroom setting. The use of the online, anonymous survey allowed students to participate without any outside influences, which hopefully increased the honesty and accuracy of student responses (Kays, Gathercoal, & Buhrow, 2012).

<div align="center">**Instrumentation**</div>

Data was collected through the use of three instruments; the Portrait Values Questionnaire (PVQ), the Socio-Cultural Adaptive Scale (SCAS), the Patterns of Adaptive Learning Scale (PALS2000), as well as a demographic survey. A Cronbach's alpha threshold of .70 will be used to determine the reliabilities for each of the scales utilized in this study based on the accepted threshold of .70 to .95 (Tavakol & Dennick, 2011).

Predictor Variables

Cultural identity and personal value orientation. The Portrait Values Questionnaire (PVC) is a 40 item instrument that measured the CCKs' cultural identity (individualistic versus collectivistic) and personal value orientation (academic versus social well-being). This was accomplished by presenting participants with a description of a person and then asking them to rate how much the person being described resembles themselves using a six item Likert-type scale where 1 represents "very much like me" and 6 represents "not like me at all." The mean Cronbach's alpha (α) for the PVQ was only 0.55 due to the small number of items for each scale

(Schwartz et al., 2001). However, Schwartz (2012b) suggested this low value can be overcome by combining the 10 categories into the four subscales – "openness to change", "conservation," "self-enhancement," and "self-transcendence," which was the approach used in this study. As can be seen in Table 3, the 'openness to change' subscale contained two categories: stimulation and self-direction while the 'conservation' subscale contained three categories: conformity, security, and tradition. Likewise, Table 4 shows the 'self-enhancement' subscale contained the power and achievement categories, while the 'self-transcendence' subscale contained the universalism and benevolence categories (Hofer et al., 2011; Schwartz, 2012; Schwartz, et. al, 2001).

Table 3

PVQ Categories for 'Openness to Change' and 'Conservation' Subscales Used to Measure Cultural Identity.

Openness to Change (Individualism)	Instrument Question Numbers	Conservation (Collectivism)	Instrument Question Numbers
Stimulation	6, 15, 30	Conformity	7, 16, 28, 36
Self-direction	1, 11, 22, 34	Security	5, 14, 21, 31, 35
		Tradition	9, 20, 25, 38

Table 4

PVQ Categories for 'Self-Enhancement' and 'Self-Transcendence' Subscales Used to Measure Personal Value Orientation.

Self-Enhancement (Achievement Value Orientation)	Instrument Question Numbers	Self-Transcendence (Social Well-Being Value Orientation)	Instrument Question Numbers
Power	2, 17, 39	Universalism	3, 8, 19, 23, 29, 40
Achievement	4, 13, 24, 32	Benevolence	12, 18, 27, 33

The "openness to change" and "conservation" subscales were used to measure the CCKs' cultural identity. CCKs who most closely identify with individualism will score low on the "openness to change" subscale, with subscale scores ranging from 7 to 42, while those who identify with collectivism will rate low on the "conservation" subscale, with subscale scores ranging from 13 to 78 (Schwartz, 2012; Schwartz et al., 2001). The PVQ was also used to measure the CCKs' personal value orientation through the "self-enhancement" and "self-transcendence" subscales. CCKs with an achievement value orientation will rate lowest on the "self-enhancement" subscale with a subscale score ranging from 7 to 42, while those who with a social well-being value orientation will rate lowest on the "self-transcendence" subscale with a subscale score ranging from 10 to 60.

The test-retest reliabilities for this study's four subscales (openness to change, conservation, self-enhancement, and self-transcendence subscales) were .70, .85, .84, and .83 respectively (Schwartz et al., 2001), which met the requirements for this study. The Cronbach's alphas for each of the PVQ categories were 0.70 for stimulation, 0.63 for self-direction, 0.71 for conformity, 0.62 for security, 0.68 for tradition, 0.68 for universalism, 0.58 for benevolence, 0.66 for power, 0.79 and for achievement (Matthews et al., 2007). The PVQ was created to serve as a more concrete replacement for the Schwartz Value Survey in order to allow the

researcher access to better data when it is utilized with students from different cultures (Schwartz et al., 2001). The PVQ has been cross-validated across various samples and various countries (Beierlein, Davidov, Schmidt, & Schwartz, 2012; Bilsky, Janik, & Schwartz, 2011; Matthews et al., 2007; Schwartz, 2006). The PVQ's reliability for this sample was measured by calculating Cronbach's alpha for each of the subscales. Chapter four presents the descriptive statistics for each of the PVQ's categories including Cronbach's alpha for each of the PVQ subscales.

Acculturation. The Socio-Cultural Adaptive Scale (SCAS) by Searle and Ward (1990) is a 40-item survey with reliability coefficients ranging from .81 to .88 (Ward & Kennedy, 1993, 1994; Ward & Rana-Deuba, 1999), which are within the guidelines for this study. The SCAS asks CCKs to rate the amount of difficulty they experience in various social situations using a five point Likert-type scale where 1 represents "no difficulty" and 5 represents "extreme difficulty." The composite scores for the SCAS range from 40 to 200, where CCKs with higher scores experiencing a more difficult acculturation process than those with low scores. The SCAS has been cross-validated across various samples and various countries (Antonakopoulou, 2013; Renner, Salem, & Menschick-Bendele, 2012; Savicki, 2010; Spencer-Oatey & Xiong, 2006; Ward & Chang, 1997). Cronbach's alpha was calculated on the SCAS in order to assess the scale's reliability in this sample. Chapter four presents the descriptive statistics, including Cronbach's alpha for the SCAS.

Criterion Variable

Academic motivation. The Patterns of Adaptive Learning Styles (PALS), by Midgley et al. (2000), was used to measure the student's academic motivation orientation. The personal achievement goal orientation subscale was used to identify the goal orientation for each CCK: mastery goal orientation (5 items; $\alpha = .90$), performance-approach goal orientation (5 items; $\alpha =$

.86), and performance avoidance goal orientation (4 items; $\alpha = .76$) (Midgley et al., 2000). The

PALS 2000 performance achievement goal orientation subscale asked the CCKs to use a Likert-

type scale from 1 to 5 to identify whether a statement is true of themselves in the classroom. A

response of 1 represents a response of "not true at all," while a 5 represents a response of "very

true." In the personal achievement goal orientation subscale, the category with the highest score

best represents the CCKs' preferred academic motivation. The score ranges for the three

categories of the personal achievement goal orientation subscale are mastery goal orientation (5

to 25), performance-approach goal orientation (5 to 25), and performance-avoidance goal

orientation (4 to 20). The PALS 2000 has been cross-validated across various samples, various

grade levels, and various countries (Muís, Winne, & Edwards, 2009; Negru & Damian, 2010;

Peetsma et al., 2005; Urdan, 2004). Cronbach's alpha was calculated on the PALS2000 in order

to assess the scale's reliability in this sample. Chapter four presents the descriptive statistics,

including Cronbach's alpha for the PALS2000.

Control Variables

The online survey also included demographic questions that allowed the researcher to

assess information related to the control variables; gender, grade level, years living in the host

country, passport region, and number of international moves (see Table 1 for additional

information regarding how the information was collected). Table 5 provides additional

information regarding the theoretical frameworks, variables, instruments, unit of measurements,

and sample questions that were used in this study.

Table 5

Variables and Measurement Methods

Theoretical Framework	Variable	Instrument	Unit	Sample Question
Theory of Individualism and Collectivism (Hofstede, 1980; Triandis, 2012)	Cultural Orientation (Predictor Variable)	Portrait Values Questionnaire (PVQ) subscales: openness to change vs. conservation	6 item Likert-type scale 1-6 1 - very much like me 2 - like me 3 - somewhat like me 4 – a little like me 5 - not like me 6 - not like me at all	#1. "Thinking up new ideas and being creative is important to him. He likes to do things in his own original way."
Theory of Motivational Conflict (Hofer, 2007)	Value Orientation (Predictor Variable)	Portrait Values Questionnaire (PVQ) subscales: self-enhancement vs. self-transcendence	6 item Likert-type scale 1-6 1 - very much like me 2 - like me 3 - somewhat like me 4 – a little like me 5 - not like me 6 - not like me at all	#2. "It is important to him to be rich. He wants to have a lot of money and expensive things."
Analysis of Acculturation Attitudes (Berry, 1997; Ward & Rana-Deuba, 1999)	Acculturation (Predictor Variable)	Socio-cultural Adaptive Scale (SCAS)	5 point Likert-type scale 1-5 1 - no difficulty 2 - slight difficulty 3 - moderate difficulty 4 - great difficulty 5 - extreme difficulty	Use the following scale to indicate the amount of difficulty you experience in different areas of your life in Thailand: 1. "Going to coffee shops/restaurants/fast food"

Table 5 continued

Variables and Measurement Methods

Theoretical Framework	Variable	Instrument	Unit	Sample Question
Achievement Motivation Theory (McClelland, 1961), Achievement Goal Orientation Theory (Pintrich & Schunk, 2002)	Academic Motivation (Criterion Variable)	Patterns of Adaptive Learning Scale (PALS) subscales: personal achievement goal orientation (#3, 8, 9, 25, 26, 29, 33, 38, 41, 45, 48, 49, 51, 55)	5 point Likert-type scale 1-5 1 - not true at all 3 - somewhat true 5 - always true	3. "It's important to me that I don't look stupid in class."
	Demographic/ Experience Data (Control Variable)			
	Gender	Self-report survey	Male/Female	"What is your gender?"
Theory of Individualism and Collectivism (Hofstede, 1980; Triandis, 2012)	Grade Level	Self-report survey	9, 10, 11, 12	"What grade are you in?"
	Passport region	Self-report survey	Africa, South America, North America, Southeast Asia, India, Central Asia, Europe, Other (please specify)	"Please indicate your passport region."
	Years living in the host culture	Self-report survey	1-18	"How many years have you been living in the host country?"
	Number of international moves	Self-report survey	Numerical response	"How many international moves have you made?"

Procedures

The first step in this study was to gain Institutional Review Board (IRB) and site approval. Upon obtaining IRB approval, the research study began. During the first semester open house, a five-minute presentation was given to introduce parents and students to the research study. At the conclusion of the presentation, parents and students were given an opportunity to complete letters of consent/assent. Following open house, a follow-up introductory email was sent to the parents of high school students informing them of the study and eliciting their student's participation in the study. Recruitment was limited to a three-week period. One week after the initial email was sent to parents, a reminder email was sent to remind parents to return the letters of ascent/consent. A three-minute presentation was also given to students during the next two weekly chapel periods in order to continue to recruit participants for this study. Students were able to return letters of consent/assent to the primary researcher during the recruitment period.

A mandatory training session was held for all high school homeroom teachers in order to ensure that all teachers understood how to properly administer the online instruments. This training session was integrated into the scheduled teacher/staff orientation activities that were scheduled for the week before students returned for the start of the school year. School policy states that attendance during all scheduled activities for orientation week is mandatory for all designated teachers, so all teachers were present for the training. At the conclusion of the recruitment period, the online survey was administered during two consecutive homeroom periods. At the beginning of the selected homeroom period, the homeroom teachers explained, using a script, to the students that the survey was going to be completed over the next two-homeroom periods. Those students who chose not to participate in the study stayed in their

homerooms and participated in their normal homeroom activities, while the students who

participated in the study were sent to one of the five computer labs to complete the online

surveys. During the first homeroom period, half of the participants completed the demographic

instrument and the PVQ instrument while the other half of the participants completed the

PALS2000 and the SCAS instruments. During the subsequent homeroom period, the students

completed the other half of the instruments. The links to the two different sets of student surveys

were provided to the students at the beginning of the homeroom periods and the surveys were

activated in order to allow data to be collected.   Once the link had been provided, the students

were given 20-minutes to complete the first half of the survey. During the following week's

homeroom period, the students were given the link to the other half of the survey and were

allowed 20-minutes to complete said surveys.

Participants were required to sign into the survey with their school assigned student login

in order to allow the researcher to verify demographic data and to link the data from the two

survey components together. After the two survey periods were completed, the two data sets

(phase I and II) were compiled by the primary researcher. Additionally, a list of student login

names was sent to the registrar with a request for the participants' gender, passport region, and

current grade level. Once the requested data was received, the student data was verified and all

identifying information was removed from the data set. The data was then downloaded and

access was limited to the primary researcher and dissertation committee. All hard copies of data,

including student identification numbers, were placed in a locking file cabinet in the primary

researcher's office and will be stored for five years. All electronic data was stored on a

password-protected computer in the primary researcher's office. Once the data had been

compiled, SPSS software (version 19) was used to analyze the data in order to identify any

relationships that exist between the variables. Results to this analysis are reported in chapter four of this report.

Data Analysis

A hierarchal multiple regression with a significance level of .05 was used to analyze each of the null hypotheses. Hierarchal multiple regression was chosen because it allowed the researcher to analyze the relationship between each of the predictor variables as well as the controlling variables and the criterion variable (Gall et al., 2007). Also, hierarchical multiple regression was chosen because it has been used in research studies with similar topics (Abd-El-Fattah & Patrick, 2011; Burton et al., 2006; Dekker & Fischer, 2008; Hofer et al., 2011; Inglehart & Baker, 2000). Assumption testing was conducted prior to data analysis to examine the normality, homoscedascity, linearity, and extreme outliers. Normality was tested using histograms in order to evaluate the distribution of the data. Homoscedascity and linearity were tested using scatterplots to ensure that a linear relationship was present within the variables (Gall et al., 2007). The presence of extreme outliers was investigated using a Cook's distance greater than 1 (Cook & Weisberg, 1982) and a Mahalanobis value less than 18.65. Variance-Inflation Factor (VIF) was calculated to identify the presence of any potential multicollinearity that existed between variables, where a high score suggested multicollinearity is present and a low score suggested no multicollinearity is present (Warner, 2013).

In order to conduct the hierarchical multiple regression, the data was first "blocked." Predictor variables were placed into "blocks" in order to determine the significance level of the relationship between each variable and the criterion variable. Block 1 contained the control variables gender, grade level, years in host country, passport region, and the number of international moves. Due to gender and passport region being categorical data, these variables

were dummy coded in order to allow them to be used as nominal data in the regression equation. As can be seen in Table 6, the dummy coding process assigned a 0 for the selection of "female" and a 1 for the selection of "male" in regards to the CCK's response to the gender question in the demographic data collection. For the passport region data, the seven passport regions identified by participants were categorized into two categories; "Asia" and "other". The "Asia" category contained students who identified as being from one of the following passport regions: central Asia, southeast Asia, and India. All other passport regions (North America, South America, Western Europe, and Australia) were combined into the "other" category. Table 7 shows how the dummy coding process assigned a value of 1 for the "Asia" category and a 0 for the "other" category. The use of dummy coding allowed for any relationships that exist between gender and student motivation as well as between passport region and student motivation to be analyzed (Warner, 2013).

Table 6

Dummy Coding for Gender Example

Gender	D_0
Female	0
Male	1

Table 7

Dummy Coding for Passport Region Example

Passport Region	D_0
Asia	1
Other	0

Block 2 included the cultural identity predictor variable, block 3 included the value orientation predictor variable, and block 4 included the acculturation predictor variable. Using

this type of data analysis allowed the researcher to identify the correlation between each of the

variables in a particular block and student academic achievement motivation. Using the blocking

approach allowed the control variables to be introduced at the beginning of the analysis, which

made it possible to evaluate the relationship of each of the predictor variables without concern

for what confounding relationship might be found to exist between the control variables and the

criterion variable (Tabachnick & Fidell, 2007; Warner, 2013).

CHAPTER FOUR: FINDINGS

Introduction

The purpose of this study was to identify any relationships between the academic motivation, cultural identity, personal value orientation, and acculturation for cross-cultural students enrolled in an international school setting in order to allow international school educators to determine which factor(s) best predict academic motivation in the classroom. Demographic (gender, grade level, passport region) and experiential (number of international moves, years living in Thailand) variables were controlled in order to allow the relationships between the variables of interest to be better understood. The chapter begins with a report of the demographic and descriptive statistics, followed by the appropriate assumption tests as suggested by Warner (2013), and finally the statistical results of the hierarchical multiple regression analysis. The following research questions were used to guide this study:

RQ1: Will there be a statistically significant relationship between cross-cultural high school students' mastery-oriented academic motivation and their cultural identity, value orientation, acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

RQ2: Will there be a statistically significant relationship between cross-cultural high school students' performance-approach oriented academic motivation and their cultural identity, value orientation, acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

RQ3: Will there be a statistically significant relationship between cross-cultural high school students' performance-avoidance oriented academic motivation and their cultural identity,

value orientation, acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves)?

Descriptive Data

Prior to analyses, all categorical data, gender and passport region, were dummy coded. The grade level for the participants ranged from 10th grade to 12th grade, with the mean grade being 11.15 (*SD* = .74). Among the participants, 23 (20.9%) identified as sophomores, 47 (42.7%) identified as juniors, and 40 (36.4%) identified as seniors. Additionally, 61 (55.5%) of the participants identified their gender as female and 49 (44.5%) identified their gender as male. The number of years the participants have lived in Thailand ranged from 1 year to 18 years, with the mean and median scores being 14.15 years and 16.00 years, respectively (*SD* = 4.34). The number of international moves made by the participants ranged from no international moves to 10 international moves, with the mean and median scores being 1.66 and 1.00 moves, respectively (*SD* = 1.91). The participants reported holding a passport from the following regions: Australia 1 (0.9%), Central Asia 17 (15.5%), India 7 (6.4%), North America 7 (6.4%), South America 1 (0.9%), Southeast Asia 76 (69.1%), and Western Europe 1 (0.9%). The passport region data was combined into two categories; "Asia" (Central Asia, India, and Southeast Asia) which accounted for 100 (90.9%) participants and "other" (North America, South America, Western Europe, and Australia) which accounted for 10 (9.1%) participants. Participants' gender, grade level and passport region were self-reported and the results were verified through the Registrar's office.

The participants' responses to the Portraits Values Questionnaire (PVQ), Socio-Cultural Adaptive Scale (SCAS) and the Patterns of Adaptive Learning Styles (PALS 2000) scales were also analyzed. The PVQ instrument was used to measure the cultural identity predictor variable

using the openness to change (individualism) and conservation subscales (collectivism),

respectively. The PVQ was also used to measure the personal value orientation predictor

variable using the self-enhancement (achievement value orientation) and self-transcendence

(social well-being value orientation), respectively. The acculturation predictor variable was

measured using the SCAS instrument, and the PALS2000 was used to measure the academic

motivation criterion variable. The Likert-type scores (1 = very much like me to 6 = not like me at

all) for each of the four PVQ subscales were tallied. The PVQ is designed such that a lower

score on a particular subscale best represents the participants' preferred cultural identity or

preferred personal value orientation, and the subscales have the score ranges: openness to change

(7-42), conservation (13-78), self-enhancement (7-42), and self-transcendence (10-60). The

openness to change subscale yielded a mean score of 19.13 (SD = 5.43); the conservation

subscale yielded a mean score of 39.18 (SD = 9.26); the self-enhancement subscale yielded a

mean score of 21.20 (SD = 6.25); and the self-transcendence subscale yielded a mean score of

27.05 (SD = 8.13). The Likert-type scores (1 = no difficulty to 5 = extreme difficulty) for the

SCAS instrument were also tallied. This instrument has a composite score ranging from 40 to

200, where higher scores suggest the participant is having a more difficult acculturation

experience. The mean acculturation score for the study participants was 92.30 (SD = 20.94).

The criterion variable, academic motivation, was measured using the Likert-type scores (1 = not

true at all to 5 = always true) for the three PALS2000 subscales – Mastery Goal Orientation,

Performance-Approach Goal Orientation, and Performance-Avoidance Goal Orientation. The

scores for each subscale were tallied individually with the following possible score ranges:

mastery goal orientation (5-25), performance-approach goal orientation (5-25), and performance-

avoidance goal orientation (4-20), where the higher value represents the students' preferred type

of academic motivation. The mastery goal orientation subscale yielded a mean score of 19.05

($SD = 4.24$), the performance-approach goal orientation subscale yielded a mean score of 13.62

($SD = 5.24$), and the performance-avoidance goal orientation subscale yielded a mean score of

12.70 ($SD = 3.84$). Table 8 displays the descriptive statistics for the three predictor variables and

the criterion variables for this study.

Table 8

Summary of Means and Standard Deviations for Predictor and Criterion Variables

Measure	*M*	*SD*	Minimum	Maximum	Range
Cultural Identity (PV)					
Individualistic	19.13	5.43	7	34	27
Collectivistic	39.18	9.26	18	61	43
Personal Value Orientation (PV)					
Achievement Value Orientation	21.10	6.25	8	40	32
Social Well-Being Value Orientation	27.05	8.13	12	50	38
Acculturation (PV)	92.30	20.94	46	152	106
Academic Motivation (CV)					
Mastery Goal Orientation	19.05	4.24	5	25	20
Performance-Approach Goal Orientation	13.62	5.24	5	25	20
Performance-Avoidance Goal Orientation	12.70	3.84	4	20	16

Note. PV = predictor variable, CV = criterion variable.

Correlation of Predictor Variables with Criterion Variables

The results of the correlation analysis for the predictor variables, control variables, and the criterion variable, mastery goal orientation, are presented in Table 9. Analysis of the correlation data suggested there were significant, weak, negative correlations between the participant's mastery goal orientation and their cultural identity, individualistic ($r = -.272$, $p < .01$) and collectivistic ($r = -.224$, $p < .01$). Additionally, a significant, weak, negative association was noted between social well-being value orientation and mastery goal orientation ($r = -.333$, $p < .001$). Gender, grade level, years living in Thailand, number of international moves, passport region, achievement value orientation, and acculturation were not identified as having any significant association with the mastery goal orientation criterion variable.

Table 9

Correlation of Predictor, Control and the Mastery Goal Orientation Criterion Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Mastery Goal	-										
2. Grade Level	-.116	-									
3. Years in Thailand	-.104	.370**	-								
4. # of Intl Moves	-.025	.173*	-.146	-							
5. Gender	.051	-.039	-.157	-.121	-						
6. Passport Region	.048	.109	.142	.044	-.162*	-					
7. Individualistic	-.272**	.081	.028	-.152	-.008	-.080	-				
8. Collectivistic	-.224**	.170*	-.024	-.040	.095	.106	.120	-			
9. AVO	-.048	-.064	-.117	-.088	-.079	-.061	.365**	.150	-		
10. SWBVO	-.333**	.107	.029	-.054	.038	.189*	.403**	.662**	.009	-	
11. Acculturation	-.118	-.060	-.019	-.118	-.029	.012	.230**	.120	.050	.319**	-

Note. # of Intl Moves = Number of International Moves, AVO = Achievement Value Orientation, SWBVO = Social Well-Being Value Orientation.
*p < .05, **p < .01.

The results of the correlation analysis for the predictor variables, control variables and the criterion variable, performance-approach goal orientation, are presented in Table 10. Analysis of the correlation data suggested there was a significant, weak, negative association between participants who identify as being more collectivistic and their performance-approach goal orientation ($r = -.184$, $p < .05$). A significant, weak, negative association was also found between the participants' performance-approach goal orientation and their personal value orientation, achievement value orientation ($r = -.393$, $p < .001$) and social well-being value orientation ($r = -.171$, $p < .05$). Similarly, a significant, weak, positive association was identified between acculturation and performance-approach goal orientation ($r = .169$, $p < .05$). Gender, grade level, years living in Thailand, number of international moves, passport region, achievement value orientation, and acculturation were not identified as having any significant association with the performance-approach goal orientation criterion variable.

Table 10

Correlation of Predictor, Control and the Performance-Approach Goal Orientation Criterion Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Performance-Approach	-										
2. Grade Level	.072	-									
3. Years in Thailand	.087	.370**	-								
4. # of Intl Moves	-.016	.173*	-.146	-							
5. Gender	-.064	-.039	-.157	-.121	-						
6. Passport Region	.037	.109	.142	.044	-.162*	-					
7. Individualistic	-.038	.081	.028	-.152	-.008	-.080	-				
8. Collectivistic	-.184*	.170*	-.024	-.040	.095	.106	.120	-			
9. AVO	-.393**	-.064	-.117	-.088	-.079	-.061	.365**	.150	-		
10. SWBVO	-.171*	.107	.029	-.054	.038	.189*	.403**	.662**	.009	-	
11. Acculturation	.169*	-.060	-.019	-.118	-.029	.012	.230**	.120	.050	.319**	-

Note. # of Intl Moves = Number of International Moves, AVO = Achievement Value Orientation, SWBVO = Social Well-Being Value Orientation
*p < .05, **p < .01.

The results of the correlation analysis for the predictor variables, control variables and the criterion variable, performance-avoidance goal orientation, are presented in Table 11. Analysis of the correlation data suggested there were significant, weak, negative correlations between the participants who identified as being more collectivistic and their exhibiting performance-avoidance goal orientation ($r = -.188, p < .05$). A significant, weak, negative correlation was also noted between the participant's achievement value orientation and their performance-avoidance goal orientation ($r = -.290, p = .001$). Participants who identified as experiencing a higher level of acculturation ($r = .203, p < .05$) showed a higher tendency towards having a performance-avoidance goal orientation. No significant correlations were noted between the control variables and the performance-avoidance goal orientation.

Table 11

Correlation of Predictor, Control and the Performance-Avoidance Goal Orientation
Criterion Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Performance-Avoidance	-										
2. Grade Level	-.013	-									
3. Years in Thailand	.033	.370**	-								
4. # of Intl Moves	-.118	.173*	-.146	-							
5. Gender	-.121	-.039	-.157	-.121	-						
6. Passport Region	-.033	.109	.142	.044	-.162*	-					
7. Individualistic	.094	.081	.028	-.152	-.008	-.080	-				
8. Collectivistic	-.188*	.170*	-.024	-.040	.095	.106	.120	-			
9. AVO	-.290**	-.064	-.117	-.088	-.079	-.061	.365**	.150	-		
10. SWBVO	-.077	.107	.029	-.054	.038	.189*	.403**	.662**	.009	-	
11. Acculturation	.203*	-.060	-.019	-.118	-.029	.012	.230**	.120	.050	.319**	-

Note. # of Intl Moves = Number of International Moves, AVO = Achievement Value Orientation, SWBVO =
Social Well-Being Value Orientation
*p < .05, **p < .01.

Assumption Testing

Assumption tests were completed on the data set to determine whether the assumptions

for conducting a hierarchical multiple regression, including normality, homoscedasticity,

linearity, multicollinearity, and extreme outliers, were met. Additionally, Cronbach's alpha

coefficients were calculated for each of the subscales and full scales in order to determine the

internal reliability for each scale.

Normality

The assumption of normality was tested through visual inspections of the normal

probability-probability plot (P-P plot) of the regression standardized residual and histograms (see

Appendix D). This visual inspection of the P-P plots revealed a normal distribution of the

residuals, suggesting the assumption of normality was tenable. Likewise, the inspection of the

histograms for each predictor and criterion variable revealed normal bell curve, which also

confirms that the assumption of normality was tenable for this data set.

Homoscedasticity and Linearity

Examination of the scatterplots of the standardized residuals on the standardized predicted values for the predictor and criterion values revealed similar variance along the regression line, thus the assumption of homoscedasticity was tenable (see Appendix D). The bivariate scatterplots also revealed that the predictor and criterion variables relate linearly, thus confirming that the assumption of linearity was tenable.

Multicollinearity

The inter-correlation between the predictor variables was analyzed to assess whether the assumption of multicollinearity was tenable. As is shown in Table 12, the variance inflation factor (VIF) values for all of the variables were significantly below 10, and the tolerance values were all significantly greater than .10, thus the assumption of no multicollinearity was tenable (Warner, 2013).

Table 12

Inter-Collinearity Statistics for the Predictor Variables

Predictor Variables	Tolerance	VIF
Individualism	.631	1.585
Collectivism	.478	2.091
Achievement Value Orientation	.763	1.311
Social Well-Being Value Orientation	.380	2.634
Acculturation	.875	1.143

Outliers

The presence of outliers influencing the data within the three models was determined not to be problematic based on a maximum Mahalanobis distance of 17.901, which did not exceed the critical chi-square value (Tabachnick & Fidell, 2007). Likewise, a maximum Cook's distance of .219 suggested no significant problems with multivariate outliers within the data (see Table 13).

Table 13

Mahalanobis Distance and Cook's Distance Statistics for the Predictor Variables

Predictor Variables	Mastery Goal Orientation	Performance-Approach Goal Orientation	Performance-Avoidance Goal Orientation
Mahalanobis Distance	17.901	17.901	17.901
Cook's Distance	.219	.142	.084

Reliability

Cronbach's alpha coefficients of reliability were calculated for each of the subscales and full scales using the sample of cross-cultural students ($N = 110$) in order to determine the appropriateness of using each of the scales in the hierarchical multiple regression analyses. Moderate to high internal reliability was present in each of the subscales and the full scales with Cronbach alpha coefficients ranging from .72 to .91 (see Table 14). Cronbach's alpha coefficients for the Portrait Values Questionnaire full scale ($\alpha = .85$) and the PALS2000 full scale ($\alpha = .87$) were also calculated in addition to the Cronbach's alphas for each of the instruments' subscales to ensure instrument reliability. Due to the moderate to high reliabilities for each of the pertinent subscales and full scales, these instruments and corresponding data were deemed appropriate to use in the analyses (Tavakol & Dennick, 2011).

Table 14

Reliability Statistics for the Full Scales and Subscales

Measure	Cronbach's Alpha	Number of Items in Scale
Individualistic Cultural Identity	.72	7
Collectivistic Cultural Identity	.75	13
Achievement Value Orientation	.81	7
Social Well-Being Value Orientation	.85	10
PVQ Total Instrument	.85	37
SCAS Total Instrument	.90	40
Mastery Goal Orientation	.88	5
Performance-Approach Goal Orientation	.91	5
Performance-Avoidance Goal Orientation	.79	4
PALS 2000 Total Instrument	.87	14

Results of Multiple Hierarchical Regression Model

Research Question One

The first research question sought to determine whether a statistically significant relationship was present between the cross-cultural students' mastery goal orientation and their cultural identity, personal value orientation, and acculturation while controlling for demographic and experiential variables (i.e., gender, grade level, years in host country, passport region, and number of international moves). The variables were placed into four separate blocks that resulted in four different models (see Table 15).

Table 15

Mastery Goal Orientation Models

Model	Predictor Variables	Criterion Variable
1	Demographics	Mastery Goal Orientation
2	Demographics + CI	Mastery Goal Orientation
3	Demographics + CI + PVO	Mastery Goal Orientation
4	Demographics + CI + PVO + Acculturation	Mastery Goal Orientation

Note. CI = Cultural Identity, PVO = Personal Value Orientation

The following sections highlight the significant findings from the hierarchical multiple

regression analysis for each of the four models in regards to the first research question as well as

the related null hypotheses.

Model 1. The first model examined how the cross-cultural students' demographic and

life experiential variables added to the regression model for the prediction of the CCKs' mastery-

oriented academic motivation. Gender and passport region were dummy coded prior to the

multiple regression analysis. The related null hypothesis predicted that the control variables

(gender, grade level, years in host country, passport region, and number of international moves)

would not significantly contribute to the model for predicting cross-cultural, high school

students' mastery-oriented academic motivation. This hypothesis was confirmed as the results of

model 1 were not significant with $F(5, 104) = .54$, $p = .75$, $R^2 = .025$ (adjusted $R^2 = -.022$), and

the control variables only accounted for 2.5% of the variance in mastery-oriented academic

motivation. Therefore, the null hypothesis cannot be rejected. Table 4.11 demonstrates that

none of the control variables individually contributed to the predictive model.

Model 2. Model 2 introduced the cultural identity (individualistic and collectivistic)

predictor variables to the regression model for the prediction of the CCKs' mastery-oriented

academic motivation. The related null hypothesis predicted there would be no statistically

significant contribution of cultural identity to the prediction model for cross-cultural high school

students' mastery-oriented academic motivation. Overall, model 2 was found to be significant,

$F(7,102) = 2.31$, $p = .03$, $R^2 = .137$ (adjusted $R^2 = .078$) and accounted for 13.7% of the variance in mastery-oriented academic motivation. The addition of the cultural identity variables to the prediction model led to a significant 11.2% change in the variance of the full model from model 1 to model 2, where $\Delta R^2 = .112$, $F(2,102) = 6.61$, $p = .002$. These findings support the rejection of the null hypothesis.

Per model 2, both the individualistic and collectivistic cultural identity variables were found to be significant individual contributors within this block ($\beta = -.25$, $p = .01$) and ($\beta = -.21$, $p = .03$), respectively (see Table 18). Thus, CCKs who exhibit a preference for being either individualistic or collectivistic were found to exhibit more mastery goal academic motivation.

Model 3. Model 3 introduced the CCKs' personal value orientation (achievement value orientation and social well-being value orientation) predictor variables to the mastery-oriented academic motivation regression model. The related null hypothesis predicted there would be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation. Model 3 was found to be significant, $F(9,100) = 2.20$, $p = .03$, $R^2 = .165$ (adjusted $R^2 = .090$), yet it only accounted for an additional 2.8% of variance where $\Delta R^2 = .028$, $F(2,100) = 1.69$, $p = .19$. These findings support the rejection of the null hypothesis; however, none of the control or predictor variables were found to be statistically significant individual contributors to the CCKs' mastery goal academic motivation within this block.

Model 4. The fourth model introduced the acculturation predictor variable into the mastery-oriented academic motivation regression model. The related null hypothesis predicted there would be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' mastery-oriented academic motivation. Model 4 was

found to be significant, $F(10,99) = 1.96$, $p < .05$), $R^2 = .165$ (adjusted $R^2 = .081$), which supported

the rejection of the null hypothesis. However, model 4 did not account for any of the variance of

the full model, with $\Delta R^2 = .000$, $F(1,99) = .005$, $p = .95$. The acculturation predictor variable

was not found to be a significant individual contributor to the mastery-oriented academic

motivation criterion variable within this block or the larger regression model (see Table 18).

Overall model. The guiding research question for this first predictive model sought to

determine whether a statistically significant relationship was present between the cross-cultural

students' mastery goal orientation and their cultural identity, personal value orientation, and

acculturation while controlling for demographic and experiential variables (i.e., gender, grade

level, years in host country, passport region, and number of international moves). The related

null hypothesis predicted there would be no statistically significant relationship between cross-

cultural high school students' mastery-oriented academic motivation and their cultural identity,

value orientation, and acculturation while controlling for control variables (gender, grade level,

years in host country, passport region, and number of international moves). The full model was

found to be statistically significant, $F(10, 99) = 1.96$, $p < .05$); therefore the null hypothesis can

be rejected. Examining the effect size, the model did account for 16.5% of the variance of

mastery-oriented academic motivation where $R^2 = .165$, $F(1,99) = .005$, $p = .95$.

Research Question Two

The second research question sought to determine whether a statistically significant

relationship was present between the cross-cultural students' performance-approach goal

orientation and their cultural identity, personal value orientation, and acculturation while

controlling for demographic and experiential variables (i.e., gender, grade level, years in host

country, passport region, and number of international moves). The variables were placed into

four separate blocks that resulted in four different models (see Table 4.9).

Table 16

Performance-Approach Goal Orientation Models

Model	Predictor Variables	Criterion Variable
1	Demographics	Performance-Approach Goal Orientation
2	Demographics + CI	Performance-Approach Goal Orientation
3	Demographics + CI + PVO	Performance-Approach Goal Orientation
4	Demographics + CI + PVO + Acculturation	Performance-Approach Goal Orientation

Note. CI = Cultural Identity, PVO = Personal Value Orientation

The following sections highlight the significant findings from the hierarchical multiple

regression analysis for each of the four models in regards to the second research question as well

as the related null hypotheses.

Model 1. The first model investigated how the CCKs' demographic and life experiences

variables added to the regression model for the prediction of their performance-approach

academic motivation. As was discussed earlier, gender and passport region were dummy coded

prior to analysis. The related null hypothesis predicted the control variables (gender, grade level,

years in host country, passport region, and number of international moves) would not

significantly contribute to the model for predicting cross-cultural high school students'

performance-approach oriented academic motivation. Model 1 was not significant where $F(5,$

$104) = .27, p = .93, R^2 = .013$ (adjusted $R^2 = -.035$) and only accounted for 1.3% of the variance

in the performance-approach academic motivation. These results provided evidence that the null

hypothesis could not be rejected. Table 18 demonstrates that none of the control variables in

model 1 individually contributed to the predictive model.

Model 2. Model 2 included the CCKs' cultural identity (individualistic and

collectivistic) variables into the regression model for predicting the CCKs' performance-

approach academic motivation. The related null hypothesis predicted there would be no

statistically significant contribution of cultural identity to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation. The overall model was not significant, $F(7, 102) = .80$, $p = .59$, $R^2 = .052$ (adjusted $R^2 = -.013$) and only accounted for 5.2% of the variance in performance-approach academic motivation. The addition of the cultural identity variables to the prediction model only accounted to an additional 3.9% change in the variance for the full model from model 1 to model 2, where $\Delta R^2 = .039$, $F(2,102) = 2.10$, $p = .13$. This demonstrates that neither the individualistic nor the collectivistic cultural identities are an individual contributor to the predictive model. As such, there was no evidence to support rejecting the null hypothesis.

Model 3. Model 3 introduced the personal value orientation (achievement value orientation and social well-being value orientation) variables into the regression model. The related null hypothesis predicted there would be no statistically significant contribution of value orientation to the prediction model for cross-cultural, high school students' performance-approach oriented academic motivation. Model 3 was found to be significant, $F(9, 100) = 3.62$, $p = .001$, $R^2 = .246$ (adjusted $R^2 = .178$) and accounted for 24.6% of the variance in performance-approach academic motivation. Specifically, the addition of the personal value orientation variables resulted in a significant 19.4% change in the variance of the full model from model 2 to model 3, where $\Delta R^2 = .194$, $F(2,100) = 12.85$, $p < .001$. These findings supported the rejection of the null hypothesis.

Per model 3, both achievement value orientation and social well-being value orientation were found to be significant individual contributors to the CCKs' performance-approach academic motivation within this block ($\beta = -.51$, $p < .001$) and ($\beta = -.35$, $p < .05$), respectively. Additionally, the individualistic predictor variable was also found to be a significant individual

contributor within this block (β = .27, p = .02). CCKs who exhibited a preference towards one of the personal value orientation, either achievement value orientation or social well-being value orientation, were found to have more performance-approach academic motivation, while CCKs who do not to identify with being individualistic, those who score higher on the openness to change subscale, were more likely to exhibit performance-approach academic motivation. Table 18 displays the contribution made by each of the variables in the regression model.

Model 4. Model 4 introduced the acculturation variable into the regression model for predicting the CCKs' performance-approach academic motivation. The related null hypothesis predicted there would be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-approach oriented academic motivation. Model 4 was found to be significant, $F(10, 99)$ = 4.33, $p < .001$, R^2 =.304 (adjusted R^2 = .234) and accounted for 30.4% of the variance in performance-approach academic motivation. The addition of acculturation to the model resulted in a significant 5.9% change in the variance of the full model from model 3 to model 4, where ΔR^2 = .059, $F(1,99)$ = 8.38, p = .005. These findings supported the decision to reject the null hypothesis.

Per model 4, acculturation (β = .26, p = .005), as well as individualism (β = .25, $p < .05$), achievement value orientation (β = -.51, $p < .001$), and social well-being value orientation (β = -.45, p = .002), contributed individually to the predictive model. CCKs who experienced a higher degree of difficulty with the acculturation process were more likely to exhibit performance-approach academic motivation. As with model 3, the CCKs who do not identify as individualistic were more likely to exhibit performance-approach academic motivation, while CCKs with a clear personal value orientation were more likely to exhibit performance-approach

academic motivation.   No other variables were significant (see Table 18) and therefore did not individually contribute to the predictive model.

Overall model. The guiding research question for the second predictive model sought to determine whether a statistically significant relationship was present between the cross-cultural students' performance-approach goal orientation and their cultural identity, personal value orientation, and acculturation while controlling for demographic and experiential variables (i.e., gender, grade level, years in host country, passport region, and number of international moves). The related null hypothesis predicted there would be no statistically significant relationship between cross-cultural high school students' performance-approach academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves). The full model was found to be statistically significant, $F(10, 99) = 4.33$, $p < .001$; therefore, the null hypothesis was rejected. This model accounted for 30.4% of the variance in performance-approach oriented academic motivation where $R^2 = .304$, $F(1,99) = 8.38$, $p = .005$. Both personal value orientations, as well as the individualistic cultural identity and acculturation predictor variables made the most significant individual contributions to the variance within this predictive model.

Research Question Three

The final research question sought to determine whether a statistically significant relationship was present between the cross-cultural students' performance-avoidance goal orientation and their cultural identity, personal value orientation, and acculturation while controlling for demographic and experiential variables (i.e., gender, grade level, years in host

country, passport region, and number of international moves). The variables were placed into

four separate blocks that resulted in four different models (see Table 17).

Table 17

Performance-Avoidance Goal Orientation Models

Model	Predictor Variables	Criterion Variable
1	Demographics	Performance-Avoidance Goal Orientation
2	Demographics + CI	Performance-Avoidance Goal Orientation
3	Demographics + CI + PVO	Performance-Avoidance Goal Orientation
4	Demographics + CI + PVO + Acculturation	Performance-Avoidance Goal Orientation

Note. CI = Cultural Identity, PVO = Personal Value Orientation

The following sections highlight the significant findings from the hierarchical multiple

regression analysis for each of the four models in regards to the third research question as well as

the related null hypotheses.

Model 1. The first model investigated how the CCKs' demographics and life

experiences added to the regression model for the prediction of their performance-avoidance

academic motivation. As with the previous models, gender and passport regions were dummy

coded before being analyzed. The related null hypothesis predicted the control variables

(gender, grade level, years in host country, passport region, and number of international moves)

would not significantly contribute to the model for predicting cross-cultural high school students'

performance-avoidance oriented academic motivation. Model 1 was not significant where $F(5,$

$104) = .76, p = .58, R^2 = .035$ (adjusted $R^2 = -.011$) and accounted for 3.5% of the variance in the

performance-avoidance academic motivation. These results provided evidence that the null

hypothesis could not be rejected. Table 18 demonstrates that none of the control variables in

model 1 individually contributed to the predictive model.

Model 2. Model 2 introduced the cultural identity predictor variables into the regression

model for predicting the CCKs' performance-avoidance academic motivation. The related null

hypothesis predicted there would be no statistically significant contribution of cultural identity to

the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation. The overall model was not significant, $F(7, 102) = 1.21$, $p = .31$, $R^2 = .077$ (adjusted $R^2 = .013$) and only accounted for 7.7% of the total variance in performance-avoidance academic motivation. The addition of the cultural identity variable to the prediction model led to an additional 4.1% change in the variance of the full model from model 1 to model 2, where $\Delta R^2 = .041$, $F(2,102) = 2.28$, $p = .11$. The collectivistic cultural identity variable was found to be a significant, individual contributor within this block ($\beta = -.20$, $p < .05$). While this indicates that a small, negative bivariate relationship exists between performance-avoidance academic motivation and the collectivistic cultural identity, the overall model is not significant; therefore, the null hypothesis cannot be rejected.

Model 3. Model 3 introduced the person value orientation variables into the regression model for predicting the CCKs' performance-avoidance academic motivation. The related null hypothesis predicted there would be no statistically significant contribution of value orientation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation. Model 3 was found to be statistically significant, $F(9,100) = 2.95$, $p = .004$, $R^2 = .210$ (adjusted $R^2 = .138$) and accounted for 21.0% of the variance in performance-avoidance academic motivation. The addition of the CCKs' personal value orientation into the regression model resulted in a significant 13.3% change in the variance of the full model from model 2 to model 3, where $\Delta R^2 = .133$, $F(2,100) = 8.41$, $p < .001$. These findings provided support for the rejection of the null hypothesis.

Per model 3, only the achievement value orientation and individualism predictor variables were found to be significant, individual contributors to the CCKs' performance-avoidance academic motivation where ($\beta = -.43$, $p < .001$) and ($\beta = .30$, $p < .05$), respectively.

CCKs who have a high achievement value orientation were found to exhibit more performance-avoidance academic motivation. CCKs who do not identify as being individualistic were more likely to exhibit performance-avoidance academic motivation. The social well-being value orientation variable was not statistically significant and did not individually contribute to the model for predicting performance-avoidance academic motivation. Table 18 displays the individual contributions made by each of the variables in the regression model.

Model 4. Model 4 introduced the acculturation variable into the regression model for predicting the CCKs' performance-avoidance academic motivation. The related null hypothesis predicted there would be no statistically significant contribution of acculturation to the prediction model for cross-cultural high school students' performance-avoidance oriented academic motivation. Model 4 was found to be significant, $F(10, 99) = 3.32$, $p = .001$, $R^2 = .251$ (adjusted $R^2 = .176$) and accounted for 25.1% of the variance in performance-avoidance academic motivation. The addition of the acculturation variable to the model resulted in a significant 4.2% change in the variance of the full predictive model from model 3 to model 4, where $\Delta R^2 = .042$, $F(1,99) = 5.53$, $p = .02$. These findings supported the decision to reject the null hypothesis.

Per model 4, the acculturation ($\beta = .22$, $p < .05$), individualism ($\beta = .28$, $p < .05$), and achievement value orientation ($\beta = -.43$, $p < .001$) variables were found to individually contribute to the overall predictive model. As CCKs experienced a higher degree of difficulty with the acculturation process, they were more likely to exhibit more performance-avoidance academic motivation. As with model 3, CCKs who did not identify as being individualistic were more likely to exhibit performance-avoidance academic motivation. Likewise, CCKs who exhibit a high achievement value orientation were more likely to exhibit performance-avoidance

academic motivation. None of the other variables within this model were significant individual

contributors (see Table 18).

Overall model. The guiding research question for the third predictive model sought to

determine whether a statistically significant relationship existed between the cross-cultural

students' performance-avoidance academic motivation and their cultural identity, personal value

orientation, and acculturation while controlling for demographic and experiential variables (i.e.,

gender, grade level, years in host country, passport region, and number of international moves).

The related null hypothesis predicted there would be no statistically significant relationship

between cross-cultural high school students' performance-avoidance oriented motivation and

their cultural identity, value orientation, and acculturation while controlling for control variables

(gender, grade level, years in host country, passport region, and number of international moves).

The full model was found to be statistically significant, $F(10, 99) = 3.32$, $p = .001$); therefore,

this null hypothesis can be rejected. This model accounts for 25.1% of the variance in

performance-approach oriented academic motivation where $R^2 = .221$, $F(1,99) = 5.53$, $p = .02$.

Table 18

Summary of Hierarchical Multiple Regression Analyses Predicting CCK's Academic Motivation

	Variable	Mastery Goal Orientation				Performance-Approach Goal Orientation				Performance-Avoidance Goal Orientation			
		B	*SE* B	β	R^2	B	*SE* B	β	R^2	B	*SE* B	β	R^2
Model 1	Grade Level	-.514	.615	-.090	.025	.368	.765	.052	.013	.070	.553	.014	.035
	Years in Thailand	-.076	.107	-.078		.064	.133	.053		-.006	.096	-.007	
	# International Moves	-.042	.227	-.019		-.067	.283	-.024		-.275	.205	-.137	
	Gender	.387	.852	.046		-.567	1.059	-.054		-1.126	.766	-.147	
	Passport Region	1.137	1.455	.077		.300	1.810	.017		-.682	1.309	-.051	
Model 2	Grade Level	-.053	.599	-.009	0.137**	.705	.777	.100	.052	.233	.561	.045	.077
	Years in Thailand	-.111	.102	-.114		.034	.132	.028		-.024	.096	-.027	
	# International Moves	-.186	.220	-.084		-.129	.285	-.047		-.277	.206	-.138	
	Gender	.460	.814	.054		-.384	1.054	-.037		-.952	.761	-.124	
	Passport Region	1.182	1.399	.081		.683	1.813	.038		-.262	1.309	-.020	
	Individualistic	-.194	.074	-0.248**		-.026	.096	-.027		.065	.069	.092	
	Collectivistic	-.097	.044	-0.212*		-.113	.057	-.199*		-.082	.041	-.199*	
Model 3	Grade Level	-.139	.600	-.024	.165	.326	.705	.046	0.246***	.043	.528	.008	0.210***
	Years in Thailand	-.099	.102	-.101		-.023	.120	-.019		-.064	.090	-.072	
	# International Moves	-.164	.219	-.074		-.165	.257	-.060		-.309	.193	-.154	
	Gender	.510	.815	.060		-.985	.958	-.094		-1.335	.717	-.174	
	Passport Region	1.755	1.426	.119		1.277	1.676	.070		-.160	1.255	-.012	
	Individualistic	-.130	.093	-.167		.261	.109	.270*		.209	.082	.296*	
	Collectivistic	-.028	.062	-.062		.045	.034	.080		-.018	.055	-.044	
	Achievement Value Orientation	.011	.073	.017		-.426	.085	-.508***		-.262	.064	-.426***	
	Social Well-Being Orientation	-.129	.077	-0.248		-.223	.091	-.346*		-.077	.068	-.162	
Model 4	Grade Level	-.141	.604	-.025	.165	.426	.682	.061	0.304**	.105	.517	.020	0.251*
	Years in Thailand	-.099	.103	-.101		-.014	.116	-.011		-.058	.088	-.066	
	# International Moves	-.165	.221	-.074		-.101	.249	-.037		-.269	.189	-.134	
	Gender	.507	.821	.060		-.843	.926	-.080		-1.248	.703	-.163	
	Passport Region	1.751	1.434	.119		1.444	1.618	.080		-.058	1.228	-.004	

Individualistic	-.130	.094	-.167		.243	.106	.252*	.198	.080	.281*
Collectivistic	-.029	.063	-.063		.065	.071	.116	-.006	.054	-.014
Achievement Value Orientation	.011	.073	.017		-.431	.082	-.514***	-.264	.063	-.431***
Social Well-Being Orientation	-.128	.080	-.245		-.289	.091	-.448**	-.117	.069	-.248
Acculturation	-.001	.020	-.007		.066	.023	.262**	.040	.017	.221*

*p < .05, **p ≤ .01, ***p ≤ .001

Summary

This correlation study examined the predictive relationship between 110 cross-cultural students' academic motivation and their cultural identity, personal value orientation and acculturation, while controlling for demographic and life experience variables. All three of the overall models of the hierarchical multiple regression analyses were significant. Within the overall mastery goal academic motivation model, all of the models were found to be significant except for the first model, which included the control variables. Despite being a significant model, none of the predictor variables were found to be significant, individual contributors to the model. Similarly, model 1 was not found to be significant individual contributors within the performance-approach academic motivation model or the performance-avoidance academic motivation model. Additionally, model 2, which containted the cultural identity predictor variable, was not found to be a significant, individual contributor to the performance-approach or the performance-avoidance academic motivation models. The tested null hypotheses are summarized in Table 19.

Table 19

Summary of Tested Null Hypotheses

Hypothesis	Statement	Overall Model/R^2	Added Variance/ΔR^2	Results
$H_{01.0}$	There will be no statistically significant relationship between cross-cultural, high school students' mastery-oriented academic motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).	16.5%	16.5%	Reject
$H_{01.1}$	The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural, high school students' mastery-oriented academic motivation.	2.5%	-	Failed to Reject
$H_{01.2}$	There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural, high school students' mastery-oriented academic motivation.	13.7%	11.2%	Reject
$H_{01.3}$	There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural, high school students' mastery-oriented academic motivation.	16.5%	2.8%	Reject
$H_{01.4}$	There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural, high school students' mastery-oriented academic motivation.	16.5%	0.0%	Reject
$H_{02.0}$	There will be no statistically significant relationship between cross-cultural, high school students' performance-approach oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).	30.4%	30.4%	Reject
$H_{02.1}$	The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural, high school students' performance-approach oriented academic motivation.	1.3%	-	Failed to Reject
$H_{02.2}$	There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural, high school students' performance-approach oriented academic motivation.	5.2%	3.9%	Failed to Reject
$H_{02.3}$	There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural, high school students' performance-approach oriented academic motivation.	24.6%	19.4%	Reject

H$_{02.4}$	There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural, high school students' performance-approach oriented academic motivation.	30.4%	5.9%	Reject
H$_{03.0}$	There will be no statistically significant relationship between cross-cultural, high school students' performance-avoidance oriented motivation and their cultural identity, value orientation, and acculturation while controlling for control variables (gender, grade level, years in host country, passport region, and number of international moves).	25.1%	25.1%	Reject
H$_{03.1}$	The control variables (gender, grade level, years in host country, passport region, and number of international moves) will not significantly contribute to the model for predicting cross-cultural, high school students' performance-avoidance oriented approach motivation.	3.5%	-	Failed to Reject
H$_{03.2}$	There will be no statistically significant contribution of cultural identity to the prediction model for cross-cultural, high school students' performance-avoidance oriented academic motivation.	7.7%	4.1%	Failed to Reject
H$_{03.3}$	There will be no statistically significant contribution of value orientation to the prediction model for cross-cultural, high school students' performance-avoidance oriented academic motivation.	21.0%	13.3%	Reject
H$_{03.4}$	There will be no statistically significant contribution of acculturation to the prediction model for cross-cultural, high school students' performance-avoidance oriented academic motivation.	25.1%	4.2%	Reject

CHAPTER FIVE: DISCUSSION

Introduction and Overview

Globalization has led to an influx of cross-cultural students into the international school classrooms during the 21st century (Allan, 2003). As the aim of all schools should be to motivate students to excel in the classroom, this cultural diversity poses a great challenge to international school educators because the boundaries between social and cultural groups within the school environment have become blurred (Boekarts, 2006; Hofer et al., 2011; Hui et al., 2011). Several factors have been identified as influencing academic motivation including cultural identity (Lillemyr et al., 2010), personal value orientation (Bernard, Maio, & Olson, 2003; Hofer, 2007), and acculturation (Chun, 2003) for students worldwide who are studying at state/government-sponsored public schools where the general student populations tend to share similar cultural heritage and values (Boekarts, 2006; Dekker & Fischer, 2008; Hofer et al., 2010; Hui et al., 2011; Yang, 2008). In the review of the literature, these factors tend to be overlooked when investigating the cross-cultural students' academic motivation within the international school setting.

Due to their unique life experiences, each of the three factors mentioned need to be considered when identifying the preferred academic motivational orientation for cross-cultural students. Academic motivation can best be understood through the achievement goal orientation theory, where academic motivation is classified as either intrinsically (mastery goal) oriented, or extrinsically (performance-approach goal and performance-avoidance goal) oriented (Ames, 1992; Deci & Ryans, 2000). Hofstede's (1980) individualism and collectivism construct asserts that individualistic people focus on individual successes, while collectivistic people tend to focus on group needs and well-being. In the classroom, individualistic students readily engage in

learning activities that encourage critical thinking and synthesis of new understanding, while collectivistic students prefer rote-memorization and group assignments (Yang, 2008). Hofer's (2007) motivational conflict theory suggests that personal value orientation also contributes to academic motivation. Students with an achievement value orientation are more likely to choose activities that enhance learning, while students who are social well-being value oriented are more likely to choose social activities (Fries et al., 2007). Lastly, acculturation, how well students are adjusting to their new culture, can also influence academic motivation (Schuarzberg & Parenteau, 2004).

International school educators need to identify the best practices for motivating CCKs with different values, cultural identities, and transitional experiences (Ames, 1992; Hofer, 2007; Lillemyr et al., 2010), and foundational to forming these practices is understanding what factors contribute to their motivation. To better understand how these factors contribute to and predict cross-cultural students' academic motivation within the international school, a quantitative, predictive, correlational research design was used, and cross-cultural students from an international school in Thailand were surveyed. The online survey included demographic and life experiential questions, the Portraits Value Questionnaire (PVQ) to measure the CCK's cultural identity and personal value orientation, the Socio-Cultural Adaptive Scale (SCAS) to measure acculturation, and a subscale of the Patterns of Adaptive Learning Styles (PALS) to measure their preferred type of academic motivation. Using hierarchical multiple regression analysis, the predictive relationship between the cross-cultural student's academic motivation and cultural identity, personal value orientation, and acculturation, while controlling for demographic and life experiences were analyzed. This chapter will discuss the results of the

hypothesis testing, the relationship of the results with previous research, the implications of this study, limitations and implications for future research, and a summary of the results.

Results of the Hypothesis Testing

The three research questions and the corresponding hypotheses for this study were focused on whether any statistically significant predictive relationships were present between the predictor variables (e.g., cultural identity, personal value orientation, and acculturation) and the three types of academic motivation: mastery goal academic motivation, performance-approach academic motivation, and performance-avoidance academic motivation, while controlling for gender, grade level, passport region, number of international moves, and the number of years lived in Thailand. Using the hierarchical multiple regression, the variables were entered into blocks based on temporal order and research and theory. The first block contained the demographic and life experience control variables, followed in order by blocks 2, 3, and 4, which contained the predictor variables, cultural identity, personal value orientation, and acculturation, respectively.

Demographics and Life Experience Control Variables

The first model to be investigated for each type of academic motivation consisted of the demographic (gender, grade level, and passport region) and life experience (years in Thailand, number of international moves) control variables. Model 1 was not found to be a statistically significant predictor for mastery goal academic motivation, performance-approach academic motivation, or performance-avoidance academic motivation, and only accounted for 2.5%, 1.3%, and 3.5% of the variance, respectively.

Gender was included as a control variable as it has previously been shown to be a significant predictor of academic motivation amongst high school students (Gerner & Perry,

2000; Hui et al., 2011; Van Houtte, 2004). However, within this cross-cultural student population, gender was not found to be a significant individual contributor to academic motivation. Grade level was included as a control variable as it has been shown that students in 11th and 12th grades tend to exhibit more academic motivation than students in 9th and 10th grades (Keklik & Erdem-Keklik, 2012; Tang & Neber, 2008). Despite this, grade level was not found to be a significant individual contributor to academic motivation within this CCK population. This study contains a slightly uneven grade level distribution, with none of the participants being in 9th grade and only 20.9% ($n = 23$) of the participants identified as being in 10th grade, while 42.7% ($n = 47$) were in 11th grade and 36.4% ($n = 40$) were in 12th grade. However, it is doubtful that this would explain why grade level was not found to be an individual significant contributor to academic motivation. Instead, a limited number of studies investigating how grade level and student age were related to intrinsic (mastery goal) and extrinsic (performance-approach and performance-avoidance) motivation found that little to no relationship existed between these specific motivation variables. Gottfried, Fleming, and Gottfried (2001) found that as students progressed from middle elementary school through high school, students showed a slight decrease in intrinsic motivation for math, but intrinsic motivation for social studies remained constaint. Additionally, Lepper et al. (2005) were not able to find any significant linear effects between grade level and extrinsic motivation. In light of these studies and the non-relationship found in the current study, additional research is needed where CCK academic motivation is studied through different variable, such as GPA and standardized test scores, or with regards to subject-specific motivation. It would also be prudent to conduct further research with a CCK sample where 9th graders are represented.

As this research focused on CCKs, the number of international moves each participant had made and passport region were also considered as control variables for this study. The number of international moves was identified as a control variable because it has been shown to be related to academic motivation (Gerner et al., 1992; Pascoe, 1994; Schuarzberg & Parenteau, 2004). Similarly, the students' passport region and has also been found to be related to academic motivation (Kelmke & Tuyet, 1999; Larson & Verma, 1999). Unlike this previous research, neither of these variables was found to be a significant individual contributor to academic motivation. This finding could be attributed to the lack of variation within both of these variables within this CCK sample. The number of international moves made by the CCKs in this sample mean had a mean score of 1.66 ($SD = 1.91$) moves; however the median score was 1.00 moves, with 78.1% of the CCKs having made 2 or less moves (e.g., 20.9% made no moves, 45.5% made 1 move, and 11.8% made two moves). In regards to the passport region, 90.9% ($n = 100$) of the participants identified their passport region as "Asia" while only 9.1% ($n = 10$) reported 'other'. This represents a significant lack of variation in regards to passport region, which could explain why passport region was not found to be an individually significant contributor to academic motivation.

This lack of variation within the passport region could potentially call into question whether the CCK sample utilized in this study was truly a cross-cultural population; however, it should be remembered that a cross-cultural kid is any "person who has lived in or meaningfully interacted with –two or more cultural environments for a significant period of time during their developmental years" (Van Reken & Bethel, 2006, p. 3). Pollock and Van Reken (2009) include bi/multi-cultural/racial children, minority children, international adoptees, domestic TCKS, and educational TCKs in their list of CCKs. Domestic TCKS are children who live in their home

country but that have moved into different regions of said country which causes them to interact with various subcultures within their home country. Similarly, educational TCKs are students who live in their home country but that attend schools that have a different cultural base and student mixture than would be present in the local school system.

As the CCKs in this study were studying in an open enrollment, American-based, Christian, international school in Thailand, one must consider the school environment as a second culture for students who do not fit within these descriptors (Schwindt, 2003). Only seven (6.4%) of the participants in this study were American passport holders, and only 35 (31.8%) of the participants reported coming from a Christian faith system (see Table 20). This data suggests that the school utilized in this study provided a different cultural experience and environment for a significant portion of the study participants.

Table 20

Frequency and Percent for Faith Systems

Faith System	*n*	%
Agnosticism	13	11.8
Atheism	4	3.6
Buddhism	41	37.3
Christianity	35	31.8
Hinduism	2	1.8
Jainism	4	3.6
Other	11	10.0

This sample can also be considered cross-cultural because the 100 (90.9%) participants who reported holding an Asian passport were not all from the same region of Asia; 76 (69.1%) were from Southeast Asia (Thailand, Malaysia, Indonesia, the Philippines, and Singapore), 17 (15.5%) were from Central Asia (China and Korea) and seven (6.4%) were from India. While the Southeast Asian countries tend to get lumped together, Keyes (1995) asserts that there is a

significant amount of socio-cultural diversity amongst the Southeast Asian people groups; therefore, one should consider a move within these countries as cross-cultural because there is an interaction with a new cultural environment. Still, due to the findings that passport region was not a significant, individual contributor to academic motivation, further research needs to be conducted that includes more even variation and distribution of passport regions and number of international moves amongst participants.

Predicting CCK Mastery Goal Academic Motivation

The full prediction model for the criterion variable, mastery goal academic motivation, was found to be statistically significant and accounted for 16.5% of the variance, which lead to the rejection of the null hypothesis. However, none of the individual variables within the full model were statistically significant individual contributors, which suggests that the none of the predictor and control variables utilized in this study can predict whether the CCK participants in this study will exhibit mastery goal academic motivation. As was discussed above, model 1 included the control variables and was not significant and only accounted for 2.5% of the variance in mastery goal academic motivation. In model 2, cultural identity was added which resulted in a model that significantly explained 13.7% of the total variance; an 11.2% change from model 1 to model 2. Within model 2, the individualism ($\beta = -.248$, $p = .010$) and collectivism ($\beta = -.212$, $p = .029$) cultural identities were significant, individual contributors. The PVQ subscales for individualism and collectivism are designed such that a low score on a particular scale suggests that the student will most closely identify with that particular cultural identity. Mastery goal academic motivation was measured using the PALS2000 scale which identifies a student as mastery goal oriented if he scores high on that subscale. As such, the negative β values found within model 2 suggest that CCKs who have a clearly defined cultural

identity, either a low score on the individualistic or collectivist subscales, will be mastery goal academically motivated. However, when the additional predictor variables were entered into models 3 and 4, having a clearly defined cultural identity, either individualistic ($\beta = -.167$, $p = .168$) or collectivistic ($\beta = -.063$, $p = .648$), was no longer found to be significant, individual contributors to mastery goal academic motivation.

Personal value orientation was added in model 3 and the model was found to be significant; however, it only accounted for an additional 2.8% of the variance in mastery goal academic orientation. Personal value orientation was measured using the PVQ subscales where a low score on the achievement value orientation subscale indicates a participant is achievement value oriented, while a low score on the social well-being value orientation subscale suggests the participant is social well-being value oriented. Neither the achievement value orientation ($\beta = .017$, $p = .876$) nor the social well-being value orientation ($\beta = -.248$, $p = .114$) predictor variables were found to be significant, individual contributors when introduced into model 3. Likewise, within the overall predictive model for mastery goal academic motivation, neither the achievement value orientation ($\beta = .017$, $p = .876$) nor the social well-being value orientation ($\beta = -.245$, $p = .114$) variables were found to be significant individual contributors. This suggests that the personal value orientation predictor variable is not an effective predictor of mastery goal academic motivation within this study's CCK sample.

The fourth and final model introduced acculturation and was found to be statistically significant; however, the introduction of the acculturation predictor variable did not account for any additional variance in mastery goal academic motivation over the previous models. The SCAS instrument was used to measure acculturation where higher scores represent CCKs who are experiencing higher levels of acculturative stress than CCKs who score lower on this scale.

Within the overall predictive model for mastery goal academic motivation, acculturation (β = -.007, p = .946) was found not to be a significant, individual contributor, suggesting that acculturation is not a predictor of mastery goal academic motivation within this CCK sample.

While each of the predictor variables investigated in this study were previously identified as having a predictive relationship with mastery goal academic motivation, none were found to be individual contributors within this study. This finding supports Harter's (1981) assertion that schools and educators can unintentionally repress students' intrinsic motivation by reinforcing extrinsic motivation through classroom practices and school policies. Similarly, Wong (2004) found that Chinese students studying in Australian universities adjusted their preferred learning style and academic motivation to reflect those of their peers and professors. The educators at the international school utilized in the current study might have created an extrinsically motivated learning environment. Creating an extrinsically-biased environment could result in intrinsically motivated CCK repressing their preferred academic motivation. If these CCKs repressed their desire for intrinsic motivation, this could explain why none of the predictor variables in this study were individually related to mastery goal academic motivation. As such, further research needs to be conducted in order to investigate whether the school environment (including international schools, state-supported public schools, private schools, charter schools, etc.) and educators reinforce extrinsic motivation, which could be accomplished by using the additional subscales of the PALS2000. The students could complete the perception of teacher goals and classroom goals subscales, while the teachers could complete the perception of school goal structure for students and the approaches to instruction subscales. This data would allow for the researcher to determine if the school and educators are reinforcing a particular type of academic motivation. Additionally, future research needs to be conducted in order to determine whether

there is a relationship between any such reinforcement of extrinsic motivation and student repression of intrinsic motivation.

Predicting CCK Performance-Approach Academic Motivation

The full prediction model for performance-approach academic motivation was found to be statistically significant and accounted for 30.4% of the variance. Performance-approach academic motivation was measured using the PALS2000, which identifies a student as performance-approach academically motivated if they score the highest on this PALS2000 subscale. Within the full model, both of the personal value orientation predictor variables, the individualistic cultural identity predictor variable and the acculturation predictor variable, were found to be significant, individual contributors. Model 1 introduced the control variables into the regression model, and was found not to be significant, accounting for 1.3% of the variance in performance-approach academic motivation. In model 2, the individualistic (β = -.027, p = .784) and collectivistic (β = -.199, p = .050) cultural identity predictor variables were added to the regression model, with only collectivism being identified as a significant, individual contributor. The addition of cultural identity resulted in an insignificant overall model that only accounted for 5.2% of the total variance. Only individualism (β = .252, p < .05) was found to be a significant, individual contributor to the full model (model 4). As was stated previously, individualism and collectivism were measured using subscales of the PVQ, where a low score represents the CCK's preferred cultural identity. As such, the positive contribution made by the individualism predictor variable on the overall model for performance-approach academic motivation suggests that CCKs who do not associate with being individualistic, those who score high on the PVQ's individualistic subscale, are more likely to exhibit performance-approach academic motivation.

Personal value orientation was added in model 3, and the model was found to be significant and accounted for 24.6% of the total variance in performance-approach academic motivation. This represents a 19.4% change in the variance from models 2 to 3. The CCK's personal value orientation was found to be the strongest predictor of performance-approach academic motivation within this study, as both achievement value orientation (β = -.514, p < .001) and social well-being value orientation (β = -.448, p = .002) were found to be significant, individual contributors to the full model. This negative contribution is due to the fact that personal values orientation is measured using the PVQ, which identifies the students preferred value orientation based on the scale with the lowest score. Therefore, CCKs who clearly identity as having preferred personal value orientation, by scoring low on either the achievement value orientation or the social well-being value orientation, are more likely to exhibit performance-approach academic motivation than CCKs who are more ambiguous in their value orientation, such as those who score high on both subscales.

The fourth and final model, which introduced acculturation, was statistically significant and accounted for 30.4% of the total variance, a 5.9% increase in variance over model 3. The acculturation predictor variable was found to be a significant, individual contributor to the full model for predicting performance-approach academic motivation within the CCK population, where (β = .262, p < .01). Thus, CCKs who experience greater difficulty with the acculturation process, those who scored high on the SCAS, are more likely to hold a performance-approach academic motivation.

The full model identified four variables (individualism, achievement value orientation, social well-being value orientation, and acculturation) that are each significant individual contributors to the overall regression model for predicting performance-approach academic

motivation amongst CCK students enrolled in the international school setting. The presence of a negative correlation between individualism and performance-approach academic motivation, and the lack of a relationship between collectivism and performance-approach academic motivation could be due to the fact that it is extremely difficult to label CCKs as being truly individualistic and collectivistic (Konsky et al., 1999-2000, Pollock & Van Reken, 1999; Sears, 2011). This suggests that while the CCK sample in this study did not clearly identify with a particular cultural identity, there seems to be a preference for non-individualistic behaviors. The negative correlation that exists between individualism and performance-approach academic motivation supports Tanaka and Yamauchi (2004) assertion that students who identity as being collectivistic tend to exhibit performance-approach and performance-avoidance academic motivation over mastery goal academic motivation.

The CCK's personal value orientation was found to be the best predictor of performance-approach academic motivation within the confines of this study. This supports the findings of Kuhnle et al. (2010) who assert that personal value orientation can be used to help determine which type of learning activity a student will choose in the classrom. Similarly, Hofer (2007) suggests that discerning an individual's personal value orientation is better than trying to label them with a particular cultural identity when it comes to understanding what type of academic motivation they will exhibit. The fourth variable, acculturation, has also been shown to influence academic motivation when students from one culture move into a new culture (Berry & Kim, 1998; Cheung-Blunden & Juang, 2008). Hill (2006) purports that most CCKs have to navigate three cultures (e.g., heritage, host, and school culture); therefore, it is not surprising that acculturation was found to be a good predictor of performance-approach academic motivation within the confines of this study.

Predicting CCK Performance-Avoidance Academic Motivation

The full prediction model for performance-avoidance academic motivation was found to be statistically significant and accounted for 25.1% of the variance. Performance-avoidance academic motivation was measured using the PALS2000, which identifies a student as performance-avoidance academically motivated if they score the highest on this PALS2000 subscale. Within the full model, the achievement value orientation, individualistic, and acculturation predictor variables were found to be significant individual contributors. Model 1 introduced the control variables and, as was the case with the mastery goal and performance-approach academic motivation, model 1 was not significant. The control variables only accounted for 3.5% of the variance in performance-avoidance academic motivation. The addition of cultural identity in model 2 resulted in an insignificant overall model that only accounted for 7.7% of the total variance in performance-avoidance academic motivation. Cultural identity was introduced into the second model for predicting performance-avoidance academic motivation and was included in all subsequent models. Within model 2, only collectivism ($\beta = -.199$, $p < .05$) was found to be a significant, individual contributor; however, in the final model (model 4), only individualism ($\beta = .281$, $p < .05$) was found to be a significant, individual contributor. This positive relationship between individualism and the criterion variable suggests that CCKs who do not identify as being individualistic are more likely to exhibit performance-avoidance academic motivation than CCKs who associate with having an individualistic cultural identity. While it might be easy to infer that a student who does not associate with being individualistic would be collectivistic, this is not the case. In order to be labeled as either individualistic or collectivistic, a participant must score low on that particular subscale. As such, the overall predictive model for performance-avoidance academic motivation

suggests that only the individualistic cultural identity predictor variable is a statistically significant predictor of performance-avoidance academic motivation.

Personal value orientation was added in model 3 and the model was found to be significant and accounted for 21.0% of the total variance in performance-avoidance academic motivation. This represents a 13.3% change in the variance from models 2 to 3. Of the two personal value orientations, only the achievement value orientation variable (β = -.426, p < .001) was found to be an individual, significant contributor to the overall predictive model as well as its predecessors. In fact, achievement value orientation was the strongest predictor of performance-avoidance academic motivation within this study. The social well-being value orientation was not identified as a significant, individual contributor to model 3 (β = -.162, p = .263) or 4 (β = -.248, p = .091). Therefore, CCKs who display a strong achievement value orientation are more likely to exhibit performance-avoidance academic motivation.

The fourth and full model, which introduced acculturation, was statistically significant and accounted for 25.1% of the total variance, a 4.2% increase over model 3. The acculturation predictor variable was found to be a significant, individual contributor to the full model for predicting performance-avoidance academic motivation with the CCK population, where (β = .221, p < .05). CCKs who experience a difficult acculturation process in their new setting are more likely to exhibit performance-avoidance academic motivation than CCKs who have an easier time working through acculturation. The full model identified three variables (individualism, achievement value orientation, and acculturation) that are each significant individual contributors to the overall regression model for predicting performance-approach academic motivation amongst CCK students enrolled in the international school setting. Performance-approach and performance-avoidance academic motivation are both extrinsic

motivations (Ames, 1992); therefore, it is not surprising that they share similar predictor variables, with the only difference being the lack of a relationship between social well-being value orientation. Performance-avoidance academically motivated students desire to avoid receiving punishment from their teachers or looking foolish in front of their peers, which means it is possible these students refrain from participating in learning activities that have a social component (Ames, 1992).

Relationship of the Results to Research and Theory

Despite earlier research demonstrating that the demographic and experience variables used in this study were significant predictors of academic motivation, this research found that these variables were not significant predictors of academic motivation within the current culturally-diverse cross cultural student sample. Earlier investigations into the influence of demographics on the CCK's academic motivation have focused on CCKs from the same home country (Gerner & Perry, 2000; Hui et al., 2011; Keklik & Erdem-Keklik, 2013; Tang & Neber, 2008). Similarly, earlier studies that investigated the role life experiences play in the development of academic motivation focused on students with well-defined cultural identities and heritages (Larson & Verma, 1999; Van Hook, 2011). It is difficult to apply these findings to cross-cultural kids studying in the international school setting because each CCKs has a unique life experience (Dixon & Hayden, 2008; Limberg & Lambie, 2011). As such, the current study differentiated from these earlier studies by focusing on a cross-cultural CCK population studying at a multicultural international school.

Research has shown that a relationship exists between students' cultural identity and the type of academic motivation they display in the classroom (Deci & Ryan, 2000; Hui et al., 2011; Lillemyr et al., 2010; Tsai & Kuo, 2008). However, Lepper et al. (2005) found that it is difficult

to delineate between mastery and performance goal orientation within the culturally diverse classroom, such as those found in the international school environment. Additionally, Konsky et al. (1999-2000) warned against trying to label individuals as holding to either a truly individualistic or collectivistic cultural identity. This is especially true for CCKs whose cultural identities are influenced by their cultural heritage, parents, friends, host nation, and school environment (Hoersting & Jenkins, 2010; Pollock & Van Reken, 1999; Sears, 2011). As a result, many CCKs develop a cultural homelessness framework where they become disconnected from all cultures (Hoersting & Jenkins, 2011). Within the confines of this study, a similar phenomenon was found where students that did not have a firm grasp of their cultural identity, especially those who did not identify with being individualistic, were more likely to exhibit extrinsic academic motivation - either performance-approach or performance-avoidance goal orientation. Similarly, the prediction model for mastery goal orientation (intrinsic academic motivation) showed that cultural identity was not an individual contributor. When cultural identity was introduced into the second block of the predictive model for mastery goal orientation, it was observed that students who clearly identify with either cultural identity, individualistic or collectivistic, were more likely to be mastery goal oriented. However, when the other predictor variables were introduced into the model, cultural identity was not longer a significant contributor towards the prediction model for mastery goal academic motivation. Thus it is probable that the CCK sample utilized in this study do not clearly associate with either the individualistic or collectivistic cultural identity, suggesting they may have developed a cultural homelessness framework as a result of their life experiences and cultural interactions.

While cultural identity is often used to label people from different cultural groups, Hofer (2007) suggests that each individual develops their individual personal value orientation based

upon their life situations and circumstances. Hofer's (2007) motivational conflict theory asserts that personal value orientation influences how someone responds towards a learning activity when presented with a new learning, or social activity. Those who are achievement value oriented are more likely to choose to study and participate in activities that enhance learning, while social well-being value oriented students will choose activities that are socially beneficial. Due to the cultural diversity within the international school, it is possible that CCKs will develop a personal value orientation that is a conglomeration of their parents' and peers' values (Kilian et al., 2013; Matthews et al., 2007). Past research has shown that personal value orientation can help explain why some students choose to participate in learning activities while others choose social activities (Bodas & Ollendick, 2005; Kuhnle et al., 2010), but no connections have been drawn between personal value orientation and the academic motivation criterion variable utilized in this study.

As such, this study expands the understanding of CCK academic motivation by showing that CCKs who are achievement value oriented are more likely to exhibit both types of extrinsic academic motivation, performance-approach or performance-avoidance. From this, it can be concluded that students who value academic achievement will be motivated by many types of learning activities. The key to unlocking these CCKs' academic motivation is ensuring that the learning activities give performance-approach academically motivated CCKs the opportunity to receive praise from their teachers/parents, while the performance-avoidance academically motivated CCKs need activites that they can complete without looking foolish in front of their peers (Ames, 1992).

CCKs who are social well-being value oriented are most likely to only adhere to performance-approach academic motivation. This lack of connection between social well-being

value orientation and performance-avoidance academic motivation could be due to the fact that students who are performance-avoidance academically motivated are focused on avoiding punishment from the teacher. In an effort to limit the likelihood of receiving punishment for misbehavior, it is possible that these students refrain from choosing to participate in social activities in the classroom environment (Ames, 1992), which could potentially explain why no connection between social well-being and performance-avoidance academic motivation was found in this study. As was seen with cultural identity, personal value orientation did not serve as a predictor for mastery goal academic motivation within this CCK sample.

In addition to cultural identity and personal value orientation, this study also investigated the predictive nature of acculturation on CCK academic motivation. When students are uprooted and transplanted in a new country they experience acculturation, which can influence academic performance (Berry & Kim, 1998; Cheung-Blunden & Juang, 2008). Much of the previous work in the area of acculturation and academic motivation has focused on students from one country coming to a new country to study in either a state-supported school system (Cheung-Blunden & Juang, 2008) or university setting (Nilsson et al., 2008). When the international school is taken into consideration, acculturation can be further complicated because the school can serve as a third or fourth culture which the CCK must learn to navigate (Hill, 2006). The current study supported and validated this finding by showing that acculturation can be used to predict performance-approach and performance-avoidance academic motivation, where CCKs who were experiencing a more difficult acculturation process were more likely to exhibit one of these two types of motivation. As with the previous predictor variables, acculturation was not found to be a predictor for mastery goal academic motivation. A question that needs to be considered in future research is whether the preferred type of academic motivation exhibited by a student

experiencing difficulty with acculturation will change as the student progesses through the acculturation process. It is possible that intrinsically motivated students adopt an extrinsic academic motivation during the acculturation process, and as they become more comfortable with their new environment they could revert back to their original preferred motivation.

Implications for Practice

The results of this study can be used to provide future implications for international school educators and administrators in regards to both classroom practices as well overall school policies and practices. As CCK's personal value orientation is the best predictor of performance-approach (desire to receive praise and recognition) and performance-avoidance (desire not to look foolish in front of peers or to receive punishment) academic motivation, international school teachers need to better understand how to identify their students' personal value orientation. Unlike cultural identity, personal value orientation is not easily determined from a student's nationality, so international school educators need to be armed with efficient tools for determining a student's personal value orientation as well as how to integrate this information into their classroom practices.

While PVQ instrument utilized in this study could be administered during the application process for all new students, this would require a significant time investment if the the entire student body is to complete this instrument.   As such, it is recommended that schools implement the value prototypes for measuring achievement and social well-being value orientations that have been created by Fries, Schmid, Dietz, and Hofer (2005). This prototype includes a short description of an achievement value oriented student (64 words) and a short description of a social well-being value oriented student (69 words) and asks the reader to choose the student with which they most closely identify. While this value prototype instrument is not as robust as

the PVQ, it has been validated and the data is reliable (Hofer et al., 2011). Additionally, this instrument can easily be adapted to be gender specific which can provide more accurate results. Due to the length of this instrument and the simplicity of evaluating the answers, it could be administered yearly in order to ensure that the CCKs' personal value orientations do not change over an extended period of time.

International school educators also need to consider the CCK's unique acculturation process as an integral component in the learning process. As the acculturation process can involve both the integration into a new country for TCKs and global nomads and integration into a new school culture for host-nation students, educators need a means to evaluate where students are in the acculturation process so the school can find ways to help them adjust. The Socio-cultural Adaptation Scale (SCAS) utilized in the current study would be a useful tool for educators to use in an effort to measure where new students fall on the acculturation spectrum. Students who are identified as having a difficult time with acculturation could be retested periodically in an effort to determine whether their acculturation experience is improving.

The results of this study do not provide the researcher with much insight into what variables can be used to accurately predict mastery goal academic motivation. These students appear to adhere to random cultural identities, personal value orientations and are experiencing varying degrees of difficulty with acculturation. Therefore, additional research needs to be conducted to identify which variables are related to mastery goal academic motivation within the international school CCK population. While not understanding which variables are pertinent to mastery goal academic motivation may seem like a cause for concern, educators need to remember that these students tend to be motivated by the pursuit of knowledge, so trying to design activities that are meaningful to these students only requires knowledge to be meaningful

(Ames, 1992). As such, it is the students who exhibit performance-approach and performance-avoidance academic motivation that educators need to take into consideration when designing learning activities, which will be discussed below.

Integration into the International School Classroom

Due to personal values orientation being the best predictor of extrinsic academic motivation, the international school teachers need to identify which best practices they can integrate into their classrooms in order to allow performance-approach and performance-avoidance academically motivated students the best chance to excel. As achievement value orientation was the best predictor of both types of academic motivation, educators need to evaluate whether the classroom learning activities provide students with the opportunity for the performance-approach CCKs to receive the needed praise and recognition while limiting the possibility that the performance-avoidance CCKs could receive punishment or the perception of looking foolish in front of their peers.   This could potentially mean that educators offer different types of learning activities to their classes in order to allow students to choose the learning activity that best suites their academic motivation. For performance-approach students, educators could give them the choice to work on a group project, they could give an oral presentation, or they could participate in a learning competition. Similarly, performance-avoidance students could be offered the choice to also work on group projects, they could work individually on a paper, or they could do some type of independent study. In either case, the educator would find it very beneficial to provide the appropriate type of feedback for both types of students in order to ensure that the learning activities accomplish the goal of motivating the students to learn. Additionally, educators need to be mindful to ensure that each learning activity needs to have a solid academic component in order to meet the needs of the achievement value

oriented students. Likewise, educators need to ensure that some of the learning activities contain a social component in order to be appealing to the social well-being value oriented students.

International School Practices and Policies

Because neither personal value orientation or acculturation can be determined by simply looking at an individual, international schools need to attempt to identify these variables for all new students as part of the admissions process. This could be accomplished by having new prospective students complete instruments that measure personal value orientation and acculturation such as the prototype value instrument (Fries et al., 2005) and the SCAS (Searle & Ward, 1990). This information could then be made available to the student's teachers through the same means that needed medical information and other accommodations are currently distributed. Having this information would help teachers understand which activities would best fit the student's personal value orientation. Likewise, international school educators could have the entire student body complete the personal values orientation prototypes yearly in order to keep student records up-to-date as they progress through the different grade levels.

In addition to accommodating for the student's personal value orientation, the school can use the acculturation data to determine how well each student is adapting to the changes he is experiencing. Armed with this information, it would be possible for the school to enact practices that would help students work through acculturation in a healthy manner. This would benefit academic performance and motivation as students who have a positive experience with acculturation perform better in the classroom than students who struggle with the acculturation process (Cheung-Blunden & Juang, 2008). Additionally, providing the acculturation data to the teachers would allow them to easily identify which students need some encouragement as they work through the adjustment process. It could also help teachers know how to organize their

seating charts as they could pair up certain students with kids that need encouragement and support as they struggle with acculturation. Similarly, having this data would help teachers better understand why a particular student might be acting out in class or why they are having a hard time finishing assignments (Berry & Kim, 1998). Figure 2 provides a summary of how the PVQ subscales and the acculturation scales could be used by educators to determine which types of classroom activities to integrate into the learning environment.

Figure 2. Using the PVQ and SCAS scales to choose learning activites.

Limitation and Implications for Future Research

Despite the useful finding and implications, this study had several limitations that can provide areas for future research. This study used a correlational design, which is useful for determining relationships and predictions; however, the results are not indicative of cause and effect (Tabachnick & Fidell, 2007). As such, while the relationships that exist between personal value orientation, acculturation and academic motivation are statistically significant, it is not possible to determine if personal value orientation or acculturation, and more specifically interventions aimed at these areas, causes a student to be extrinsically motivated. This limitation could be addressed by an experimental research design. Further studies need to be conducted where a control group is used to evaluate the effects of implementing an acculturation program for new students. One group of new students would participate in an acculturation support program while the control group would not participate in the support group. Future research could also examine whether giving students a chance to choose a learning activities that aligns with their personal value orientation influences their academic motivation. One class would serve as a control group where students are given multiple options for each learning assignment and allowed to choose which one to complete. Two additional classes would only be provided with learning assessments designed specifically for students who exhibit performance-approach academic motivation or performance-avoidance academic motivation, respectively.

Sample selection bias is another internal threat to validity for this study. As the CCK sample population used in this study is a convenience sample located at one international school setting, great care should be taken when attempting to generalize the findings from this study to the total CCK population in all international school settings (Tabachnick & Fidell, 2007). While the sample size was acceptable based on Warner's (2013) sample size requirements ($N = 104 +$

k), there is a level of nonignorable nonresponse that must be considered (Hausman & Wise, 1979). Not all of the students in the selected population chose to participate. Additionally, several participants started the survey but did not complete it. These surveys were discarded; therefore, they are not reflected in the data. As such, the results of this study only reflect those students who chose to participate or that completed the survey. This threat was limited by allowing ample time, with numerous reminders, for participants and parents to complete the letters of assent/consent in order allow for a larger sample size to complete the surveys. This limitation could be mitigated in future research by surveying a larger sample of CCKs from numerous international schools across different countries to ensure a larger sample size while also introducing more diversity.

Omitted variable bias is also a possible threat to validity as missing variables could potentially influence the criterion variable (Hausman & Wise, 1979). The presence of omitted variable bias could result in inferences being drawn about the predictor and criterion variables that are not accurate. The internal threat to validity due to omitted variable bias was controlled by identifying all necessary variables (predictive and control) through a thorough review of the relevant literature. The fact that none of the predictor or control variables investigated in this research study were related to mastery goal academic motivation suggests there are additional variables that need to be identified in order to accurately predict mastery goal academic orientation. As mastery goal academic motivated students are primarily motivated by the pursuit of knowledge and not to receive praise or to avoid punishment (Ames, 1992), it is possible that this type of motivation is more of an innate behavior than the result of one's life situations and circumstances. However, future research needs to attempt to identify additional variables that may be considered for mastery goal academic motivation model testing.

As this study utilizes self-report survey data, student responses could be biased or dishonest which could result in skewed data (Heppner, Kivlighan, & Wampold, 1999). Self-report assessments are a limitation because they rely on fidelity. Therefore, the students were asked to be honest in their responses, and their responses to the demographic questions were verified using the school database. Additionally, having the participants complete the instruments through an online survey minimized any outside influences, which hopefully increased the honesty and accuracy of student responses (Kays et al., 2012). However, the possibility of self-report bias remains. This limitation could be addressed in future research by identifying instruments for the variables of interest that do not rely on self-report, or by investigating variables that do not rely on self-report surveys, such as GPA and standardized test scores. Additionally, it might be possible to design an experiment where the researcher could measure the variables of interest through observational methods, which would limit self-report bias.

Summary

In summary, this study sought to further the empirical understanding of cross-cultural students' academic motivation by examining whether cultural identity, personal value orientation, acculturation, demographics, and life experiences could be used to predict which type of academic motivation CCKs exhibit in the international school setting. The results suggest that the lack of diversity in demographics and life experiences within the CCK population did not allow the researcher to predict the preferred type of academic motivation. Similarly, the predictor variables did not clearly explain which CCKs would exhibit mastery goal academic motivation. The academic and social well-being value orientation predictor variables were identified as the best predictor of performance-approach academic motivation, while the

achievement value orientation was the best predictor of performance-avoidance academic motivation. Additionally, it was shown that CCKs who were experiencing a difficult acculturation process with their transition into their new culture/environment were more likely to exhibit performance-approach or performance-avoidance academic motivation. Finally, it was found that CCKs who did not show individualistic tendencies are more likely to be extrinsically motivated.

The international school classroom is going to continue to grow more culturally diverse because of globalization, yet the research into cross-cultural students in the international school is lacking. Thus, it is imperative that international school educators have a better understanding of how to motivate cross-cultural students to learn. This study provided theoretical and practical implications for international school educators in regards to how to implement best practices and differentiated instruction into the culturally diverse classroom. As future research is conducted, educators and researchers need to identify additional variables that can be used to better predict academic motivation within the CCK population. Each CCK is a unique individual who presents a unique challenge to educators; however, it is this researchers hope that the information gleaned from this study will help to narrow the gap in the literature and provide educators with a better grasp of how to motivate these unique individuals in the academic setting.

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APPENDIX A

Liberty University IRB Approval Letter

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

June 16, 2014

Dennis Steve Smith, Jr.
IRB Approval 1900:061614: The Predictive Relationship between Cultural Identify,
Value Orientation, Acculturation, and the Cross-Cultural Student's Academic
Motivation in the International School Setting

Dear Steve,

We are pleased to inform you that your above study has been approved by the
Liberty IRB. This approval is extended to you for one year. If data collection
proceeds past one year, or if you make changes in the methodology as it pertains to
human subjects, you must submit an appropriate update form to the IRB. The forms
for these cases were attached to your approval email.

Please retain this letter for your records. Also, if you are conducting research as part of the
requirements for a master's thesis or doctoral dissertation, this approval letter should be
included as an appendix to your completed thesis or dissertation.

Thank you for your cooperation with the IRB, and we wish you well with your
research project.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054

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APPENDIX B

Recruitment Letter to Parents

International Community School
1225 The Parkland Road
Bangna, Bangkok, 10260 Thailand

Dear ICS High School Parents

I wanted to inform you of a research study that I am conducting at this fall in partial fulfillment of my doctoral degree through the Liberty University School of Education. I am investigating the factors that influence cross-cultural kids' (CCK) academic motivation in the international school. I would like to invite your high school student(s) to participate in this study because he/she fits into the cross-cultural label and is currently studying at an international school.

The purpose of this study is to investigate how the CCKs' cultural identity, value orientation and acculturation influence their academic motivation in the classroom. Understanding the relationships that exist between each of these variables will help international school educators better design learning activities that motivate all CCKs, regardless of their motivational orientation, to learn and excel in the international school setting.

While an invitation is being made, please know that your child's participation in this study is completely voluntary. Therefore your decision whether or not to allow them to participate will not affect your current or future relationship with either Liberty University or your kid's current high school. If your child decides to participate, he/she is free to not answer any question or withdraw at any time without affecting those relationships. By agreeing to be in this study, your child is simply agreeing to complete a confidential, online survey that will be hosted through Google forms. Because this study is voluntary, students who choose not to participate in this study will be dismissed from their normal homeroom class, to participate in a combined homeroom period in the ARC while the survey is being administered.

For those students who choose to participate in the study, they will complete an online survey using their personal electronic devices (tablet or computer) during two consecutive homeroom periods (during the weeks of August 25 and September 1), each lasting 15 minutes. During the survey, your child will be asked to answer questions that will inquire about life experiences and demographics (passport country, grade level, number of international moves, etc…). Additional questions will be asked that will help me better identify each child's cultural identity, personal

value orientation, acculturation (how you are adopting to living in Thailand), and academic motivation.

I would ask that you earnestly consider allowing your student to participate in this study as this study will allow the faculty and staff at the research site, as well as educators worldwide, to have a better understanding of the variables that influence CCK academic motivation. Current research has failed to focus on the unique experiences of the CCK. Therefore, this research would provide great insight into helping educators better understand how to design classroom learning activities that would motivate all CCKs to excel.

Please note that your child will not receive any form of payment or compensation for participating in this study.

If your child would like to participate in this study, the attached letter of consent needs to be signed by both child and parent/guardian and returned to Mr. Steve (HS206) or Mrs. Gae (high school secretary (HS201) by August 22, 2014. The online surveys will be conducted during the weeks of August 25 and September 1 on Day 1 during homeroom. You will be given a hard copy of the letter of consent for your records. Any student who does not return the signed letter of consent by August 22 will be considered as a non-participant for this study.

If you have any questions regarding this study, I encourage you to contact me by phone (086-339-8803), email (dssmith6@liberty.edu), or in person at my classroom (HS206).

Thank you for your time and I look forward to being able to share my findings with the local community in the coming months.

Sincerely,

Mr. Steve Smith
Doctoral Candidate, Liberty University School of Education
dssmith6@liberty.edu

Attachments (1)

APPENDIX C

Consent Form

The Predictive Relationship Between Cultural Identify, Value Orientation, Acculturation and the Cross-Cultural Student's (CCKs) Academic Motivation in the International School Setting

Dennis Steve Smith, Jr., Doctoral Candidate
Liberty University: School of Education

I would like to invite your high school aged child(ren) to participate in a research study investigating the factors that influence the cross-cultural students' (CCKs) academic motivation in the international school setting. Your child was selected as a possible participant because he/she is a CCK enrolled in an international school. I ask that you read this form and ask any questions you may have before agreeing to allow your child to participate in this study.

This study is being conducted by Dennis Steve Smith, Jr., a Doctoral Candidate in the School of Education at Liberty University.

Background Information:

The purpose of this study is study how the CCKs' cultural identity, value orientation and acculturation influence their academic motivation in the classroom. Understanding the relationships that exist between each of these variables will help international school educators design learning activities that can motivate all CCKs, regardless of their motivational orientation, while they are learning in the international school setting. Approximately 300 students are expected to participate in this research study.

Procedures:

If you agree to allow your child to be in this study, participation will include completing an online, confidential survey. This online survey will be completed using your child's personal electronic device (tablet or computer) during two consecutive homeroom periods, each lasting 15 minutes. During the survey, your child will be asked to answer questions that will inquire about life experiences and demographics (passport country, grade level, number of international moves, etc…). Additional questions will be asked that will help the researcher better identify your child's cultural identity, personal value orientation and acculturation (how he/she is adopting to living in Thailand).

Risks and Benefits of being in the Study:

The study has risks that are no more than your child would encounter in everyday life. Each participant will be assigned a unique identification number that will be used to link the survey data as it is being completed over two days. This unique identification number will be linked to your child's name, however no other distinguishing information will be collected, Once

the surveys have been linked, the unique identification number will be deleted from the data in order to help maintain the confidentiality of the study and its participants.

There are no direct benefits to participating in this study. However, this study will benefit society by allowing the faculty and staff of the research site, as well as educators worldwide, to better understand the variables that influence CCK academic motivation. Current research has failed to focus on the unique experiences of the CCK. Therefore, this research would provide great insight into helping educators better understand how to design classroom learning activities that would motivate all CCKs to excel.

Compensation:

You and your child will not receive any form of payment or compensation for participating in this study.

Confidentiality:

The researcher will take precautions to protect participant identity by using unique identification numbers to link the surveys as opposed to student names. These identification numbers will be randomly generated and the file that links participants' names with their numbers will be kept in a locked file cabinet. These identification numbers will only be used to link the data from the two days of surveying. The researcher will not identify any participant by name or identify the school in any of his writings or presentations. The survey will be conducted through Google forms, and all data will be stored on SharePoint for the primary researcher and the dissertation committee to view. Data stored on the server is kept in a password-protected database and is not shared with anyone. All data will be stored on this site for the duration of three years and will then be deleted by the researcher. Any hard copies of the data will be stored in a locked filing cabinet and shredded at the end of three years.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not affect his/her current or future relations with Liberty University. If you decide to allow your child to participate, he/she is free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Mr. Steve Smith. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at 086-339-8803; dssmith6@liberty.edu. You may also contact this student's advisor with any questions: Dr. Amanda Rockinson-Szapkiw, (434) 582-7423, aszapkiw@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Suite 1837, Lynchburg, VA 24515 or email at irb@liberty.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent/Assent:

I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child to participate in the study.

Signature of parent or guardian: _____   Date: _____
(If minors are involved)

Minor's Signature: _____   Date: _____

Signature of Investigator: _____   Date: _____

IRB Code Numbers: 1900:061614

IRB Expiration Date: June 16, 2015

APPENDIX D

Assumption Testing Graphs

Normal P-P Plot of Regression Standardized Residuals

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Mastery Goal

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Performance-Approach Goal

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Performance-Avoidance Goal

Historgrams

Histogram

Mean = 21.1
Std. Dev. = 6.25
N = 110

Histogram

Mean = 27.05
Std. Dev. = 8.126
N = 110

Frequency

Social Well-Being Value Oriention

Histogram

Mean = 92.3
Std. Dev. = 20.935
N = 110

Frequency

Acculturation

Histogram

Mean = 19.05
Std. Dev. = 4.241
N = 110

Frequency

Mastery Goal

Histogram

Mean = 13.62
Std. Dev. = 5.243
N = 110

Frequency

Performance-Approach Goal

Histogram

Mean = 12.7
Std. Dev. = 3.835
N = 110

Scatterplots for Criterion Variables

Scatterplot
Dependent Variable: Mastery Goal

Scatterplot

Dependent Variable: Performance-Approach Goal

Scatterplot

Dependent Variable: Performance-Avoidance Goal