Factors Influencing the Academic Engagement of Upper-Division Undergraduate
International Students: A Case Study of the University of Minnesota-Twin Cities

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Dedication

This dissertation is dedicated to the memory of Dr. Josef A. Mestenhauser (1925-2015) Professor Emeritus, University of Minnesota – Twin Cities, for his leadership, mentorship, and enduring vision for the field of international education…and, as Joe would want it, to the hundreds of thousands of international students who study in the United States each year, with special regard for those who contributed to this dissertation.

Abstract

The purpose of this study is to determine factors influencing the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities (UMTC). In keeping with the conceptualization of engagement as a "joint proposition" (Davis & Murrell, 1993, p. 5), the research questions emphasize student-driven and institutional aspects of academic engagement. Bourdieu's (1986) forms of capital theory is employed to organize relevant literature and the study findings.

The researcher utilized a mixed-methods research design. Data collection was primarily qualitative in nature and conducted via 20 semi-structured interviews; data were supplemented with the results from a quantitative on-line quantitative survey (n = 116) that provided broader coverage of the study themes. The researcher independently developed the survey instrument and the interview protocol.

The study results are organized into individual and institutional factors affecting the academic engagement of upper-division undergraduate international students at UMTC. Key findings include the influence of campus-based relationships, including those among peers and with professors and teaching assistants, on students' academic engagement. Inductive coding of qualitative data also uncovered pedagogical supports for academic engagement including instructional clarity, opportunities for participatory and hands-on learning, guidance for group work, instructor feedback, and support for classroom inclusion and participation. Cultural factors and their relationship to international students' academic transitions are also included in the analysis and emerged as key factors influencing academic engagement of study participants.

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CHAPTER ONE: BACKGROUND OF THE STUDY

Introduction

The 2013-14 school year marked the highest enrollment of undergraduate international students in colleges and universities in the United States to date (Institute of International Education [IIE], 2014). The nine percent growth in undergraduate student numbers from 2012-13 (339,993 to 370,724) reflects a broader pattern of increased international student enrollment at all academic levels and a more recent trend of international undergraduate students outnumbering international graduate students in the United States (IIE, 2014). Furthermore, if higher education projections are to be believed, this stregthening trend of global student mobility is not expected to slow anytime soon (Altbach, Reisberg & Rumbley, 2009; Teekens, 2014).

There is significant evidence to suggest that when selecting a higher educaiton institution prospective international students prioritize the quality and reputations of the institutions they choose and the educational outcomes they believe they can achieve (Becker & Kolster, 2012; Obst & Forster, 2004). Findings from an Institute of International Education (IIE) study on student choice documents that international students interested in attending college in the United States specifically seek opportunities to gain foundational knowledge in their fields of study, to experience new ways of thinking, and to receive preparation to be competitive participants in the global workforce (Obst & Forster, 2004).

Yet international students often struggle with their transitions to post-secondary education. Many scholars attribute this difficulty to students' unfamiliarity with the learning environment and the local academic culture (Andrade, 2006; Zhang & Goodson,

2011). Indeed, the challenges for international students transitioning to higher education in the United States are well documented (Justice & McLachlan, 2009; Montgomery, 2010; Robertson, Line, Jones, & Thomas, 2000; Senyshyn, Wardford, & Zhan, 2000; Yeh & Inose, 2003; Zhang & Mi, 2010).

Wan, Chapman and Biggs (1992) indicate that international students most frequently cite the academic environment as the primary point of stress and difficulty. Studies regarding differences in academic culture and systems, instruction modes, advising styles, instructors' expectations of students, and academic support mechanisms document the aspects of a U.S. education that may pose academic and personal difficulties for international students (e.g., Andrade, 2006, 2010; Kingston & Forland, 2008; Zhang & Goodson, 2011).

Biggs (2003) aruges that these academic challenges can make the accomplishment of pre-matriculation goals more difficult, may present significant learning challenges, and may possibly lead to the disengagement of international student learners. As the number of international students enrolled in U.S. higher education institutions continues to rise and competition for attracting these students stiffens, schools across the United States face the challenge of creating optimal learning environments for increasingly diverse learners. Andrade (2010) argues: "with varying cultural, ethnic, and linguistic backgrounds as well as academic preparation, support for student learning is a critical concern, as well as an opportunity to expand pedagogical approaches. Institutions must be accountable for serving those they admit and for adjusting methods of instruction and support systems to address learners' needs" (p. 221).

Increasingly, there is a dialogue among higher education and international education scholars regarding the ways that post-secondary faculty and staff can foster an environment of academic inclusion and educational success for all students (Andrade, 2010; Leask, 2009). Frequently, this literature focuses on the tension between the adjustments that students must make for educational success and the adjustments that instructors make to accommodate learners from different learning traditions (Carroll & Ryan, 2005).

In keeping with that dialogue, this study focuses specifically on the academic engagement of upper-division undergraduate international students. For the purpose of this study, academic engagement is conceptualized as a multidimensional construct of students' behaviors and affective involvement in the learning process. The term "affective" is used to address the emotional and attitudinal aspects of learning engagement. This definition is drawn from Fredricks, Blumenfeld and Paris' (2004) meta-analysis of 44 articles related to school engagement. This construct represents the student-driven side of "engagement".

This study also addresses the institutional factors that support academic engagement. Kuh, Kinzie, Buckley, Bridges and Hayek (2007) assert that it matters significantly how higher education institutions deploy resources and organize the curriculum, as well as other learning opportunities and support services, to encourage learning participation. Related outcomes for academic engagement include learning, educational persistence, satisfaction, and graduation (Kuh et al., 2007).

While numerous reports concern domestic student engagement (such as the large-scale National Survey of Student Engagement and Student Experience in the Research

University studies) there has been less attention toward the specific learning-related behaviors, emotions and cognitions of international students in post-secondary academics. In the 13-year history of the National Survey of Student Engagement (NSSE) only one report, authored by Zhao, Kuh and Carini (2005), compares international student and domestic student engagement using NSSE data. There is one similar report using Student Experience in the Research University (SERU) data (see Zhao & Douglass, 2011), and institution-specific reports on this topic are rarely published beyond their institutional contexts (Foot, 2009).

Student engagement and academic engagement models, discussed in more detail in Chapter Two, are rooted in constructivist student development theories that assume potential effect of time spent in an educational environment (Pascarella & Terenzini, 2005; Upcraft, Gardner & Barefoot, 2005). When considered alongside the body of literature that details the longer transition time that international students face upon entry into higher education (Andrade, 2006, 2010; Justice & McLachlan, 2009; Montgomery, 2010; Yeh & Inose, 2003; Zhang & Mi, 2010), upper-division students—those students in their junior or senior year of study—were selected as the population of interest for this study. This affords the opportunity to study the development of engagement behaviors and attitudes over time, something rarely presented in the literature on international students.

The lack of empirical research regarding the academic engagement patterns of international undergraduates carries implications for student learning and for the institutions in which international students are enrolled. The following section outlines the problem in more detail and contextually frames the study.

Statement of the Problem

The academic engagement of undergraduate international students is an increasingly critical issue for higher education given rising international student enrollment numbers and the problems reported by international students in Western learning environments (Andrade, 2010; Carroll & Ryan, 2005; Leask, 2009).

SERU data from 2011 suggest that international undergraduates are less satisfied with their college experience than their domestic student peers, that international undergraduates tend to have less sense of belonging than their U.S. counterparts, and that they feel a lesser degree of development in scholarship than U.S. American students at SERU consortium schools[1] (Zhao & Douglass, 2011). Further, when asked the question: "Knowing what I know now, I would still choose to enroll at this campus," international students were less likely to answer in the affirmative than their domestic counterparts (Zhao & Douglass, 2011, p. 5).

Campus-specific data from the 2014 SERU survey conducted at the University of Minnesota-Twin Cities shows that international students report less favorable ratings of campus climate, are less engaged, and have less sense of belonging than their U.S. peers (Yu & Isensee, 2014). Compared to domestic students, fewer international students expressed satisfaction with:

- Their overall academic experience
- The availability of their desired classes and academic majors

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[1] In 2011 eight SERU-AAU member institutions participated in data collection: University of California Berkeley; University of Florida; Rutgers University; University of Michigan at Ann Arbor; University of North Carolina at Chapel Hill; University of Pittsburgh; University of Oregon; and, University of Southern California. In 2015, the SERU-AAU consortium includes 24 institutions: Rutgers University; University of Florida; University of Michigan; University of Minnesota; University of Oregon; University of Pittsburgh; University of Texas; University of Southern California; University of North Carolina; University of Virginia; Texas A&M University; University of Iowa; Purdue University; Indiana University and nine system campuses and the Office of the President of the University of California system.

- The treatment and responsiveness of faculty to their concerns and needs
- The academic advising services they receive from their college, departments, and peer advisers
- The availability of academic resources including library staff and research materials, educational enrichment programs, and research opportunities
- Their overall sense of belonging
- Their personal involvement in academic settings
- The diversity of the University's climate and the tolerance for differing religious or political beliefs.

(Yu & Isensee, 2014)

International students scored higher than domestic students in the areas of academic disengagement and poor academic habits, yet also higher in the categories of academic initiative and research activity. On a self-assessment of their skills when they started at UMTC, international students reported lower skills in critical thinking and communication skills, cultural appreciation, and research skills. Aligned with this study's focus on the development of engagement behaviors over time, however, international students reported more improvements in these domains while they were at the University of Minnesota when compared to domestic students (Yu, & Isensee, 2014).

In their analysis of NSSE data, Zhao, Kuh and Carini (2005) also report findings of lower international student satisfaction with their academic experience when compared to U.S. American peers. This is notable because student satisfaction may have significance beyond the immediate campus environment. Lee (2008, 2010) asserts that institutions may jeopardize international student retention by not delivering on promises set in the recruitment process or not meeting students' needs upon arrival. This may also prompt the alienation of prospective students from an enrolled students' family and peer network, which is a known source of potential applicants (Lee 2008, 2010).

Failing to engage international undergraduate students potentially leaves this growing student population vulnerable to the antithesis of student engagement, what Mann (2001) refers to as "alienation" (p. 7) and Krause (2005) describes as "inertia, apathy, disillusionment or engagement in other pursuits" (p. 7). These symptoms of disengagement may be particuarly impactful for international students who must adjust to life in a new culture alongside their adjustment to higher education. Research on the psycho-social adjustment and acculturation of international students suggests that the transition into a new higher education context is fraught with stressors across academic and social realms (Berry, 1997; Church, 1982; Mori, 2000; Zhang & Goodson, 2011).

The data demonstrating the rising number of international undergraduates on U.S. campuses (IIE, 2000, 2011a, 2012, 2013a) leave little question that higher education classrooms are becoming increasingly international in their composition. According to IIE's (2014) *Open Doors* report, 886,052 international students were enrolled at U.S. institutions in the 2013-14 school year. Just over 40% of this number (370,724) was enrolled at the undergraduate level, constituting a 9.0% increase in undergraduate enrollments from the 2012-2013 school year. Enrollment of undergraduate international students in the United States has trended upwards each year since 2006-2007, which marked the end of a four-year decrease in enrollments immediately following the terrorist attacks of September 11, 2001 (IIE, 2011a).

Research by the British Council suggests that global flows of students will increase from 2.1 million in 2003 to approximately 5.8 million by 2020 (Böhm, et al., 2004). In the UNESCO report *Trends in Global Higher Education: Tracking an Academic Revolution*, Altbach, Reisberg and Rumbley (2009) project even greater

growth, asserting that 7 million students will be internationally mobile by 2020. Teekens' (2014) projections for global higher education readiness place 400 million students worldwide ready to study at the tertiary level in their own countries or abroad by 2030.

Increased demand for higher education is intrinsically linked to substantial social, economic and political changes across the globe. Altbach, Reisberg and Rumbley (2009) particularly highlight the increased "massification" of higher education, or the proliferation of access to tertiary education (per Trow, 2006). This access-driven development agenda has intersected with population growth, increased literacy, global educational partnerships and public demand for higher education, as well as the emergence of a knowledge economy based in large part on technology advances (Altbach, Reisberg & Rumbley, 2009). One of the conundrums of globalization—the fact that English has emerged as the primary language of scientific communication, academic publishing, and research—has further positioned English-speaking countries, such as the United States, to receive a large number of these students (Altbach, Reisberg & Rumbley, 2009; Choudaha, 2013; IIE, 2011b). That said, global competition for student enrollments is increasingly strong across the world, as well (IIE, 2011b; Wildavsky, 2010; Teekens, 2014).

International students are portrayed as an integral part of campus internationalization efforts (IIE, 2010; Knight, 2004; NAFSA, 2007; Sanderson, 2011) and instrumental to the accomplishment of intercultural learning outcomes for all students. Mestenhauser and Barsig (1977) suggested nearly 40 years ago that international students are necessary to the education of U.S. students, and Mestenhauser

(2011) wrote more recently: "There can be no global citizenship without taking into account people from other countries and, in this case, without foreign students being a part of this" (p. 275).

The successful integration of international students into college and university communities is positioned at the intersection of trends in student mobility, the internationalization of higher education, student recruitment, the development of global citizenship and intercultural competence for college graduates, and the allocation of resources for appropriate and accessible student support services. These topics have been widely addressed in the higher education literature over the past decade, but what remains less understood is the academic transition experience of undergraduate international students in the U.S. university.

The argument set forth in this dissertation, therefore, is that there exists a critical need for a better understanding of the academic engagement of undergraduate international students in the research university setting. Furthermore, there is a notable lack of research that examines the development of engagement behaviors and attitudes for the upper-division international undergraduate sector of the university population. The following sections outline the statement of study purpose, the study research questions, and the context of the study.

Statement of Study Purpose

The purpose of the proposed study is to identify the factors influencing the academic engagement of upper division undergraduate international students at the University of Minnesota-Twin Cities.

Research Questions

Pursuant to this statement of study purpose, the following research questions frame the proposed study:

1. In what ways do upper-division undergraduate international students at the University of Minnesota-Twin Cities define "academic engagement"?

2. What individual factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?

3. What institutional factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?

Context of the Study

The proposed research site is the University of Minnesota-Twin Cities (UMTC), a Carnegie classified "doctoral, research-extensive" institution in the upper Midwestern region of the United States (Carnegie Foundation, 2012). The University of Minnesota was founded in 1851 as a land-grant institution, established by the Morrill Acts of 1862 and 1890 (Pike & Kuh, 2005).

The University of Minnesota is composed of five system campuses: Crookston, Duluth, Morris, Rochester and the largest, in Minneapolis-St. Paul, known as the "Twin Cities" campus. In the Fall 2014 term, 51,147 students were enrolled at UMTC, with 30,135 studying at the undergraduate level. Just over 62% of these students (18,722) are enrolled as juniors and seniors (University of Minnesota Office of Institutional Research, 2015). For the purpose of this study, "upper-division students" are defined as students enrolled in the junior and senior classes at UMTC. By definition, these students have completed at least 60-credit hours of college-equivalent coursework.

International undergraduate enrollments at the University of Minnesota-Twin Cities have increased dramatically over the past five years. Table 1 details the undergraduate international student enrollment and percent growth from 2009-2014:

Table 1: Undergraduate International Student Enrollment and Percent Growth (2009-14)

Year	International Undergraduate Enrollment	Percent Change
2009	1411	------
2010	1834	+30.0%
2011	2282	+ 24.4%
2012	2449	+ 7. 3%
2013	2613	+6.7%
2014	2758	+5.5%

Source: University of Minnesota ISSS (2014)

These changes constitute a +95.5% increase over five years, due in part to intentional recruitment efforts to attain international student numbers commensurate with other peer research extensive universities (McMaster, 2009). The top ten countries of origin for undergraduate students studying at UMTC in 2014-15 appear in Table 2.

Table 2: Top Ten Countries of Origin, Undergraduate Students (2014-15)

Country of Origin	Number of Students
China	1390
Korea, Republic of	513
Malaysia	158
India	107
Vietnam	101
Hong Kong	47
Indonesia	46
Oman	44
Canada	28
Japan	27
TOTAL:	2461[2]

Source: University of Minnesota ISSS (2014)

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[2] Note that this figure accounts for undergraduate students in degree programs alone. Other undergraduate statistics in this report included non degree-seeking students at the undergraduate level.

As outlined in further detail in Table 3 (see page 39), these countries of origin are represent broader trends for international student enrollment in the United States. In the 2013-14 academic year, the top sending countries of undergraduate students to the United States were China (110,550); Republic of Korea (36,992); Saudi Arabia (26,865); Canada (13,916); India (12,677); Vietnam (11,886); Japan (9,155); Mexico (8,311); Taiwan (5,886); and, Hong Kong (5,830). With students from Indonesia (5,423) and Malaysia (4,750) strongly represented at the national level, as well, the only outlying student population at UMTC is the comparatively large population of undergraduates from Oman, given that there are 1,000 total Omani students studying at the undergraduate level in the United States (IIE, 2014).

The University of Minnesota has a long standing reputation for its innovations in, and commitment to, international education and the internationalization of higher education (Mestenhauser, 2011). In addition to a tradition of student mobility, internationalization of the curriculum, and scholarship on international education, the University's core educational mission is to "graduate lifelong learners, leaders, and global citizens" (University of Minnesota Office of Undergraduate Education, 2013, para. 1). These themes are further manifested in the institution's detailed three-fold mission for:

> **Research and Discovery**
> Generate and preserve knowledge, understanding, and creativity by conducting high-quality research, scholarship, and artistic activity that benefit students, scholars, and communities *across the state, the nation, and the world*[3].
>
> **Teaching and Learning**
> Share that knowledge, understanding, and creativity by providing a broad range of educational programs in a strong and diverse community of learners and teachers,

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[3] Emphasis added by the author in this section.

and *prepare graduate, professional, and undergraduate students, as well as non-degree-seeking students interested in continuing education and lifelong learning, for active roles in a multiracial and multicultural world.*

Outreach and Public Service
Extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of *the state, the nation, and the world.*
(University of Minnesota Board of Regents, 2011)

The IIE (2014) *Open Doors* report ranked the University of Minnesota-Twin Cities fourth in the United States for the number of students sent abroad and sixteenth in the nation for total international student enrollments among doctoral granting institutions[4]. Associate Vice President and Dean of International Programs Meredith McQuaid stated: "The university's high ranking in the *Open Doors* report in both study abroad and international student enrollment reflects our long history and reputation for offering high quality international education programming and the university's commitment to internationalization. While we are proud to rank highly in both categories, our emphasis continues to be on providing international and intercultural opportunities both inside and outside of the classroom to help our students be prepared to live and lead in this global society" (*University of Minnesota University News Service*: 11/08/2013).

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[4] These numbers and the subsequent rankings are best considered in comparison to peer research-intensive institutions; IIE does not rank by percentage of students engaged in international education activities, but rather by total number student participants enrolled at a given institution.

Definition of Terms and Acronyms

The following terms are used frequently throughout this dissertation. Where possible definitions have been taken from one credible source. In other cases, definitions have been synthesized in order to better operationalize the terms for the purposes of this study.

Academic engagement: a multidimensional construct of students' behaviors and affective involvement in the learning process (as defined by the author for the purposes of this study, adapted from Fredricks, Blumenfeld and Paris, 2004)

Active learning: learning strategies that promote engagement in the learning process and that encourage reflection on what is being learned (Hannafin, 2006; Sternberg & Williams, 2010)

Academic unit: the college or comparable school entity in which a student is enrolled at the University of Minnesota-Twin Cities. Examples would include the College of Science and Engineering or the Carlson School of Management.

Affective: related to feelings, or emotional actions or actions driven by feelings

Cultural capital: high cultural knowledge, tangible or intangible, that have value in a given context and promote belonging or social mobility (Bourdieu, 1979)

Doctoral/research-extensive university: Carnegie classification of the University of Minnesota-Twin Cities, indicating highest level of degree program offered and amount of on-site and affiliated research conducted (Carnegie Foundation, 2012; Pike & Kuh, 2005)

Economic capital/human capital: skills, competencies, attitudes and behaviors to perform labor and to produce economic value (Bourdieu, 1986; Schultz, 1961)

IIE: Institute of International Education*;* an independent not-for-profit organization for international education advocacy and training. Publisher of the annual *Open Doors* report of international student enrollment statistics for U.S. colleges and universities

Intercultural learning: "acquiring increased awareness of subjective cultural context (world view), including one's own, and developing greater ability to interact sensitively and competently across cultural contexts as both an immediate and long-term effect of exchange" (Bennett, 2009, p. 2)

Internationalization [of higher education]: "a process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education" (Knight, 2003, p. 2)

International student: An individual holding a U.S. Department of State-issued non-immigrant visa to come temporarily to the United States to pursue a full course of study in an approved academic program [5]

Globalization: "the inexorable integration of markets, nation-states and technologies" (Friedman, 2000, p. 9)

NSSE: National Survey of Student Engagement*;* student engagement survey administered at 1,554 colleges and universities in North America since its inception (NSSE, 2012)

SERU: Student Experience in the Research University; consortium-based student engagement study in which the University of Minnesota-Twin Cities campus has participated since 2009 (SERU, n.d.)

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[5] Despite the intentional selection of this definition to aggregate students of differing national backgrounds, the inherent heterogeneity of the international student population is acknowledged and accounted for in the factors for analysis in the study's research questions 1 and 2.

Social capital: ties of goodwill, mutual support, shared language, shared norms,
social trust, and a sense of mutual obligation from which individuals can derive
value (Bourdieu, 1986; Huysman &Wulf, 2004)

STEM: teaching and learning in the fields of science, technology, engineering,
and mathematics (Gonzalez & Kuenzi, 2012)

Student engagement: the interaction between the time, effort and other resources
invested by students and their institutions to maximize student learning and
development (Kuh, 2005a; Kuh et al., 2007)

UMTC: University of Minnesota-Twin Cities

Upper-division students: Undergraduate students enrolled at the junior (third-
year) or senior (fourth-year and beyond) level; rank of junior and senior students
is determined by the number of course credits completed toward the students'
degree plan. Students must have taken at least 60 hours of higher education-
equivalent coursework to earn upper division status at UMTC.

Theoretical Framework

Pierre Bourdieu's (1986) seminal work "The Forms of Capital" is the study's
primary theoretical framework. Where applicable, Bourdieu's (1986) work is
supplemented with other scholarship regarding the forms of capital and their impact on
human behavior and social organization.

Bourdieu (1986) argues that our experience in society is shaped in large part by
the resources to which we have access. He organizes those forms of "capital", as he

terms them, into broad categories of *economic capital* (money and assets), *social capital* (relationships, group membership), and *cultural capital* (knowledge and experience).

Economic capital has, historically, been a guiding framework for understanding the purpose of higher education, as have "human capital" capital models, which collectively represent the skills, competencies, attitudes and behaviors to perform labor and to produce economic value. Actors in human capital models operate by setting individual goals and acting independently to accomplish them (Schultz, 1961).

The focus of a human capital approach in higher education is often on the preparedness of students entering the job market and the ways in which professional preparation affects their societal contributions. In its most distilled form, Schultz's (1961, 1972) argument for the explanatory power of human capital theory is that individuals who seek education to gain skills for specialized jobs tend to make more local and global economic investments, are more civically engaged than their less educated peers, and even tend to live longer.

Critics argue, however, that economic and human capital models alone fail to acknowledge the realities of the social environment (Coleman, 1988). Bourdieu is one of the most prominent of these critics, and his "Forms of Capital" introduces a multi-dimensional approach to understanding other important types of capital.

The central idea behind social capital theory is that social relationships among people are valuable assets that can foster social affairs and access to knowledge (Nahapiet & Ghoshal, 1998). Bourdieu (1986) writes that social capital is "made up of social obligations ('connections'), which is convertible in certain conditions to economic capital" (p. 169). Perhaps more relevant to the specific context of higher education,

Huysman and Wulf (2004) define social capital as "network ties of goodwill, mutual support, shared language, shared norms, social trust, and a sense of mutual obligation that people can derive value from" (p. 1).

Putnam (1995, 2000) makes a distinction between two kinds of social capital: *bonding capital* and *bridging capital*. He indicates that bonding capital is developed through socialization among like peers. These are generally individuals who carry similar affiliations and identities such as age, race, religion, or national origin. This differs from bridging capital, which is generated when individuals form relationships with individuals with backgrounds, traits or identities different than their own. Putnam (2000) asserts in his seminal text *Bowling Alone* that organizations and activities that bring people together play a key role in developing bonding capital and, thus, equipping individuals to generate bridging capital, as well. This recognition of organizational forms of social capital beyond networks for interpersonal social capital is congruent with the conceptualization of engagement for this study, which includes both individual and institutional aspects.

According to Bourdieu (1986), cultural capital consists of affiliation with the dominant culture in a society. Cultural capital is the ideas and knowledge that people draw upon as they participate in social life; cultural capital encompasses everything from etiquette to ways of writing and speaking that convey affiliation with certain social groups or classes. Cultural capital is created when values, traditions, beliefs and language become the currency to leverage other types of capital (Bourdieu, 1979). An example of cultural capital in the education context would be familiarity with the dominant academic culture including the ability to understand and use localized

educational language and understand and meet local educational expectations, per Bourdieu's (1986) highlighting of the ability to understand and use 'educated' language in interactions with others. Other types of cultural capital evident in the higher education setting might include ways of interacting with professors and university staff or navigating university systems effectively or efficiently.

Within this model, the forms of capital are of intrinsic equal value and may be exchanged for other types of capital. Those individuals who maximize all types of capital are more likely to experience success (Bourdieu, 1986).

In the piece "Forms of Capital" Bourdieu (1986) addresses the dynamics between economic/human, social and cultural capital. He theorizes that society is composed of diverse "fields" in which capital may be used. Fields may be academic, religious, national, or representative of other affiliations. Fields are constantly evolving (Bourdieu, 1986).

In a given field, capital is used to gain power and influence, which may also give rise to conflict and competition as individuals attempt gain and trade capital resources. Bourdieu (1986) argues that altering the distribution of capital within a field changes the field itself. He defines this organic, inevitable change the "habitus".

Habitus is the internalized knowledge of a lifetime's worth of external messages and instruction. Habitus is the catalyst for thoughts and actions, which results in continued creation of the external world. It structures society but society also structures the habitus. Bourdieu's (1986) definition of habitus differs from other theorists; the habitus may guide, shape, and constrain our thoughts and actions but it doesn't *determine* our thoughts and actions.

Bourdieu argues that when habitus and field are aligned, individuals react instantaneously and with ease. When posed with a discussion question in a formal learning setting, for example, students from student-centered learning traditions understand almost immediately that the question is posed to generate interaction among students. This alignment is what Bourdieu calls "cohesion without concept".   Cohesion without concept speaks to the level to which an individual is ingrained in a group. It represents adhesion to a value system in a way that lacks self-awareness or contextual analysis; it is "how we do things around here" (Fullan & Hargreaves, 1996, p. 37).

Yet when habitus and field aren't aligned, individuals have to navigate an unfamiliar field governed by unknown "rules". For students who come from different academic traditions, understanding the localized "rules" around writing style, participation and types of academic engagement are often unclear. These rules are what Leask (2009) refers to as the "hidden curriculum" within higher education, underscoring the difficulty of understanding these unwritten expectations for international students.

The interactions between these concepts (the forms of capital, field, and habitus) culminate in the potential for what Bourdieu (1986) calls *symbolic violence*. Symbolic violence is not physical violence, but rather the unconscious exertion of cultural domination (Bourdieu, 1986). According to Bourdieu (1986), the related inequality and injustice is often invisible, even to the groups who are being marginalized.

Forms of Capital and the Dissertation Study

The following section describes how Bourdieu's (1986) forms of capital apply to the academic engagement of undergraduate international students at macro-, meso-, and

micro-levels. Specific examples are provided.

Given the rapidly rising cost of higher education and the new demands on college graduates, the macro-level purpose of higher education has become an increasingly popular topic in scholarly writing and the popular press. According to economic and human capital models, the ultimate purpose of higher education is to equip graduates with adequate skills to enter and succeed in the labor market (Bourdieu, 1986; Schultz, 1961). In today's globalized workforce, these skills may include the development of intercultural communication competencies, proficiency in multiple languages, acquiring country-specific knowledge, or understanding global markets in addition to the skills necessary to compete in one's community or country of origin.

Beyond instilling graduates with specific professional capabilities, there is an added focus in U.S. higher education on developing students' social and cultural forms of capital. Since the creation of universities and colleges in the United States, the development of "mind, body, and spirit" has persisted as one of the dominant dialogues related to the purpose of higher education (NASPA, 2004), and has steered the development of curricula, academic programming, student affairs, and institutional decision-making (Light, 2001; Pascarella & Terenzini, 2005).

Putnam's (1995, 2000) "bonding" and "bridging" distinctions are particularly practical when looking at the types of social capital that international students in higher education generate or lack. Mestenhauser (2011) documents the phenomenon of international students spending the majority of their time with students from the same national background and the consequences this carries for adaptation to students' lives on U.S. campuses and their studies. Several other recent publications address barriers and

supports for domestic and international student interaction as they relate to learning outcomes and development of meta-skills such as intercultural competency, perspective taking, and global learning (Arkoudis, et al., 2010; Colvin & Volet, 2014; Luo & Jamieson-Drake, 2013).

In the context of the University of Minnesota-Twin Cities, the campus-wide Student Learning and Development Outcomes (SLDOs) reflect the paradigm shift to this broader "whole person" or "whole student" model of student development (Pascarella & Terenzini, 2005; Upcraft, Gardner & Barefoot, 2005). Citing outcomes for knowledge, interpersonal abilities, and capabilities for graduates to function in a broader, more globally connected world, the SLDOs align with the theoretical framework of this paper and provide further evidence of the relevance of these lenses for looking at the changing landscape of higher education and graduate competencies.

Social capital is manifested in the key academic relationships that students form in the higher education environment. An exchange of social capital is evident when a student leverages a connection with a university instructor for a letter of recommendation or a referral. The cultural capital of institutional affiliation can also be leveraged for students who are, by nature of being enrolled at an institution, assumed to carry institutional values, skills, or benefits beyond that institution. Cultural capital is also gained through the rites and rituals associated with a given institution and can be increased as individuals become more fluid in navigating the structural and symbolic aspects of that given place.

Social and cultural capital theory further explains students' interest in institutional reputation, as reported in Obst and Forster (2004), and an institutional desire to foster

life-long relationships with successful graduates (Clotfelter, 2003). Cultural capital has roots in affiliation and many organizations go to great lengths to foster a cohesive institutional culture and a sense of belonging (Bolman & Deal, 2012).

Examples are evident at the institutional level, as well. The educational mission of the University of Minnesota is to "recruit, challenge, and graduate outstanding students who become highly motivated lifelong learners, leaders, and global citizens" (University of Minnesota Office of Undergraduate Education, 2013, para. 1). The articulation of this mission statement suggests a value orientation regarding a degree from the University of Minnesota and the attainment higher education. Explicitly stated, those purposes include the quest for knowledge and scholarship, leadership, and awareness of the broader world.

At the micro-level, the forms of capital can be used to categorize, organize and explain the relationship between individual actions and the broader construct of academic engagement. A student who is able to pay for editing assistance is accessing knowledge of predominant writing rules and style (cultural capital) through an exchange of economic capital. A recommendation letter from a faculty member that results in receiving a scholarship, internship or job is social capital exchanged for economic capital. Meaningful intercultural exchanges among domestic and international students exemplify the types of social capital that can result in increased familiarity with one another, which Bourdieu would categorize as cultural capital.

These examples need not be hypothetical or anecdotal. The literature on international students studying in the U.S. provides multiple examples that align with Bourdieu's forms of capital. The U.S. Department of Commerce estimates that international students contribute more than $27 billion dollars to the U.S. economy in

tuition and living expenses (IIE, 2014). IIE (2014) estimates that 74% of all international

students receive the majority of their funds from personal and family sources. A previous

report (IIE, 2011a) estimated that 81% of all undergraduate students draw upon personal

and family funds for living and tuition expenses. Lee's (2008, 2010) research on student

networks suggests that students who have positive experiences at a higher education

institution are likely to suggest the same institution to peers and family in their country of

origin. Arkoudis et al.'s (2010) work on the Australian national research project *Finding

Common Ground: Enhancing Interaction Between Domestic and International Students*

speaks to the mutual educational benefits that can be achieved when international

students are integrated into courses in ways that familiarize them with local academic

culture and provide opportunities for them to share differing perspectives on course

material with their domestic peers.

Figure 1, next page, illustrates the relationship between the forms of capital

(economic/human, social and cultural) in the field of the higher education learning

environment. Academic engagement is positioned at the center of these forms of capital,

congruent with Bourdieu's (1986) hypothesis that an individual capable of maximizing

multiple forms of capital will achieve success in their given field.

The Venn diagram is used to show, per Bourdieu (1986), that each form of capital

supports the behaviors and affective dimensions of academic engagement; the

overlapping circles represent exchanges of capital that are possible in Bourdieu's capital

exchange model. The "field" is the higher education learning environment.

Figure 1 Academic Engagement and Bourdieu's (1986) Forms of Capital
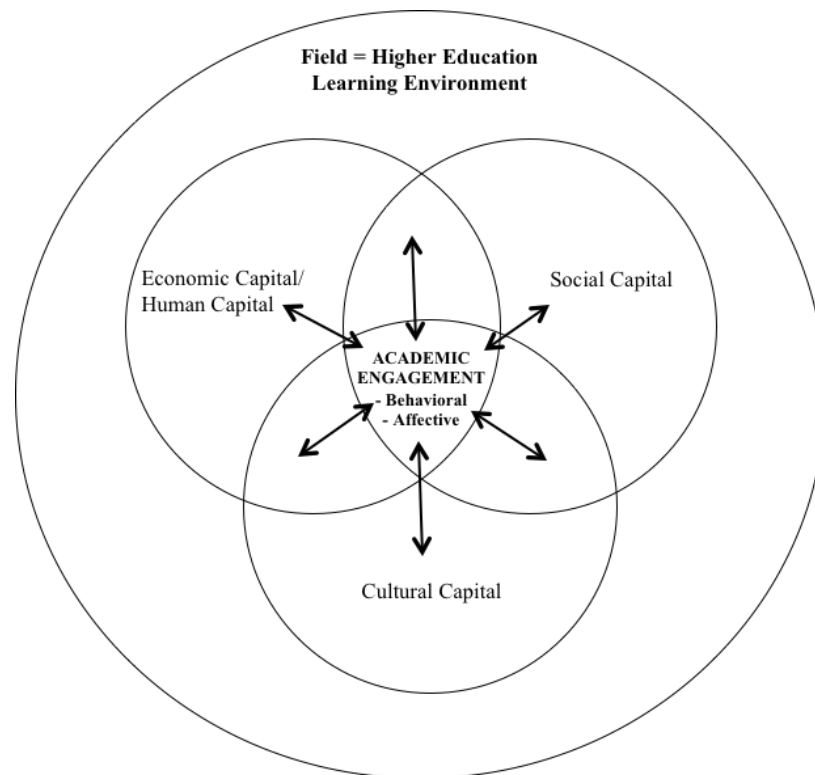
In this model, the *habitus* is the prevailing academic culture of U.S. classrooms, many of which are informed specifically by student-centered models of learning (Fink, 2013) and come with their own unwritten rules of behavior and engagement (Leask, 2009). Per Bourdieu's (1986) model, when habitus and field are aligned, individuals react instantaneously and with ease to the academic expectations in the learning environment. When habitus and field are not aligned, individuals have to navigate an unfamiliar field governed by unknown "rules". This model predicts high levels of engagement for students whose habitus is aligned with the norms of the U.S. educational environment at the University of Minnesota-Twin Cities and low levels of engagement and subsequent distress from those whose learning traditions are not aligned.

Based on Bourdieu's (1986) assertion that neither the field nor the habitus are static, the model predicts that certain features of the "field" (the higher education learning environment) can be modified to better foster undergraduate international student engagement and to prepare these students for ongoing success. This aligns with this study's conceptualization of the individual and institutional roles in fostering the behaviors and affective involvement of academic engagement.

Delimitations of the Study

The study focuses on upper-division undergraduate students at the University of Minnesota-Twin Cities. The study sample does not include international graduate students. The structure and demands of graduate education differ significantly from those at the undergraduate level (Upcraft, Gardner & Barefoot, 2005), which require separate attention and study.

The study does not include first-year or sophomore international students. It focuses on upper-division undergraduate international students. Upper-division students were selected as the population of interest because of the perceived impact of their time at UMTC on their academic engagement.

The study is not comparative in nature. The focus of the study is the academic engagement of undergraduate international students. Study data are not compared with data on domestic student engagement. It is conceptualized that the academic experiences of these populations are discrete and warrant separate consideration.

Unless otherwise noted, the literature included in Chapter Two is focused on cases and studies conducted in the United States. Literature regarding students in other non-

U.S. contexts is limited to align with the context of the study. Where the scholarship is conceptual in nature, the work of international scholars is integrated as appropriate.

Summary

This chapter serves as an introduction to the issues surrounding the academic engagement of undergraduate international students and the significance of the problem and varying levels. The information is provided to frame the concepts related to the study and the research context.

The study's theoretical framework, Bourdieu's (1986) forms of capital, serves as an appropriate lens for organizing and analyzing the behavioral and affective dimensions of academic engagement. The visual representation of the theoretical framework and examples of the relationship between academic engagement and the forms of capital lay the foundation for the study's design, as detailed in Chapter Three.

The following chapter provides a review of the literature relevant to the study of the academic engagement of upper-division undergraduate international students in a research university setting. Three categories of literature are included and the chapter concludes with a discussion of existing gaps and directions for further research.

CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

The literature in this chapter is drawn from three broad, complementary categories to frame the issues related to the academic engagement of international undergraduate students. This chapter is organized from macro- to micro-levels of analysis to address the topic's complexity and to provide an overview of scholarly perspectives at each of these levels.

The first section of the literature review addresses globalization and the subsequent internationalization of higher education, focusing particularly on the United States. The second section of the literature review addresses undergraduate academic engagement. Included in this section is the literature on academic engagement in higher education and, more specifically, of undergraduate international students. Literature on student development is included in this section, as well. The third body of literature addresses the active learning environment that international students encounter in a U.S. educational setting and the difficulties that international students may experience when transitioning to a new academic culture.

When considered alongside one another, these bodies of literature establish a foundation regarding the academic engagement of undergraduate international students in U.S. higher education.   Evidence for the alignment between the themes in existing literature and Bourdieu's (1986) forms of capital is woven throughout the review to further establish the relevance of the conceptual framework proposed in Chapter One. The literature review concludes with a discussion of the intersections among these

categories of scholarship and identification of gaps in the related literature for the purpose of framing the study.

Literature on Globalization, Internationalization, and International Students

Recent economic, political, social, and technological advances have increased the demand for, and access to, tertiary education worldwide. Increased demand and access have revolutionized the landscape of higher education in ways never seen before (Altbach, Reisberg & Rumbley, 2009; Teekens, 2014). The deepening connections between markets, nation states and technologies across the globe (Friedman, 2000) have resulted in a significant shift in who attends higher education and why (Knight & de Wit, 1997).   The IIE (2011b) report *Student Mobility and the Internationalization of Higher Education: National Policies and Strategies from Six World Regions* characterizes the presence and the mobility patterns of international students as one of the most visible indicators of the effects of globalization and internationalization in higher education.

These large-scale global and international changes have also resulted in increased dialogue surrounding the concepts of "global citizenship" (Dower & Williams, 2002; Falk, 1993; Lingard & Rizvi, 2010). This conversation has extended to the ways in which higher education graduates can be prepared to enter a workforce with fewer geographic boundaries and where more cross-cultural collaboration is required (Friedman, 2000, 2005; Mestenhauser, 2011; Nussbaum, 2002).

The following section includes definitions of the terms *globalization* and *internationalization* as they relate to higher education. These definitions are followed by a brief discussion of the historical and current context for the presence of international students in U.S. higher education. The section concludes with the rationales and trends

for enrollment of international students as part of the broader phenomenon of the internationalization of higher education.

Globalization and Higher Education

Globalization has become a pervasive term in modern discourse, used frequently to discuss the phenomenon of increasing connectedness worldwide and the shrinking divide across time, distance, and interaction (Altbach, 2002; Friedman, 2000, 2005; Knight, 2004; Knight & de Wit, 1995). Thomas Friedman, the international affairs columnist for *The New York Times* and author of *The Lexus and the Olive Tree* and *The World is Flat*, is often credited with introducing globalization in a popular context at the turn of the 21st century. Friedman (2000) defines *globalization* as "the inexorable integration of markets, nation-states and technologies to a degree never witnessed before" (p. 9). He asserts that individuals, corporations, and nation-states have the ability to reach the world "farther, faster, deeper, and cheaper" than at any other time in history, with "increasingly egalitarian" (p. 9) speed and efficiency.

Knight and de Wit's (1997) definition of globalization further extends to the exchange of knowledge and ideas. The scholars articulate the cross-border "flow of technology, economy, knowledge, people, values [and] ideas" that is implicit in the process of globalization (Knight & de Wit, 1997, p. 6). Knight and de Wit (1995, 1997) explain that the effects of globalization differ from nation-state to nation-state due to individual histories, traditions, cultures and priorities. This framing makes their definition of globalization particularly relevant to higher education which, at its broadest level, is concerned with the flow of knowledge and ideas among people and institutions,

while being inarguably affected by national influences, context, traditions, and history (Mestenhauser, 2011).

Scott (2000) argues that globalization presents the most pressing and fundamental challenge to higher education in its long history, positioned at a time and place where the boundaries between nation-states, the higher education market, and cultures are no longer clearly delineated. Globalization has significantly impacted college demographics worldwide (Altbach, Reisberg & Rumbley, 2009; IIE, 2011b) and has generated a dialogue about the role of higher education in producing "global ready" graduates (Adler, Loughrin-Sacco & Moffatt, 2005; Fuller & Scott, 2009).

In the UNESCO report *Trends in Global Higher Education: Tracking an Academic Revolution,* Altbach, Reisberg and Rumbley (2009) argue that an access-driven development agenda in much of the world has intersected with population growth, increased literacy, global educational partnerships, and the emergence of so-called "knowledge economies" and "technology economies". The result is an increased public and individual demand for higher education, and subsequent growth in student mobility.

Research by the British Council suggests that global flows of students will increase from 2.1 million in 2003 to approximately 5.8 million by 2020 (Böhm, et al., 2004). Teekens' (2014) more recent projection places 400 million students worldwide ready for and seeking higher education in their home countries or abroad by the year 2030.

The increased demand for tertiary education has created high stakes competition for an increased number of college-eligible students (IIE, 2011b). One of the conundrums of globalization—the fact that English has emerged as the primary language

of scientific communication, academic publishing, and research-oriented universities—has positioned English-speaking countries such as the United States to receive a large number of these students (Altbach, Reisberg & Rumbley, 2009; Bevis & Lucas, 2007). The United States, in fact, continues to attract more international students than any other country in the world (IIE, 2014).

The list of countries that attract internationally mobile students is shifting, however, and competition for student enrollment is ever increasing (Wildavsky, 2010). Several countries have established national policies to increase global student recruitment, including Singapore, Jordan, and Japan. The latter has the ambitious goal of increasing its international student enrollment from 120,000 to one million students by 2025 (Wildavsky, 2010). IIE's (2011b) *Project Atlas* data suggests that China is also rapidly becoming a rising star in attracting students from Southeast Asia, the United States, and Europe. Furthermore, the trend of student mobility flowing from "developing" to "developed" nations for study is changing, "with interesting variations emerging in which several unexpected players are now engaged in what might best be described as a 'global competition' for international students" (IIE, 2011b, p. 6). Choudaha (2013) suggests that emerging markets such as Saudi Arabia, Brazil, Vietnam, and Turkey will become increasingly important as they send more and more students abroad, seeking a variety of environments to meet educational expectations and needs.

Institutions must thus adapt to the rapidly changing features of a globalized world and the role that higher education plays in preparing students to enter the networked system of "technology, economy, knowledge, people, values [and] ideas" (Knight & de Wit, 1997, p. 6). Aligned with the theoretical framework within which this study is

positioned, successful entry into those systems requires behaviors, knowledge, skills, and relationships to adequately navigate the complexities of the globalized world.   To attract students and to maximize their engagement in the academic environment to these ends, institutions have had to transform their approaches to be more inclusive of global perspectives and more responsive to global trends and influences (de Wit, 2002). The next section addresses this process of the internationalization of higher education.

Internationalization of Higher Education

Knight (2004) conceptualizes the internationalization of higher education as a direct response to the globalization phenomenon. Many scholars, including Ellingboe (1998), Knight (2004), and Knight and de Wit (1995) characterize the internationalization of higher education as a cyclical process that is ongoing and continuously adapting to the changing features of the globalized world. Knight (2003) succinctly defines the *internationalization of higher education* as "a process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education" (p. 2). *Globalization* and *internationalization* are conceptually distinct yet inextricably linked, Knight (2004) argues, writing: "[i]nternationalization is changing the world of higher education and globalization is changing the world of internationalization" (p. 5). Altbach (2002, 2004) similarly asserts that internationalization is a response to globalization and one of the most influential trends in higher education today.

As the internationalization of higher education has remained conceptually broad (Mestenhauser, 2011), the strategies for doing so have also been diverse (Knight, 2004). Knight (2004) proposes a framework for considering the different approaches to

internationalization; she organizes these approaches into categories of *policies*, *programs*, and *strategies*[6] at national, sector, and institutional levels (p. 13).

At the institutional level, *policies* for internationalization may be enacted and interpreted in different ways (Knight, 2004). Narrow interpretations of policy might relate to priorities and plans for internationalization, such as mission statements or, in the case of international students, policies related to student recruitment, partnerships, or cross-border delivery in bridging programs. Broader policy work includes statements, directives, or planning documents related to the implications for or from internationalization, inclusive of resource allocation, staffing, curriculum planning, and development of student support services (Knight, 2004).

In Knight's (2004) framework, *programs* are more specific in nature, and reflect the day-to-day organizational operations around campus-based strategies (e.g., Internationalization at Home [per Nilsson, 2000]) and strategies of student mobility. Knight's model focuses predominantly on the ways that institutions can be adequately responsive to and proactive regarding internationalization, rather than what happens at the level of classroom teaching and learning.

Sanderson (2011) offers a critique of Knight's (2004) organizational approach to internationalization, asserting that it falls short of providing clear and sufficient direction for ground-level internationalization of the curriculum, a process Leask (2009) describes as "the incorporation of an international and intercultural dimension into the content of the curriculum as well as the teaching and learning arrangements and support services of a program of study" (Leask, 2009). Sanderson (2011) advocates for the integration of

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[6] The term "strategy" is meant to differ conceptually from "activities" and is thus broader in scope, but encompasses both program and organization initiatives at the institutional level (Knight, 2004).

sound pedagogy and global and intercultural perspectives toward the realization of course-level and campus-level objectives for internationalized learning. This argument is revisited in Chapter Five when the implications of the study findings are reviewed.

The movement toward "comprehensive internationalization" in the field of international education and exchange attempts to acknowledge multiple ways of internationalizing higher education and to establish guidelines for practice. NAFSA: Association of International Educators defines *comprehensive internationalization* as:

> …a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education. It shapes institutional ethos and values and touches the entire higher education enterprise. It is essential that it be embraced by institutional leadership, governance, faculty, students, and all academic service and support units. It is an institutional imperative, not just a desirable possibility.
>
> Comprehensive internationalization not only impacts all of campus life but the institution's external frames of reference, partnerships, and relations. The global reconfiguration of economies, systems of trade, research, and communication, and the impact of global forces on local life, dramatically expand the need for comprehensive internationalization and the motivations and purposes driving it.

<div align="right">(Hudzik, 2011, p. 10)</div>

Hudzik (2011) makes the case that the meaning of campus internationalization is constantly evolving and process-oriented, "not an end, but a means to many ends" (p. 8) and that the dialogue around campus internationalization should reflect this multi-dimensionality. The comprehensive internationalization approach builds upon Knight's (2004) national, sector, and institutional categories, recognizing the relationship between these entities.

Hudzik (2011), Knight (2004), Leask (2009, 2012) and Mestenhauser (2006) all acknowledge that even with the use of organizational frameworks, internationalization is

a complex process. Mestenhauser (2006) speaks specifically to the difficulty of implementing internationalization plans and strategies in higher education environments that are "fragmented, complex, multidimensional, interdisciplinary, [and inherently] intercultural" (p. 61).

The presence of international students has been positioned as an integral part of campus internationalization for decades (Bevis & Lucas, 2007), albeit with varying institutional approaches to student recruitment, matriculation, and integration. The following section provides a brief history of international students in the United States and historical rationales for international student enrollment.

Trends and Rationales for International Student Enrollment

Bevis & Lucas (2007), authors of the most comprehensive history of international students in U.S. higher education to date, place the origins of "sizeable" (p. 31) international student enrollment in U.S. institutions in the mid-1800s. At that time, a rapidly developing American higher education system began to attract students from abroad, allowing the United States to actively compete with the European institutions that inspired the development and structure of its higher education system.

Early demographic trends show patterns of student enrollment from neighboring Canada and Latin American nations (Wheeler, King & Davidson, 1925). The first surge in the number of Chinese students occurred in the early 1900s as part of the "open door" policy with China, one part of Theodore Roosevelt's plan to expand trade and to encourage Chinese educational reform in the style of the U.S. education system (Bevis & Lucas, 2007).

Census taking of international students began mid-century, after a significant fluctuation of international student enrollments in the wake of WWI and WWII. The Committee on Friendly Relations Among Foreign Students and the Institute of International Education (IIE)'s 1948-49 census report accounted for 26,759 students from 151 nations in 2,512 academic institutions (IIE, 2013b). Academic refugees from post-conflict Europe came to the United States in large numbers. Student and scholar exchange programs, such as the Fulbright Act of 1945, were established as part of the U.S.'s diplomatic efforts to establish and maintain relationships with allies worldwide.

While political diplomacy continued to drive international student policies and enrollment throughout the Cold War era, the late 1950s also ushered in a period of intentional planning to internationalize U.S. campuses through the enrollment of international students (Bevis & Lucas, 2007). A report by the Committee on Educational Interchange Policy (1957) outlined a rationale for maintaining international student enrollment for the purposes of: 1) fostering communication among scholars of all nations, 2) fulfilling an obligation to share educational resources with other countries, and 3) broadening the outlook of American students.

Over the next 15 years, in keeping with and exceeding the imperative outlined in the Committee on Educational Interchange Policy's report, the numbers of international students in the United States skyrocketed. There was a seven-fold enrollment increase from the 1955-56 *Open Doors* student census to the 1979-80 census, the latter of which reported enrollment of 286,340 international students (IIE, 1956, 1980). This increase reflected U.S. outreach to international students through recruitment and exchange opportunities, and diversification of students' backgrounds and ages. In the 1980s

increasing numbers of international students sought graduate and advanced degrees and enrollment in community colleges in addition to undergraduate programs (Bevis & Lucas, 2007).

Distinct enrollment trends emerge from the literature on international student mobility in the 19th and 20th centuries: Educational competition, establishing and maintaining political alliances, cultural diplomacy, diversification of the student body, and supplementing tuition revenues (Bevis & Lucas, 2007). Current scholarship on student mobility also includes rationales related to campus internationalization and the impact of significant political and economic changes after September 11, 2001.

Recent Trends and Rationales for International Student Enrollment

Institute of International Education's (2014) *Open Doors* report, 886,052 international students were enrolled at U.S. institutions in the 2013-14 school year. Just over 40% of this number (370,724) was enrolled at the undergraduate level, constituting a 9.0% increase in undergraduate enrollments from the 2012-2013 school year. Enrollment of undergraduate international students in the United States has trended upwards each year since 2006-2007, which marked the end of a four-year decrease in enrollments immediately following the terrorist attacks of September 11, 2001 (IIE, 2011a). Prior to September 11, 2001, international enrollments at U.S. institutions saw increases ranging from 0.3 to 16.0% annually from the 1971-72 school year, when the last drop in international student enrollments occurred (IIE, 2011). Since IIE began collecting data on international student enrollments in U.S. higher education in 1948, the statistics from only four academic years (1971-72, 2003-04, 2004-05, and 2005-06) show a percentage decrease (IIE, 2012).

According to *Open Doors* (2014) reporting, China is the number one country of origin for undergraduate international students in the U.S. (110,550; a 17.9% increase from 2012-2013, building upon a 25.9% increase from 2011-2012). Table 3 documents the top five sending countries to the United States in the 2013-14 academic year, with further data regarding the previous two years of enrollment and the percentage increases and decreases, respectively.

Table 3: U.S. Higher Education Enrollment Trends by Leading Countries of Origin

	2011-12	% change [from '10-11]	2012-13	% change	2013-14	% change
China	74,516	+30.8%	93,789	+25.9%	110,550	+17.9%
Republic of Korea	38,232	+0.8%	38,094	-0.4%	36,992	-2.9%
Saudi Arabia	14,344	+31.0%	20.667	+44.1%	26,865	+30.0%
Canada	12,866	-6.7%	13,395	+4.1%	13,916	+3.9%
India	13,059	-2.2%	12,740	-2.4%	12,677	-0.5%

(Source: IIE, 2014)

IIE (2014) reports that the top five academic programs for 2012-13 international students are (1) business and management; (2) engineering; (3) mathematics and computer science; (4) social sciences; and, (5) physical and life sciences.

At present, the rationales for enrolling international students in U.S. higher education institutions are as diverse as, and inclusive of, the historical reasons for recruiting and matriculating students from other countries. Current literature can be organized around five prominent themes: educational competition for students; economic gains; diversification of the campus community; maintenance of diplomatic relations; and, the perceived role of international students in internationalizing higher education.

Competition. Much like the late 1800s when early American educators strived to compete with their European counterparts, the latter part of the 20th century was marked by increased competition for international students (Teekens, 2014; Wildavsky, 2010). Competition for students seeking English-speaking programs comes particularly from institutions in the United Kingdom, Canada, and Australia (Andrade, 2006; Choudaha, 2013). Although the United States maintained the majority of the international student market throughout the 19th and 20th centuries (IIE, 2000, 2010, 2012) the U.S. now faces significant competition from abroad (Choudaha, 2013; Fullan, 2010; Wildavsky, 2010). Several countries have established national policies to increase global student recruitment, including Singapore, Jordan, and Japan. The latter has the ambitious goal of increasing its international student enrollment from 120,000 to one million students by 2025 (Wildavsky, 2010). IIE's (2011b) *Project Atlas* data suggests that China is also rapidly becoming a rising star in attracting students from Southeast Asia, the United States, and Europe.

Related to competition is the role of global higher education rankings in enrollment decision-making. Among the most popular global rankings, including England's *Times Higher Education Rankings* and China's *Shanghai Jiao Tong* rankings, the number of international students at a given institution is factored as an asset when assigning the rank order of institutions worldwide (Hazelkorn, 2007; Institute for Higher Education Policy, 2009; Saisana & D'Hombres, 2008). Despite controversy that the rankings may not create an accurate hierarchy (Saisana & D'Hombres, 2008), they remain significantly popular and have been

documented to influence student opinion, plans for application and enrollment decisions (Becker & Kolster, 2012).

Economic gains. The U.S. Department of Commerce estimates that international students contribute more than $27 billion dollars to the U.S. economy in tuition and living expenses (IIE, 2014). The organization further estimates that 65% of all international students receive the majority of their funds from personal and family sources (IIE, 2014), and an earlier report estimated that 81% of all undergraduate students draw upon personal and family funds for living and tuition expenses (IIE, 2011b). International undergraduates tend to pay the full, non-resident rate of tuition at higher education institutions and have been enrolled as a strategy to offset low matriculation in certain educational programs to aid higher education institutions in maintaining enrollment revenues (Barber & Morgan, 1988; Garrett, 2014). In addition to competition for student numbers, therefore, the competition for student dollars is part of the drive for attracting international students to campuses.

Increasing campus diversity. As higher education institutions seek to diversify the demographics of their respective student bodies, international students have come to play an important role in recruitment, matriculation, and inclusion goals (Peterson, Briggs, Dreasher, Horner & Nelson, 1999). Diversity in education has specifically been shown to enhance student growth and development in the cognitive, affective, and interpersonal domains (Alger, 1997; Hurtado, 1992; Milem, 2001). Milem (2001) also documents institutional and societal benefits for engagement across individual, institutional, and societal domains. Ping (1999)

asserts that on-campus interactions can provide liberating encounters with people who represent other values, faiths, and social practices, and can prepare students to engage in cross-cultural environments beyond their college experience.

Diplomacy. The United States, primarily through programs implemented through the U.S. Department of Congress and the U.S. Department of State, invests in and manages programs designed to establish and maintain diplomatic programs with other nations. Although many of these programs are offered for advanced scholarship, there are exchange and scholarship programs at the undergraduate level that play key roles in maintaining relationships with other countries (Scott, 2008).   Student visas are also a critical part of non-immigrant visa reciprocity programs, which have long represented the health of relationships between the United States and other nations (Wilson, 2007).

Campus internationalization. As discussed in the previous pages, international students are portrayed as an integral part of campus internationalization efforts (Altbach, 2002; Ellingboe, 1998; Hudzik, 2011; IIE, 2010; Knight, 2004; NAFSA, 2007). Mestenhauser and Barsig (1977) asserted nearly 40 years ago that international students are necessary to the education of domestic students, and Mestenhauser (2011) more recently argued that international students are critical in the development of global citizenship within higher education. Paige (2003) further suggests in a case study of the University of Minnesota that the welfare and wellbeing of international students on campus is a key performance indicator of an institution's internationalization efforts.

The preceding "snapshot" of the rationales for integrating international students only scratches the surface of the complexity of the issue. Institutions may have more specific rationales, such as building or maintaining cross-border partnerships, affiliations with certain government or funding programs, or research agendas that may also motivate or necessitate education leaders to welcome international students into their campus community. Aligned with Bourdieu's (1986) framework, pure economic capital, the formation and maintenance of relationships, and institutional culture are all evident in the rationales described in this section.

Understanding institutional motives for increasing international student enrollment, however, only addresses one side of the international student enrollment issue. The next section includes considerations of why students elect to study abroad and what factors affect their decision-making.

Factors Affecting Student Choice

As global competition for students intensifies (Wildavsky, 2010), there is an increasing amount of research being conducted on students' educational choices. Recent research (Becker & Kolster, 2012; Obst & Forster, 2004) suggests that the factors that attract students to an institution are related to attainable knowledge and skills, affiliations, and applicable skills to the workforce and citizenry. Data from Becker and Kolster's (2012) meta-analysis also suggests that the level of campus internationalization and services for international students is a consideration for non-native students.

Based on data collected from more than 3,000 students across three surveys, Becker

and Kolster (2012) document "pull" factors related to final selection of an institution for

matriculation:

- A wide knowledge and awareness of an institution among students (good and available information, educational / historical / strategic links between the host institution and a previous education institution, linguistic and religious linkages, and active promotion or recruitment policies of the institution),
- A high perceived quality and reputation of the institution and its education and research (e.g. as expressed in rankings of the institution, its programs/faculties and its academic staff),
- Recognition of degrees or other qualifications by the host institution and country of origin, and a high marketability of the degree/qualification,
- The costs of higher education (tuition fee level, the availability of financial aid, travel expenses, and living costs),
- The nature of governance and administrative procedures of a higher education institution (public vs. private, academic freedom, the speed of application procedures and student satisfaction with institutional communication),
- The safety level within the institution / on campus (crime rate, discrimination levels),
- The level of internationalization of an institution (number of international students and staff, and the availability and diversity of international programs),
- The living, study and work environment of an institution (ambiance, study rooms, on-campus employment opportunities during and after the study, and the quality of ICT and research facilities), and
- Social and geographical links (friends/relatives living or studying at the same institution, geographical proximity).

(Becker & Kolster, 2012, p. 14).

A similar Institute of International Education survey collected data from 420

students at 24 institutions to determine why students selected a given higher education

institution. This study was conducted exclusively with international students attending

higher education in the United States (Obst & Forster, 2004). The survey data indicates

the following factors for making the choice to study abroad: (1) Experience new ways of

thinking and acting in the field of study; (2) Improve chances for an international career;

(3) Obtain a broader/more flexible education than offered in home country;

(4) Opportunity to develop the personality/become more independent; and, (5) Improve career prospects/chances of getting a good job back in the home country (Obst & Forster, 2004, p. 15-16).

In terms of institutional characteristics, 77% of respondents in IIE's study indicated that it was important or very important that the university offered a specific program or courses in their area of specialization. Seventy-two percent of all respondents placed importance on the "general prestige of the institution / quality of education and research." Obst and Forster's (2004) findings align with Becker and Kolster's (2012) meta-analysis and the specific findings from Mazzarol and Soutar (2002), which suggest that the academic program, affiliation with a prestigious institution, and personal development are important in international students' decision-making processes.

Research by Andrade (2010), Kingston and Forland (2008), Lee (2010), and Pyvis and Chapman (2005) further indicates that the expectations that students develop during the application process (whether set by recruiters, other students, individuals in the family network, or the student him- or herself) influence student satisfaction, retention, and the image of the institution a student shares with his or her peer network (Lee 2008, 2010).

There is compelling evidence to suggest that innovative and rigorous educational programs, legitimate credentialing, and the opportunities to develop peer networks, ongoing institutional affiliations and applicable skills and capabilities for post-graduate life are factors that students value (Becker & Kolster, 2012; Mazzarol & Soutar, 2002; Obst & Forester, 2004).   How an institution attends to and mobilizes resources for these outcomes, therefore, may make a significant difference in how students select an

institution and the experience that they have once they are enrolled (Pyvis & Chapman, 2005).

The student data demonstrating the rising number of international undergraduates on U.S. campuses (IIE 2000, 2012, 2013a, 2014) leave little question that many campuses are increasingly international in their composition. Whether or not this has influenced what is being taught or how it is being taught in post-secondary classrooms remains a question in the discourse of international education and student mobility, however. What should be expected of students coming from other learning traditions? Should content be altered? Should pedagogy be changed? Who is responsible for adapting to whom when there are demographic shifts? How do higher education institutions prepare international and domestic students to interact with a diverse range of individuals, organizations, and problems while they are in college and once they graduate?

The next section of the literature review shifts from contextual and demographic information regarding international students in U.S. higher education to a review of the literature on academic engagement. This body of scholarship also includes studies and commentary on the experience of international students in the educational environments they encounter in the United States.

Literature on Academic Engagement

Engagement is a well-explored construct, both within the field of education and without. A literature search for "engagement" turns up numerous articles on civic engagement, community engagement, public engagement, parent and family engagement,

school engagement and scholarship of engagement—each with a distinct contextual meaning and approach to understand the phenomenon.

In education scholarship, engagement definitions tend to reflect the depth and breadth of students' participation in learning processes and opportunities (Newmann, 1992). In recent years, there have been many specific attempts to understand the characteristics of and conditions for engagement in higher education (Pascarella & Terenzini, 2005; Upcraft, Gardner & Barefoot, 2005). Often, these studies look at overall student engagement, examining the ways that students spend their time and efforts in curricular, co-curricular, and off-campus settings. There is less literature, however, on higher education academic engagement of international students and significantly less research on the academic engagement of international undergraduate students, despite the dramatically rising number of these students in U.S. higher education. Harper and Quaye (2014) advocate that studying the engagement of underrepresented populations in higher education is critical to understanding the engagement construct fully and to providing equitable services in higher education settings.

The focus of this study is the academic engagement of upper-division international undergraduate students. For the purposes of the study, academic engagement is defined as *a multidimensional construct of students' behaviors and affective involvement in the learning process*. Given that higher education literature often focuses on the student engagement construct, it bears mention that the term *academic engagement* best reflects this study's focus on educationally purposeful activities and is used throughout the dissertation.

The following section is composed of foundational information on higher education engagement, how engagement is most commonly measured in U.S. higher education, and what is known about the engagement of international undergraduate students. In keeping with this study's focus on the institutional and pedagogical factors influencing the academic engagement of international students, this section concludes with viewpoints regarding the roles that institutions play in fostering post-secondary engagement.

Defining and Characterizing Engagement

The author Mihalyi Csikszentmihalyi has spent a career researching engagement. In his TED[x] talk entitled "The Rules of Engagement", Csikszentmihalyi (2011) outlines the three components of a "good life" as *pleasure*, *meaning*, and *engagement*, or "the feeling that you are doing something that's worth doing [and] that you can lose yourself into" (min. 5:50). Scholarship supports the claim that of these three factors, engagement is the most predictive of happiness, satisfaction, and wellbeing (Csikszentmihalyi, 2011).

Csikszentmihalyi (1997) characterizes the psychological investment of intentionally focused energy as a "flow state", or more explicitly, engagement to the point at which absorption in the task-at-hand excludes all other cognitive distractions. He writes that the conditions for the deepest levels of engagement are a sense that one has skills that are adequate to cope with an activity's challenges, an established and clearly recognizable goal for the experience, and a system or environment that provides feedback regarding progress (Csikszentmihalyi, 1997). Staying in the flow state, or "flow channel" (Csikszentmihalyi, 1997, p. 74), requires the actor to continually seek challenge and develop skills commensurate with that level of challenge. If skills are too high in an

unchallenging system, boredom can result; if the system provides significant challenge but the actor lacks skills, anxiety can emerge[7].

While engaging undergraduate students in a continuous educational "flow" state may not be realistic, there have been numerous attempts to understand the conditions that promote engaged learning in higher education. Engagement in the context of Western postsecondary education is commonly conceptualized as a "joint proposition" (Davis & Murrell, 1993, p. 5) composed of student effort and institutional effort. Kuh (2005c) describes the *student driven* component as "the amount of time and effort students put into their studies and other educationally purposeful activities" (p. 87). Svanum and Bigatti (2009) characterize academic engagement as "not just course-related activities (e.g., class attendance, completion of assignments) but [also] broadly defined involvement in academic life" (p. 120).

The second component is *institution driven*. Kuh et al. (2007) define this as "how the institution deploys its resources and organizes the curriculum, other learning opportunities, and support services to induce students to participate in activities that lead to the experiences and desired outcomes such as persistence, satisfaction, learning, and graduation" (p. 44). There exists considerable support in the literature on engagement that this type of engagement can be supported institutionally and in classrooms (Coates, 2005; Kuh et al., 2007; Trowler, 2010).

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[7] Mestenhauser (2011) contends that Csikszentmihalyi's work holds key lessons related to learning and, in particular, intercultural learning. Csikszentmihalyi (1997) states the flow experience is "reported in essentially the same words by old women from Korea, by adults in Thailand and India, by teenagers in Tokyo, by Navajo shepherds, by farmers in the Italian Alps, and by workers on the assembly line in Chicago" (p. 4), suggesting that "flow" may have a universal, or universally desired, component, as well as cross-cultural validity. Parallels to Vygotsky's (1978) zone of proximal development are included in the final section of the literature review.

Much of the literature on academic engagement emphasizes the relationship between student actions (behavior) and their psychological investment (affect) as key parts of engagement in the learning process. This scholarship informs and supports the operationalized definition of academic engagement for this study as *a multidimensional construct of students' behaviors and affective involvement in the learning process,* where "affective" refers to emotional and attitudinal involvement in learning (per Fredricks, Blumenfeld & Paris, 2004).

Newmann (1992) asserts that academic engagement takes place when "students make a psychological investment in learning. They try hard to learn what school offers. They take pride not simply in earning the formal indicators of success (grades), but in understanding the material and incorporating or internalizing it in their lives" (p. 2-3). According to Kuh (2009), "The engagement premise is straightforward and easily understood: the more students study a subject, the more they know about it, and the more students practice and get feedback from faculty and staff members on their writing and collaborative problem solving, the deeper they come to understand what they are learning and the more adept they become at managing complexity, tolerating ambiguity, and working with people from different backgrounds or with different views" (p. 5). Bean (2005) highlights the critical nature of engagement's affective dimension, writing "[p]articipating in events without committing psychological energy to them indicates that they are unimportant to the student and thus ineffectual in changing the student... Behavior without thought is not likely to lead to the gains associated with engagement" (p. 2-3).

The following section addresses the origins and development of engagement scholarship in higher education, which has become increasingly popular over the past decade (Harper & Quaye, 2014; Pascarella & Terenzini, 2005). This overview provides a foundation for the following sections on student engagement measurement and outcomes.

Development of Student Engagement Scholarship

Efforts to study academic engagement are positioned at the intersection of two education research traditions: Pedagogical approaches (explored in further detail in the third section of the literature review) and sociological education research. Scholars within the sociological paradigm seek to explore and measure the impact of the college experience on students' development, learning, and outcomes (Pascarella & Terenzini, 2005).

The work of Alexander Astin, in particular, laid critical groundwork for modern engagement scholarship (Kuh et al., 2007). Astin's model of college impact and his later theory of student involvement sought to explain the relationships between individual and institutional roles in college learning success.

Astin's (1970a, 1970b) input-environment-outcome (I-E-O) model remains one of the most enduring models for understanding the individual and environmental interactions in higher education (Pascarella & Terenzini, 2005). The I-E-O model conceptualizes college outcomes as functions of *inputs* (students' pre-college backgrounds and characteristics), *environments* (the rage of settings, experiences, programs, and policies students encounter on and off campus), and *outcomes* (students' post-college characteristics, knowledge, skills and attitudes).

Astin's work on student involvement further sought to explain student agency in learning. Astin (1985) broadly conceptualized student involvement as "the theory [that] *students learn by becoming involved*" (p. 133). The theory of involvement is composed of five postulates:

- involvement requires the investment of psychological and physical energy in 'objects' (e.g. tasks, people, or activities);
- involvement is a continuous concept;
- involvement has both quantitative and qualitative features;
- the amount of learning or development is directly proportional to the quality and quantity of involvement; and,
- educational effectiveness of any policy or practice is related to its capacity to induce student involvement

<div style="text-align:right">(Astin, 1985, p. 135-136)</div>

Astin's (1985) tenets of involvement address time-on-task, student effort, and motivational dimensions of modern engagement scholarship.

Harper and Quaye (2014) point out, however, that there is a key "qualitative difference" between the concepts of involvement and engagement (p. 5). While a student may be involved in a class or an activity, there is no guarantee that he or she will be actively participating and achieving deep learning (Harper & Quaye, 2014; Kuh et al., 2007).

Wolf-Wendel, Ward and Kinzie (2009) offer further distinction on the differences between involvement and engagement. They suggest that *involvement* focuses on the responsibility of the individual. The unit of analysis is the student and his or her energy, although environmental factors may be included in analysis. Although there is some variation within involvement research, involvement studies tend to measure time-on-task rather than expenditure of energy (Wolf-Wendel, Ward & Kinzie, 2009). According to Wolf-Wendel, Ward and Kinzie (2009) *engagement* focuses on "creating campus

environments that are ripe with opportunities for students to be engaged" (p. 425).

Scholarship on engagement places more emphasis on specific behaviors that are highly

correlated with desirable learning and development outcomes, such as studying and

preparing for class, interaction with faculty, and enriching educational experiences.

Environmental factors are considerably more important in engagement models, as are the

provisions for accessible, equitable opportunities for students to become engaged on

campus (Harper & Quaye, 2014).

Engagement Outcomes

Engagement has become an intensely popular topic in the literature on higher

education in recent decades. "If student engagement can deliver on its promises, it could

hold the magic wand" for the qualitative and quantitative student outcomes that typify

student success in higher education, writes Trowler (2010, p. 2).

Broadly, the promises to which Trowler (2010) refers fall along the lines of

stronger grades, greater cognitive, emotional and personal development, increased

interpersonal interactions, educational persistence and attainment, higher levels of self-

reported personal fulfillment and higher levels of post-graduate income (Astin, 1984;

Fredricks, Blumenfeld & Paris, 2004; Pascarella, Edison, Nora, Hagedorn & Terenzini,

1996; Pascarella et al., 2006; Tinto, 1997). There is evidence to suggest, as well, that

engagement in good educational practices imparts students with the skills to be successful

in their careers and in an increasingly diverse society (Pascarella et al., 1996).

Parallels to the forms of capital, particularly human and economic capital, are

evident in these outcomes and how they are highlighted in the literature. Kuh, Cruce,

Shoup, Kinzie and Gonyea (2008) underscore the alignment between student engagement

outcomes with the human capital perspective of education, especially asset building and academic and professional competence. Other literature focuses more on the relational (social capital) aspects of engagement and the role of peer interactions and faculty/student relationships in fostering deeper engagement (NSSE, 2012; Trowler, 2010). The SERU study, in particular, includes several questions that represent cultural capital development, including items regarding positive regard for institutional affiliation.

A study using National Survey of Student Engagement (NSSE) data from 18 colleges and universities (n = 6,193) found a small, yet statistically significant (p < 0.001), relationship between student engagement in educationally purposeful activities and an increase in student grades in both the first and the last year of undergraduate study (Kuh et al., 2008). Specifically, a one-standard deviation increase in "engagement" (21 hours or more per week studying and participation in educationally purposeful activities) during the first year of college increased a student's GPA by approximately .04 points, controlling for background variables of gender, race, level of parent income, level of parent education, and pre-college academic achievement.

The same study found a statistically significant, positive relationship (p < 0.001) between the engagement in educationally purposeful activities and persistence from the first to second year of undergraduate study, controlling for background characteristics, other college experiences during the first year, academic achievement and financial aid (Kuh et al., 2008).

The study further concluded that student engagement had a compensatory effect on academic achievement and persistence for students of color and students with one or more "risk factors" for school attrition (Kuh et al., 2008). Earlier studies by

Handelsman, Briggs, Sullivan and Towler (2005) and Robbins et al. (2004) had similar results, demonstrating positive correlations between engagement and grade point average and student retention.

Svanum and Bigatti (2009) characterize engaged students as "more likely to earn a degree, do it faster and do it better" in the article of the same title. Their study concerned engagement behaviors in a single course and the relationship to overall degree completion and academic performance at a public, urban state university campus of 29,000 students. The researchers collected information from university records regarding subjects' college admission exam scores, declared major of study, cumulative GPA, year in school, semester course schedule from students (n = 225) in an upper division abnormal psychology course. Semester grade performance was also collected during and at the end of the course semester. Academic engagement was measured at multiple times during the semester with a 6-question self-report survey to assess study skill and test preparation behaviors.

The researchers returned to the same campus six years later and collected university data regarding academic performance throughout each participant's college career. Relevant information included baccalaureate degree attainment, semester of graduation, undergraduate GPA at the time of graduation or in the event of non-degree completion, GPA in the last semester of enrollment (Svanum & Bigatti, 2009).

Pearson correlation testing indicates that academic course engagement had a positive and reliable relationship to degree attainment (p < 0.01). Secondary ANCOVA analysis of data suggests a relationship between engagement and time to degree completion, as well. Not surprisingly, students with lower engagement took longer to

complete a degree and students with higher levels of engagement were faster. In their discussion of findings, Svanum and Bigatti (2009) state "These results highlight the robust character of academic course engagement…as a factor in school success" (p. 129).

Findings from Kuh (2001a), Kuh et al. (2008) and Svanum and Bigatti (2009), among a host of other researchers engaged in the study of student engagement, suggest that engagement behaviors can be measured in meaningful ways at institutional, classroom, and individual levels. Commonalities across research findings further suggest that there are multiple valid ways of measuring engagement.

The Engagement of Upper-Division Students

A search in higher education literature for "first-year college students" turns up hundreds of books, journal articles and literature reviews; a similar search for "upper-division college students" calls up significantly fewer sources. This is even more true when searching the higher education literature specific to international students; a search of Google Scholar and the library catalogue at the University of Minnesota (MNCat) turned up zero sources specific to this topic, or any studies using this population as the focus of research.

As outlined in Chapter One and in the previous sections of Chapter Two, student engagement and academic engagement models are rooted in constructivist student development theories that assume potential effect of time spent in an educational environment (Pascarella & Terenzini, 2005; Upcraft, Gardner & Barefoot, 2005). When considered alongside the body of literature that details the longer transition time that international students face upon entry into higher education (Andrade, 2006, 2010; Justice & McLachlan, 2009; Montgomery, 2010; Yeh & Inose, 2003; Zhang & Mi,

2010), upper-division students—those students in their junior or senior year of study—

were selected as the population of interest for this study. This affords the opportunity to

study the development of engagement behaviors and attitudes over time, something rarely

presented in the literature on international students.

The following section provides an overview of the two largest student

engagement instruments in the United States and the limitations of these instruments

when considering the academic engagement of upper-division undergraduate

international students.

Large-Scale Studies of Engagement

Studies of engagement are prolific in current higher education scholarship and

play an increasing role in the creation of institutional policies, practices, and decision-

making (Kuh, 2005b; Trowler, 2010). In particular, two large-scale studies of student

engagement inform much of what is known about student engagement and involvement

in good educational practices in North America. Both instruments, the National Survey

of Student Engagement (NSSE) and Student Experience in the Research University

(SERU), are in the portfolio of instruments that have been administered at the University

of Minnesota-Twin Cities over the past decade (University of Minnesota Office of

Institutional Research, 2012).

The National Survey of Student Engagement (NSSE) is the most widely

administered student engagement instrument in the United States. Since the survey was

first published in 2000, more than 1,500 four-year colleges and universities in the United

States and Canada have participated in the NSSE. The most recent published report

(2014) includes data from more than 285,000 students attending 640 U.S. and 73

Canadian institutions. The 2014 NSSE survey had a 32% response rate overall, with at least half of the participating institutions reporting at least a 30% response rate (NSSE, 2014).

The NSSE (2011) states its objectives to "Provide data to colleges and universities to assess and improve undergraduate education, inform accountability and accreditation efforts, and facilitate national and sector benchmarking efforts, among others" (p. 7). NSSE's identified audience and stakeholders include college and university administrators, faculty members, advisors, student life staff, students, governing boards, institutional researchers, higher education scholars, accreditors, government agencies, prospective students and their families, high school counselors, and public media.

In 2014, the on-line NSSE survey included 108 items related to the college experience. These items represent five themes: (1) participation in educationally purposeful activities, (2) institutional requirements and the nature of coursework, (3) perceptions of the college environment, (4) estimates of educational and personal growth since starting college, and (5) background and demographic information. More than half of the items relate directly to academic behaviors, including: asking questions in class, discussing grades and assignments with instructors, discussing ideas and materials from a given course outside of class, and participation in group learning (NSSE, 2014).

The NSSE report uses five benchmarks for student engagement: level of academic challenge, active and collaborative learning, student interactions with faculty members, enriching educational experiences, and supportive campus environment. According to Kuh (2001b), the NSSE benchmarks emphasize the link between effective educational practices and collegiate quality.

To assess the "active and collaborative learning" benchmark, the survey includes questions regarding students' academic interactions with one another. Specific examples of this include items regarding peer editing or explaining course material to another student or friend.

The "student-faculty contact" benchmark refers to non-classroom interactions with faculty, as well as students' perceptions of faculty interest in teaching and personal development (Tinto, 1997). A typical survey item designed to quantifiably measure student-faculty contact might ask for information regarding the number of times a student has visited informally with a faculty member after class or made an appointment to meet with a faculty member in his or her office (Koljatic & Kuh, 2001). These benchmarks are highlighted here given the emphasis of relational aspects that emerged from the data in this study, as outlined in Chapter Four and discussed in greater detail in Chapter Five.

Significant engagement patterns emerge from the NSSE data. The first is that students from smaller schools tend to engage more effectively on most measures than students at larger institution types (Kuh, 2003). A follow-up study by Pike and Kuh (2005) suggests, however, that large research universities provide more opportunities for two specific types of engagement: interactions with diverse students and high levels of engagement through information technology. "Any generalizations about institutions, institutional type, institutional size, or student groups should be considered with the caveat that there is great variation within each of these categories," write Pike and Kuh (2003, p. 26).

While institution size does appear to matter, Pike and Kuh (2005) assert that certain student behaviors are statistically more predictive of educational outcomes than

institution size.   This aligns with Kuh et al.'s (2007) argument that institutions of any

size have the opportunity to foster engagement opportunities for student and faculty

connections, regardless of the challenge of institutional size.

Other patterns that emerged from early NSSE data suggest that the following

populations are the most engaged in the college experience:

- Women
- Full-time students
- Students living on campus
- Native students (those who start at and graduate from the same school)
- Learning community students
- Students with diversity experiences
- International students

(Kuh, 2003, p. 27)

Additional information on international student engagement suggests a more

complicated picture of undergraduate international student engagement, however.   The

NSSE (2012) report suggests that academic engagement, or "deep approaches to learning

(DAL)" is more richly understood by analysis of student subgroups, yet they fail to report

data on international undergraduate students. These measures of DAL include higher-

order learning, integrative learning, and reflective learning (NSSE, 2012), all of which

are integral parts of an active learning environment as outlined by Bonwell and Eison

(1991) and commensurate with Chickering and Gamson's (1987) good practices in

undergraduate education. This missing level of analysis is problematic for understanding

the ways in which undergraduate international students engage in these deep learning

practices alongside their domestic peers.

This missing link contributes to a broader pattern regarding limited data on

international student engagement. There exist few papers that analyze the international

student experience using NSSE data or compare domestic and international students

using NSSE data (Foot, 2009). This is of particular concern because Zhao, Kuh and Carini's (2005) analysis of early NSSE data suggests lower levels of international student satisfaction with their academic experience when compared to their domestic counterparts. No follow-up studies on that topic have been published externally by NSSE. Similarly in the NSSE 2014 report regarding the question "Are Some Institutions More Hospitable to Certain Populations?" does not include international students as a population of interest or analysis, leaving a significant gap in the literature around campus climate for international students at NSSE-participating institutions.

The second large-scale survey of engagement is the Student Experience in the Research University (SERU) survey. The current SERU-AAU Consortium includes 24 major research universities[8] in the United States (Student Engagement in the Research University [SERU], n.d.). Each consortium campus administers a customized, on-line census SERU survey, working with the Center for Studies in Higher Education (CSHE) at University of California-Berkeley, where the survey originated. Based on this data, aggregate and campus-specific reports are created.

Approximately 9,586 UMTC students took the SERU survey in 2014, resulting in a response rate of 33.7% (University of Minnesota Office of Institutional Research, 2015). Of the survey respondents to the question "Were you born in the United States"? (n = 6,129) only 9.1%, or n = 614 students, indicated "no". This does not guarantee that those 614 students are classified as international students at UMTC, but it does show that

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[8] The 24 SERU consortium campuses are: Rutgers University; University of Florida; University of Michigan; University of Minnesota; University of Oregon; University of Pittsburgh; University of Texas; University of Southern California; University of North Carolina; University of Virginia; Texas A&M University; University of Iowa; Purdue University; Indiana University; and, nine system campus and the Office of the President of the University of California system.

nearly ten times the number of U.S. born students (n = 6,129) replied to the survey and suggests that international student participation was low.

Furthermore, the 2014 SERU data suggests that international students have lower sense of belonging and a lower level of academic engagement than U.S.-born UMTC students. Campus-specific 2014 SERU data for the University of Minnesota-Twin Cities shows that international students report less favorable ratings of campus climate, are less engaged, and have less sense of belonging than their U.S. peers (Yu & Isensee, 2014). Compared to domestic students, fewer international students expressed satisfaction with:

- Their overall academic experience
- The availability of their desired classes and academic majors
- The treatment and responsiveness of faculty to their concerns and needs
- The academic advising services they receive from their college, departments, and peer advisers
- The availability of academic resources including library staff and research materials, educational enrichment programs, and research opportunities
- Their overall sense of belonging
- Their personal involvement in academic settings
- The diversity of the University's climate and the tolerance for differing religious or political beliefs.

International students scored higher than domestic students in the areas academic disengagement and poor academic habits, yet also higher in the categories of academic initiative and research activity. On a self-assessment of their skills when they started at UMTC, international students reported lower skills in critical thinking and communication skills, cultural appreciation, and research skills. Aligned with this study's focus on upper-division undergraduate international students and the development of engagement behaviors over time, however, international students

reported more improvements in those same domains than domestic students did over their time studying at UMTC (Yu, & Isensee, 2014).

Beyond UMTC, there remains little comparative analysis of domestic and international students using SERU data. One published report by Zhao and Douglass (2011) does suggest differences in levels of engagement and perceptions of the higher education experience between undergraduate domestic and international students. Key findings of that report include:

- Although generally satisfied with their overall social and academic experience, international students are less satisfied than their US counterparts.

- International students' perception of the value of education for which they are paying is ambivalent, and much lower than US students'.

- Although they rate their sense of belong to the campus favorably, international students tend to have less sense of belonging than their U.S. counterparts.

- When asked the question: "Knowing what I know now, I would still choose to enroll at this campus," international students are less likely to choose to enroll the same campus than their American counterparts.

- Compared to U.S. American students, international students feel a lesser degree of development in scholarship.   (Zhao & Douglass, 2011, p. 5)

These initial and limited findings regarding undergraduate international students' engagement suggests significant need for further study of this construct. The existing findings suggest potential academic disengagement from international student populations, yet it is difficult to tell based on the exceptionally limited evidence that is available.

The following two sections of the literature review address the limitations of the large-scale engagement studies and also critical considerations regarding the engagement of international students.

Limitations of NSSE and SERU

Although the NSSE and SERU data are used widely across higher education, there are limitations to the research approach. Fredricks and McColskey (2012) succinctly summarize the prevailing concerns regarding the methodology and findings of these large-scale engagement surveys.

The first of these concerns is that both the NSSE and SERU surveys rely on student self-report data (Fredricks & McColskey, 2012). Self-report data introduces the possibility of inaccuracy in survey response, the effect of social desirability and student selective non-response effects on the data.

Fredricks and McColskey (2012) also raise concerns about the malleability of engagement and the failure of survey-based engagement instruments to assess variation in engagement across different courses or at different points in time. They argue that the engagement construct, even when well defined, is fluid enough to have variation across settings.

The authors also raise concerns about the applicability and reliability of large-scale instruments for diverse populations (Fredricks & McColskey, 2012). Those concerns are described in greater detail in the following section, which describes special considerations that are applicable to engagement studies of international students.

International Student Engagement: Considerations

Engagement is largely acknowledged as a measurable construct (Harper & Quaye, 2014; Kuh, 2001a; Pascarella et al., 2006; Trowler, 2010). Some scholars suggest, however, that different perceptions of, patterns of, and goals for engagement impact how non-dominant student engagement is understood (Harper & Quaye, 2014; Trowler, 2010). Understanding the academic engagement of international students is further complicated by the fact that most research on academic and broader student engagement in U.S. higher education is based data from the NSSE and SERU surveys, two instruments that were designed by U.S. citizens and developed for U.S. students (Carini, Kuh & Zhao, 2005; Foot, 2009; Kuh & Umbach, 2005; Pike, Kuh & Gonyea, 2007).

As higher education in the United States becomes increasingly diverse, the need for responsive models of student learning becomes increasingly important (Harper & Quaye, 2014; Lee, 1997; Mori, 2000). Harper and Quaye (2014) write, "A dependency on sameness is no longer appropriate, as contemporary cohorts of students at colleges and universities are different; the ways they experience and respond to our campuses are varied" (p. 1). These campus-based experiences often include challenges for non-dominant populations, which have been documented with increasing frequency in higher education literature since the 1970s (Terenzini & Pascarella, 2005).

With regard to the engagement of international students there are several unique features that bear consideration and further research (Anderson, Carmichael, Harper & Huang, 2009; Zhao & Douglass, 2011). Jehn, Northcraft and Neale (1999) classify these considerations as "differences that make a difference" (p. 3).

For undergraduate international students, these differences may be linguistic, cultural, socio-economic, or other characteristics that are not shared with their domestic peers. Although Allport's (1954) contact hypothesis suggests that increasing contact between students of varying backgrounds will result in intercultural interaction and learning, Chang, Chang and Ledesma (2005) debunk this as myth. They assert that it is an erroneous assumption that students from varying backgrounds will learn about one another without institutional guidance, or that non-dominant students will follow institutional rules of engagement developed for dominant populations without introduction and facilitation. Andrade and Evans (2009), Harari (1989), and Leask (2009) argue that the mere presence of international students, even in large numbers, is insufficient in itself to promote intercultural interaction and to promote the benefits of cross-cultural understanding. Van der Wende (2000) advocates for carefully structured and designed interactive and learning processes to scaffold international students' learning in new arenas.

Anderson, Carmichael, Harper and Huang (2009) synthesize literature related to student adjustment and sojourner transition to address the specific challenges of engaging of international students in and outside the classroom in educationally purposeful activities. Challenges to the engagement of international students may include:

- psychological issues (stressors stemming from cross-cultural adjustment, including but not limited to homesickness, loneliness, depression, anxiety, alienation and isolation, and loss of self-identity, status, and self-value)
- unfamiliarity with academic customs, practices and resources
- language and communication difficulties

- socio-cultural issues (culture shock, racial and ethnic discrimination)

- transitions in social networks (establishing friendships and becoming involved in on-campus activities)

- expectations for post-college career planning

- residential transition issues (differences in health and counseling services, tuition costs, immigration and documentation issues, issues of safety and dietary restrictions)   (Anderson et al., 2009, p. 19-24)

This list of factors closely resembles the psychosocial and socio-cultural stressors identified in meta-analyses of adjustment challenges by Church (1982) and Zhang and Goodson (2011), and the challenges to student well-being articulated by Mori (2000). Anderson, et al. (2009) acknowledge that some of these factors may also challenge domestic students, but the challenges to international students are unique in their intensity and degree of difference, an argument that is underscored by Church (1982), Misra and Castillo (2004), and Mori (2000).

In order to foster engagement for undergraduate international students, Anderson et al. (2009) argue, institutions must attempt to prepare students for transitions, to provide resources for situations of unanticipated events, and to support students in learning about new experiences and opportunities. Anderson, et al. (2009) thus suggest the following strategies, next page, for increasing engagement among international students:

- cross-cultural mentoring
- family-style peer mentoring
- staffing residence halls with other international students
- conducting programming in residence hall settings
- diversifying food options in dining halls and on-campus eateries
- conducting a pre-orientation for international students
- orienting domestic students to international students' needs

(cont.)
- providing a semester-long course for ongoing orientation
- streamlining campus services
- careful, clear and culturally sensitive dissemination of information
- adaptive mental and physical health services
- career services that are aware of the needs of international students
- conversation partners
- ongoing assessment and evaluation of the international student experience

What is notably missing from the list is attention to the ways in which *academic* engagement might be enhanced. As Andrade (2010) states, "[W]ith varying cultural, ethnic, and linguistic backgrounds as well as academic preparation, support for student learning is a critical concern, as well as an opportunity to expand pedagogical approaches. Institutions must be accountable for serving those they admit and for adjusting methods of instruction and support systems to address learners' needs" (p. 221).

The work of scholar Josef Mestenhauser is particularly focused on the role of international students in the higher education learning environment and the ways that international students can be engaged in internationalized learning for all. Mestenhauser was a prolific scholar on topics related to the integration of international students and scholars to campus classrooms and communities, notably at the University of Minnesota-Twin Cities where Mestenhauser spent the majority of his career.

Mestenhauser's enduring argument is that international students are an overlooked resource for learning—among themselves, for their domestic peers, and even for faculty and campus communities at large (Mestenhauser & Barsig, 1977). Mestenhauser (2002) writes that international students "confront us on a daily basis with the larger world around us in which we must live; they bring with them large number [sic] of cultures and sub-cultures that contain more variables and components than are

available in our own culture: ethnic, linguistic, national, political, economic, cultural, gender and class-related, religious, social, familial and tribal" (p. 2). This diversity, he argues, should be harnessed to maximize the learning of all students. He continues: "[E]ducational institutions that are supposed to provide curricular structures for filling these gaps do not think about foreign students as potential learning resources" (Mestenhauser, 2002, p. 8).

In the publication *Foreign Student Advisers and Learning with Foreign Students*, a companion guide to Mestenhauser's (1976) *Learning with Foreign Students* curriculum, Mestenhauser and Barsig (1977) propose a model to engage international students as teachers in courses. This type of international student participation, they argue, would aid all students in moving beyond the single country framework for understanding global affairs and develop "an appreciation for the interdependent nature of the people and countries of the world" (Mestenhauser & Barsig, 1977, p. 10).

Although never widely adopted, Mestenhauser and Barsig's (1977) model aligns with an engagement framework of student-driven and institution-driven activities to support intercultural learning. Mestenhauser's work provides a strong rationale for the active integration of international students into classroom environments and other educationally purposeful activities for the internationalization of the curriculum and all student learning.

The literature on academic and student engagement suggests that while a potentially powerful variable for students in higher education, the academic engagement construct is not well understood for international undergraduate students. Given that international students are a unique and growing population in U.S. higher education, this

may present a larger problem moving forward as colleges and universities continue to invest resources for academic and co-curricular engagement.

The third section of the literature review focuses on the learning environment in which international students are expected to engage. Models of active learning are consistently attributed with increasing student engagement (Fredricks, Blumenfeld & Paris, 2004; Handelsman, Briggs, Sullivan & Towler, 2005; Pascarella et al., 1996; Walker, Cotner, Baepler & Decker, 2008) and have become ubiquitous in U.S. higher education learning environments over recent decades (Eland, Smithee & Greenblatt, 2009; Fink, 2013). Yet despite the claims that these practices increase student participation and involvement, there remain questions regarding the ways in which students from different learning traditions are able to understand the rules of academic engagement. The final section of the literature review traces the origins of active learning, provides examples of common active learning models, and presents evidence of the challenges that international students may encounter when entering the active learning environment.

Literature on Active Learning

Active learning is an umbrella term that encompasses a variety of pedagogical practices that engage students in the process of learning (Prince, 2004). For the purpose of this study, active learning is defined as *learning strategies that promote engagement in the learning process and that encourage reflection on what is being learned* (per Hannafin, 2006; Sternberg & Williams, 2010).   The operational definition of academic engagement for this study is a *multidimensional construct of students' behaviors and*

affective involvement in the learning process. These definitions highlight not only the behavioral (time-on-task and student effort) dimensions of active learning, but also affective involvement in learning tasks (per Fredricks, Blumenfeld & Paris, 2004). This study intentionally uses the term "engagement" as conceptualized by Kuh (2005a, 2005c) and Kuh et al. (2007) in the student engagement literature as a shared responsibility between students and institutions.

There has been a shift in U.S. higher education over the past three decades toward student-centered learning (Barr & Tagg, 1995; Fink, 2013; Pascarella & Terenzini, 2005; Sternberg & Williams, 2010). The shift has been characterized as slow (Pascarella & Terenzini, 2005), subtle (Barr & Tagg, 1995) and not all together complete (Fink, 2013), yet a review of related research produces hundreds of studies examining the efficacy of non-lecture based teaching methods. Student-centered learning has been positively correlated with deeper understanding of course materials, more excitement for learning, and achievement of learning outcomes (Walker et al., 2008). Barr and Tagg (1995) characterize this paradigmatic shift as one from "institutions that provide instruction" to "institutions that exist to produce learning" (p. 198), with a strong focus in the latter on meta-learning, holistic student success and learning outcomes.

This shift has been prevalent in higher education in English-speaking countries, but it is less common in other areas of the world (Eland, Smithee & Greenblatt, 2009). This significant difference in academic culture and the expectations of the academic environment are often problematic for entering international students who are not familiar with active learning practices (Carroll & Ryan, 2005). The following section details the academic environment into which first-year international undergraduate

students are expected to transition and engage. This section concludes with discussion of the academic cultural differences that may impact international students' abilities to engage academically in the context of U.S. higher education.

What is 'Active Learning'?

Active learning is situated in the constructivist paradigm of education (Pascarella & Terenzini, 2005; Sternberg & Williams, 2010). It portrays students as constructing their own understanding with the guidance of an instructor, rather than modes of rote memorization or listening to lecture (Hannafin, 2006). Active learning is characterized by engagement with the material through activities such as reading, writing, talking, listening, and reflecting (Sternberg & Williams, 2010).

The transition to student-centered pedagogies marks a departure from modes of instruction in which teachers do most of the talking and students are passive. While lecture may be an integral part of an active learning environment, it does not constitute the entirety, or even the majority, of how students engage with course content (Prince, 2004). Pascarella and Terenzini (2005) write, "In the hands of a skilled instructor, lecturing can be an effective method for presenting major aspects of the course content. Yet it is usually the case that lecturing requires students to assume the role of passive learners... Lecturing is not a particularly effective approach for exploiting the potential efficacy of the learning that occurs when students are actively engaged in processing information in new and personally relevant ways" (p. 101).

Research supports the idea that classroom practices have an impact on positive educational outcomes for students (Handelsman, Briggs, Sullivan & Towler, 2005; Pascarella et al., 1996). Several studies show that cooperative and collaborative learning

models are demonstrably more efficacious than traditional lecture and have produced statistically significant increases in the acquisition of foundational knowledge and problem solving capabilities when compared to individual learning (Johnson, Johnson & Smith, 1998; Pascarella et al., 1996). Intentionally designed, student-centered pedagogy has been demonstrated to increase in-class participation and critical thinking skills, as well (Fink, 2013).

Active learning maintains a strong emphasis on critical thinking, problem solving, and "authentic" learning which encourages students to apply the knowledge they are learning to situational contexts (Gibbs, 1992). Gibbs (1992) writes that students in an active learning environment have "greater autonomy and control over choice of subject matter, learning methods and pace of study" (p. 23).

The terms "active learning" and "engagement" are frequently found together in educational literature. In many sources there is, in fact, little conceptual distinction between the two. In articles by Chickering and Gamson (1987) and Bonwell and Eison (1991), both considered canons of active learning and good undergraduate educational practice, active learning is conceptualized as a strategy toward the end goal of engaged student learning. The term "engaged" is also used, however, to illustrate principles of active learning. Prince (2004) speaks to this tautology and lack of precision, acknowledging that these have served as a limitation in the study of active learning, with particular implications for measurement and the presentation of data.

For the purposes of this literature review, "active learning" is conceptualized as a set of defined practices in which students engage toward learning outcomes.

"Engagement" is conceptualized as students' behavioral and affective involvement in learning.

Origins of Active Learning

The origins of active learning are frequently traced to works of the American philosopher, psychologist, and educator John Dewey and the Russian psychologist and educator Lev Vygotsky.   Jean Piaget's contribution as a scholar of cognitive development in children, and particularly his concept of the "child as scientist", have also been cited as contributions to active learning principles (Glassman, 2001; Sternberg & Williams, 2010). Although these scholars differ on several of their ideas related to teaching and learning (Glassman, 2001), modern scholars of student-centered learning draw upon similarities in Dewey's and Vygotsky's conceptualizations of "doing" to learn rather than students as empty vessels for knowledge transfer.

Dewey's work supports a learner-centered approach, claiming a great need for learners to be able to "do" for themselves in order to truly learn (Barak, Lipson, & Lerman, 2006). In his book *Democracy in Education*, Dewey (1916) writes: "In schools, those under instruction are too customarily looked upon as acquiring knowledge as theoretical spectators, minds which appropriate knowledge by direct energy of intellect. The very word 'pupil' has almost come to mean one who is engaged not in having fruitful experiences but in absorbing knowledge directly" (p. 140). Dewey's primary argument is that engaged learning is learning in which students take an active role.

Vygotsky emphasizes development through exploratory and experiential learning, specifically through encounters with peers (Sternberg & Williams, 2010). Vygotsky's scholarship focuses more on the social and cultural environment than that of Dewey

(Glassman, 2001), resulting in a theoretical frame referred to as "social constructivism". Social constructivism places emphasis on how meaning, connections, and comprehension are shaped and influenced by social encounters (Vygotsky, 1978). This principle underlies much of the scholarship related to cooperative and collaborative learning, particularly the group work aspects of active learning.

Vygotsky is perhaps best known for his "zone of proximal development" theory, which posits that students learn best when the learning task is just outside of their learning abilities and comfort (Vygotsky, 1978). According to the theory, adding continuous, appropriate levels of challenge provides opportunities develop skills and apply existing knowledge in meaningful ways, while keeping students engaged in learning.

There are undeniable parallels between Vygotsky's (1978) zone of proximal development and Csikszentmihalyi's (1997) conceptualization of "flow", or deep engagement. In the book *Flow: The Psychology of Optimal Experience* Csikszentmihalyi (1997) similarly asserts that the conditions for the deepest levels of engagement are a sense that one has skills that are adequate to cope with an activity's challenges, an established and clearly recognizable goal for the experience, and a system or environment that provides feedback regarding progress. The concept of "flow" requires the actor to continually seek challenge and develop skills commensurate with that level of challenge. If skills are too high in an unchallenging system, boredom can result; if the system provides significant challenge but the actor lacks skills, anxiety can emerge (Csikszentmihalyi, 1997).

With the exception of the teaching methods developed by Maria Montessori in the early 1900s, however, theories of active learning had very little influence in school-based learning environments for the majority of the 20th century (Sternberg & Williams, 2010). Learner-centered, active learning approaches did not become common in higher education until the 1980s (Bonwell & Eison, 1991; Sternberg & Williams, 2010).

As active learning grew in popularity in primary school environments (Newmann, 1992), the term "active learning" began to appear in higher education literature, as well. In the late 1980s, Chickering and Gamson (1987) outlined seven factors for good practice in undergraduate education:

- encourages contact between students and faculty,
- develops reciprocity and cooperation among students,
- encourages active learning,
- gives prompt feedback,
- emphasizes time on task,
- communicates high expectations, and
- respects diverse talents and ways of learning   (p. 3)

Of these, the third speaks directly to active learning, while nearly all others speak to aspects of student-centered models and learning environments in which students are active participants in their own learning. In fact, most of the large-scale, standardized assessments used to measure student engagement (such as NSSE and SERU) are designed to quantifiably measure the degree to which colleges and universities engage their faculty, staff and students in the seven good educational practices outlined by Chickering and Gamson (Koljatic & Kuh, 2001).

The ideas in Chickering and Gamson's article laid the foundation for the publication of Bonwell and Eison's (1991) paper "Active Learning: Creating Excitement

in the Classroom", which is often attributed with first promoting the integration of active

learning practices into higher education. In that article, Bonwell and Eison (1991) write:

> Though the term 'active learning' has never been precisely defined in the educational literature, some general characteristics are commonly associated with the use of strategies promoting active learning in the classroom:
> - Students are involved in more than listening.
> - Less emphasis is placed on transmitting information and more on developing students' skills.
> - Students are engaged in activity (e.g., reading, discussing, writing).
> - Greater emphasis is placed on students' exploration of their own attitudes and values.
>
> (p. 2)

They assert that to be actively involved, students must engage in higher-order

thinking tasks such as analysis, synthesis, and evaluation (Bonwell & Eison, 1991). They

offered the formal definition of active learning as "anything that involves students doing

things and thinking about what they are doing" (Bonwell & Eison, 1991, p. 2).

Building upon Chickering and Gamson's (1987) principles for good

undergraduate teaching, Bonwell and Eison (1991) lay out seven principles of active

learning (see next page):

1. Students are involved in more than passive listening

2. Students are engaged in activities (e.g., reading, discussing, writing)

3. There is less emphasis placed on information transmission and greater

emphasis placed on developing student skills

4. There is greater emphasis placed on the exploration of attitudes and

values

5. Student motivation is increased (especially for adult learners)

6. Students can receive immediate feedback from their instructor

7. Students are involved in higher order thinking (analysis, synthesis,

evaluation)   (Bonwell & Eison, 1991, p. 2)

Since the early conversations around active learning, student-centered modes of learning have become highly prevalent in higher education classrooms, particularly in English-speaking learning environments (Fink, 2013; Robbins et al., 2004). Although formal lecturing remains part of the pedagogy in most subjects, student-centered learning has become increasingly popular, even in large research institutions where class size is traditionally larger and lecture has historically been the primary or only means of instruction (Eland, Smithee & Greenblatt, 2009; Pascarella & Terenzini, 2005).

Methods of instruction have also diversified, and formal models of active learning have been developed based around the basic principles of active learning. The following sections describe the basic principles of active learning and also specific models and types of active learning practice.

Principles of Active Learning

The objectives for active learning are rooted in the constructivist approaches to education. Goals include teaching students to deal with complexity, learning through social interaction, understanding how information is relevant and applicable across contexts, a focus on demonstrable achievement of learning objectives, and the ability to apply what is learned (often called "meaningful learning") (Sternberg & Williams, 2010). These elements are conceptualized as learning processes, facilitated by application of psychological principles to structure teaching (Prince, 2004; Sternberg & Williams, 2010).

Barr and Tagg (1995) characterize the paradigmatic change to student-centeredness as "the shift from instruction to learning" (p. 12). Other key aspects of this shift include a departure from exclusive attention on inputs to a focus on multi-dimensional outcomes and meta-learning beyond content mastery (Barr & Tagg, 1995).

In 1997, the American Psychological Association (APA) identified 14 central psychological principles related to student-centered learning.   Organized into four broad categories, the principles are factors that shape active learning environments. The APA contends that the principles are best understood holistically, not in isolation from one another, and that they apply at all levels of education, from children to adults. The learner-centered psychological principles are:

Cognitive and Metacognitive Factors
        Principle 1: Nature of the learning process
        Principle 2: Goals of the learning process
        Principle 3: Construction of knowledge
        Principle 4: Strategic thinking
        Principle 5: Thinking about thinking
        Principle 6: Context of learning

Motivational and Affective Factors
        Principle 7: Motivational and emotional influences on learning
        Principle 8: Intrinsic motivation to learn
        Principle 9: Effects of motivation on effort

Developmental and Social
        Principle 10: Developmental influences on learning
        Principle 11: Social influences on learning

Individual Differences
        Principle 12: Individual differences in learning
        Principle 13: Learning and diversity
        Principle 14: Standards and assessment
                                       (APA, 1997)

The APA (1997) makes the case that these principles focus on "psychological factors that are primarily internal to and under the control of the learner rather than

conditioned habits or physiological factors" (p. 2). They claim as well that these principles acknowledge and integrate environmental and contextual factors, particularly as they interact with the individual factors.

The APA's (1997) principles also call for the active engagement of instructors in the learning process, including a teacher's attention to the structure of the learning environment, awareness of who is in the learning environment, and understanding of how out-of-classroom events impact learning. Instructors are actively charged with having their own goals and outcomes for learning, as well (APA, 1997).

Auster and Wylie (2006) suggest that four instructional strategies are necessary to foster an active learning environment: context setting, class preparation, class delivery and continuous improvement. In *context setting*, instructors create an open classroom environment for sharing and learning. *Class preparation* refers to the thought, planning and creativity that an instructor invests before *class delivery*, which is implementation of the planned lesson in the classroom. *Continuous improvement* refers to formative assessment for students and also seeking feedback about teaching practices and subsequent modifications.

Types of Active Learning and Related Approaches

Literature on active learning is commonly organized by the specific methods that compose an active learning curriculum or learning environment.   Significant amounts of research have been conducted on individualized instruction, discovery or exploratory approaches to learning, group work and group discussion, inquiry methods, cooperative and collaborative learning, reciprocal teaching, and the integration of technology toward

more interactive learning (Pascarella & Terenzini, 2005; Prince, 2004; Sternberg & Williams, 2010;).

Pascarella and Terenzini (2005) indicate that while many of these modes of active learning have become popular enough to warrant their own genres, active learning encompasses several interactional, authentic, and problem-based learning approaches. For the purpose of this study, active learning is defined as *learning strategies that promote engagement in the learning process and that encourage reflection on what is being learned* (per Hannafin, 2006; Sternberg & Williams, 2010)*,* inclusive of the approaches that may be associated with it.

The umbrella of "active learning" includes several student-centered approaches. Prince (2004) defines active learning as "any instructional method that engages students in the learning process" (p. 1). Prince (2004) writes that this has prompted faculty questions, however, regarding what constitutes active learning, how it is implemented in and outside of the classroom, and how it differs from traditional teaching methods. For many, these questions also include how the common forms of active learning differ from each other (Prince, 2004).

In the article "Does Active Learning Work? A Review of the Research," Prince (2004) defines three major approaches within active learning (*collaborative learning, cooperative learning,* and *problem-based learning*):

Collaborative learning. A context in which students work and teach each other. Smith and MacGregor (1992) define collaborative learning as "a variety of educational approaches involving joint intellectual involvement by students, or by students and teachers together" (p. 10). Collaborative learning most frequently

involves pair or group work in which groups attempt to solve a problem, answer a

question, or create something. Roles in collaborative learning may be assigned or

un-assigned, and the time over which the group forms may be variable. There is a

strong focus in collaborative learning on the application of what is being learned,

as well as process and outcomes (Smith & MacGregor, 1992).

Cooperative learning. Group work that follows the principles of collaborative

learning, but with heightened structure. Johnson, Johnson and Smith (1998)

define cooperative learning as a procedurally structured group in which students

work together cooperatively to accomplish an established learning goal. Roles in

the cooperative learning group are clearly assigned and each group member

makes a unique contribution toward the goal, assuring success in the task only if

each group member accomplishes his or her assigned portion.

Johnson and Johnson (1994), both of whom are based at the University of

Minnesota-Twin Cities in the College of Education and Human Development,

propose that five elements are essential for effective group interaction: positive

interdependence, individual accountability, face-to-face interaction, social skills,

and processing. They indicate that functioning group processes are instrumental

in academic achievement, as well as the development of higher-order social,

personal and cognitive skills (e.g., problem solving, reasoning, decision-making,

planning, organizing, and reflecting).

Problem-based learning. Learning that is organized around solutions to a

complex problem in a given discipline or field (Pascarella & Terenzini, 2005). In

a problem-based learning environment, an instructor may be the facilitator or

guide of learning, but students are responsible for generating solutions to the given problem or situation. Problem-based learning integrates significant contextual analysis, discussion about the way that problems are defined, and reflection on the solutions that are generated as part of the learning process. Problems are often based in or taken directly from real-world situations. Problem-based learning originated in medical schools in the late 1960s, using patient scenarios, but has since become prevalent across disciplines (Barrows, 1996).

In addition to Prince's (2004) categories, Pascarella and Terenzini (2005) and Sternberg and Williams (2010) highlight other forms of active learning, including *discovery learning, inquiry methods*, and *authentic learning*:

Discovery learning. A process where students use information supplied to them to construct their own understanding (Bruner, 1971). Discovery learning may be *unguided* (a process where students are in control of the learning and discovery process) or *guided* (facilitated by an instructor). Discovery learning is highly influenced by the APA's (1997) guidelines for learner-centered learning, particularly in terms of teaching and discovery facilitation techniques. Discovery learning is often used in science education or subjects where questioning is an integral part of the active learning process (Sternberg & Williams, 2010). There is strong emphasis on student reflection in the discovery process; students are asked to think about the route they took in their discovery exploration, the considerations made in their process, and successful and unsuccessful approaches.

Small experiments and the use of tools or props may also be common in this

learning approach, giving students the opportunity to apply learning concepts.

Inquiry methods. A question-based approach to learning (Dewey, 1916). In an

inquiry-driven learning setting, the instructor asks a question as the genus of

discussion. Students generate multiple hypotheses that may address the

instructor's initial question and then work on gathering evidence to support or

disprove various possible solutions. Students are called upon to reflect on the

process they used to eliminate other hypotheses and how they arrive at a given

answer. This is often seen as an integral part of group discussion and small

group, in-class work. In addition to reflection, the purpose of the inquiry method

is to develop students' problem-solving and inquiry strategies (Sternberg &

Williams, 2010).

Authentic learning. Frames learning in a "real world" context so that students

can apply knowledge and concepts to address actual problems, questions, and

decisions (Lombardi, 2007). In authentic learning, the learning environment is

not constructed from theory and conditions are not ideally constructed for

problem solving. Learners are expected to deal with issues and problems that

exist. There is strong emphasis on problem definition, collaboration, integration

of actual contextual factors, interdisciplinary perspectives, student reflection, and

educative assessment and feedback (Lombardi, 2007).

More recently there has been increased focus on so-called "flipped" classrooms, a

blended learning format where students do the majority of their content learning outside

of the classroom (via readings, on-line modules, or audio recording/podcasts) and use in-class time for hands-on activities and peer learning (Abeysekera & Dawson, 2015). The original concept of the "flipped" class appeared in Harvard University professor Eric Mazur's 1997 text *Peer Instruction: A User's Manual*, but has become increasingly popular with the advent of Khan Academy, the on-line learning environment established by educator Salman Khan in 2004. "Flipped" classrooms are gaining increasing attention in STEM fields and courses where practical learning can be supported through course design and methods of instruction (Abeysekera & Dawson, 2015).

While these categorical distinctions are useful in better understanding the complexity of active learning, this study is less concerned with an instructor's or student's adherence to a particular model of active learning and more concerned with the ways in which Bonwell and Eison's (1991) principles of active learning are manifested in a given learning environment. Peer interaction, instructor facilitation, creative and critical thinking, problem definition and problem solving, and reflection on the process and outcomes of learning are common to each of these methods. This study focuses on those processes and the factors that affect international undergraduate students' engagement with the active learning practices in classrooms at the University of Minnesota-Twin Cities.

The following section discusses relevant studies regarding interactional and reflective types of classroom practice. In particular, the evidence of educational outcomes related to active learning is presented and discussed.

Outcomes of Active Learning Practices

In their early work advocating active learning, Bonwell and Eison (1991) suggest that active, student-centered models of learning promote more involvement than passive listening. They also suggest that active learning strategies such as reading, discussing, and writing create higher levels of academic engagement and learning excitement (Bonwell & Eison, 1991). Bonwell and Eison (1991) further claim that active learning increases student motivation and that students in active learning environments more readily engage in higher-order thinking such as analysis, synthesis, and evaluation. Subsequent to these observations of the active learning environment, active learning practices have become the focus of much empirical study.

In their review of active learning efficacy studies, Michel, Cater and Varela (2009) analyze 15 pieces of empirical scholarship on active learning: eight qualitative studies and seven quantitative studies. All of the qualitative studies, regardless of the variables examined, found active learning to be more effective than traditional, lecture-style classes in the accomplishment of stated learning outcomes. Variables of analysis in those qualitative studies included class participation, teamwork, exam and cumulative course grades, student accountability for learning, development of research and fieldwork skills, quality of student writing, and measures of self perception and self-efficacy (Michel, Cater & Varela, 2009).

Although Michel, Cater and Varela (2009) conclude from their review that sufficient evidence of the positive aspects of active learning strategies have been demonstrated over time, they indicate that the quantitative studies in the analysis suggest more variation. While some studies demonstrated the superiority of active learning

techniques over passive ones for student grades (Berg, Dickhault, Hughes, McCabe & Rayburn, 1995; Dorestani, 2005) other studies showed no difference in that relationship (Mine, Das & Gale, 1984; Stewart-Wingfield & Black, 2005). Other learning outcomes, such as students' abilities to develop and solve problems and cases (Krumweide & Bline, 1997), long-term retention of material (Van Endye & Spencer, 1988) and student satisfaction/positive evaluations of teaching (Dorestani, 2005) were positively correlated with active learning practices (all cited in Michel, Cater & Varela, 2009).

In the article "Does Active Learning Work?" Prince (2004) attributes some of the mixed empirical results to the lack of conceptual clarity and terminology with active learning studies. Despite the broader lack of clarity in the study of active learning, Prince (2004) characterizes empirical evidence for the value of active learning across disciplines as "extensive" (p. 3). Prince (2004), a member of the engineering faculty at Bucknell University, defines active learning as "learning practice that engages students in the learning process*"* (p. 1) and limits his literature review to the most structured active learning models to understand efficacy of the specific practices within those models. His own analysis of the use of collaborative, cooperative, and problem-based learning models in engineering supports the efficacy claims made more broadly.

Challenges of Active Learning for International Students

Active learning, while evidence-based, is not universally accepted as the most common or best way of teaching. The research on active learning, in fact, tends to come from locations where active learning approaches are common and the research findings are, consequently, often highly context-specific. The active learning model remains prevalent in higher education in North America, and is heavily integrated in classrooms

in the United Kingdom, Australia, New Zealand, and parts of Europe, as well, yet

education systems in other parts of the world have not adopted it as quickly (Carroll &

Ryan, 2005). It can be inferred, therefore, that active learning methods may be unfamiliar

for students educated in systems emphasizing rote learning or a lecture-based classroom

structure.

The specific challenges cited by international students across multiple studies

indicate that elements of the active learning curriculum prove difficult their adjustment to

English-speaking learning environments.   The most frequently cited adjustment

challenges for students entering English-speaking colleges and universities include:

- Language-related issues
    - Writing
    - Listening/understanding lectures and conversations
    - Speaking (and confidence in speaking)
    - Managing reading load in English

- Academic differences
    - Differing expectations
    - Differing assignment types
    - Differing forms of assessment
    - Group-work
    - Norms of classroom participation

(Andrade, 2006; Zhang & Goodson, 2011)

In a mixed-methods study, Kingston and Forland (2008) document the role of

expectations on academic performance for East Asian international students in the United

Kingdom. Their thematic analysis of qualitative data shows discrepancies in expectations

and subsequent difficulties in the following areas: the role of learning and higher

education in the United Kingdom, expectations of lecturer/faculty conduct and roles;

expectations regarding assessment methods; academic integrity and plagiarism, and

knowledge of existing resources. The article also highlights the impact of previous

schooling experiences on students' expectations of the learning environment (Kingston &

Forland, 2008). Andrade (2010), Lee (2010), and Pyvis and Chapman (2005) further

suggest that international students' expectations of the learning environment play a

significant role in student satisfaction, retention, and the image of an institution that a

student shares with his or her peer network.

Leask (2009) speaks more broadly about the experiences of international students

transitioning to new ways of learning. She conceptualizes the curriculum as composed of

three overlapping and yet distinct elements: the formal, the informal, and the hidden

levels of curriculum. All three, she argues, inform the learning environment of students

and the institutional culture that exists around teaching and learning. Leask (2009)

argues that the "hidden curriculum" can be most problematic for international students, as

it represents a set of unwritten rules that govern the academic environment. This hidden

curriculum is composed of "incidental lessons that are learned about power and authority,

what and whose knowledge is valued and what and whose knowledge is not valued, from

such things as which textbook and references are used and the way that in-class and out-

of-class activities are organized" (Leask, 2009, p. 207). She asserts that the lessons

learned from the hidden curriculum can be both positive and negative, yet are rarely

explicitly explained for newcomers.

Related to the unwritten rules and norms implicit in the higher education

environment, Paige, Jorstad, Siaya, Klein and Colby (2003) define *culture learning* as

"the process of acquiring the culture-specific and culture-general knowledge, skills, and

attitudes required for effective communication and interaction with individuals from

other cultures" (p. 4). The authors go on to categorize culture learning as a dynamic,

iterative process that engages the learner cognitively, behaviorally and affectively.

Paige and Stringer (1997) assert effective culture learning is composed of five

tenets:

1) learning about the self as a cultural being
2) learning about culture and its impact on human communication, behavior, and
    identity
3) culture-general learning (i.e., learning about universal, cross-cultural
    phenomena such as cultural adjustment)
4) culture-specific learning (i.e., learning about a particular culture, including its
    language) and,
5) learning how to learn (i.e., becoming an effective language and culture learner)

Yet Paige, Jorstad, Siaya, Klein and Colby (2003) also assert that novice intercultural

learners are not often able to engage in these types of learning on their own. They

underscore the need for cultural liaisons and, in particular, teachers and instructors to

guide the process until students have developed their own skills and intercultural

competencies (Paige et al., 2003).

Carroll and Ryan (2005) make the case that international students in the

classroom can be "canaries in the coal mine", or the first students to experience difficulty

with tasks that other students might also not understand or have trouble achieving.

Curricular adjustments to address these discrepancies, they argue, may ultimately benefit

the learning of all students and the movement of multiple student populations toward

internationalized learning outcomes (Carroll & Ryan, 2005).

In addition to documented academic challenges and unfamiliarity with academic

systems, international students may also encounter other barriers in the learning

environment. Biggs (2003) provides an extensive review of research examining beliefs

about international students' learning difficulties and provides evidence of a vast amount

of misleading information based on the cultural stereotyping of incoming students. Biggs (2003) suggests that Asian students in particular may face a number of stereotypes and false assumptions related to their engagement in active learning classrooms. Some of the problematic issues he lists are difficulties in the transfer from passive to active learning styles; no participation in argument and debate; frequent plagiarism; and, an unwillingness to adjust to local learning environments. Evidence of Asian students in the top achieving range across many academic disciplines provides significant evidence to the contrary, Biggs (2003) argues, asserting that this level of academic success would not be possible without successful integration into active learning formats.

Many international education scholars (e.g. Biggs, 2003; Carroll & Ryan, 2005; Grimshaw, 2007; Leask, 2009) argue that international students' difficulties with the active learning environment are predominantly rooted in their unfamiliarity with learning practices rather than inability or unwillingness to adapt, core cultural differences, or lack of understanding or value. Leask (2009) asserts that students may simply lack sufficient awareness of the breadth and depth of the differences that exist, a feature that may be complicated by language learning issues and other aspects of cultural transition in the first year of study. These and other scholars (e.g., Andrade, 2010; Mestenhauser, 2002) assert institutional and faculty-level responsibility for explaining dominant expectations and academic cultural practices.

Engagement, Active Learning and the Forms of Capital

Bourdieu's (1986) forms of capital can be used as a framework to organize the prevailing themes in the academic engagement and active learning literatures. At the

core of the scholarship on engagement and on active learning exists a set of implicit hypotheses that certain behaviors and attitudes improve learning and learning outcomes. Results from several studies, in fact, suggest that these hypotheses may indeed be true.

Studies on engagement and degree attainment, post-graduate skill development, and post-graduate income (as documented in Astin, 1984; Fredricks, Blumenfeld & Paris, 2004; Pascarella et al., 1996; Pascarella et al., 2006; Tinto, 1997) represent the elements of human and economic capital described by Bourdieu (1986) and Schultz (1961). These outcomes clearly align with the development of skills, competencies, attitudes and behaviors to perform labor and to produce economic value (Bourdieu, 1986; Schultz, 1961). Students who are engaged in practices that result in learning, learning retention and who "earn a degree, do it faster and do it better" (Svanum & Bigatti, 2009, p. 120) are likely, in Bourdieu's (1986) terms, to have a significant advantage in terms of human capital and the attainment of economic capital. Students who have accumulated economic capital may also have opportunities to self-select into environments that more intentionally enhance their human capital and prepare them for professional and social functioning in a broader societal context.

The emphasis on the social and collaborative aspects of student engagement and active learning are evident from the social constructivist paradigms in which they are positioned. Emphasis on the creation of meaning, connections, and comprehension through social encounters (Vygotsky, 1978) is evident in the "joint proposition" (Davis & Murrell, 1993, p. 5) of the engagement framework and in the collaborative peer and faculty aspects of active learning.

Bennett (2009) asserts that our expectations of difference are shaped by the cultures in which we are raised. International students come to the U.S. learning environment with a set of expectations regarding schooling norms, relationships and the value of education that are shaped by their own life experiences. These differences may make the accumulation of social capital difficult for newcomers who may struggle to understand the social organization of a new "field" and a new relational "habitus", per Bourdieu (1986). These differing expectations have implications for faculty-student relationships, peer relationships, and the types of engagement that students pursue as members of a given higher education community.

In their book *Teaching International Students: Improving Learning for All,* Carroll and Ryan (2005) adopt a cultural capital framework to explore the dynamics of dominant academic culture and its implications for students from different learning cultures. The authors argue that students may come to a new learning environment with much accumulated social and cultural capital from their environments of origin only to find that those types of capital cannot be exchange for local social capital or belonging. Students may struggle to realize how cultural capital is accumulated in a new environment, representing Bourdieu's (1986) theory that ways of doing things (*habitus*) misaligned with the expectations of a given setting (*field*) can cause conflict, alienation, and marginalization. In keeping with Bourdieu's (1986) model, Carroll and Ryan (2005) underscore that this type of disenfranchisement may take place without students' immediate awareness or may prompt feelings of helplessness as to how to remedy the alignment. This perceived lack of engagement in the dominant ways of campus life and

learning has potentially negative connotations in environments that value a structured, narrowly defined approach to "student engagement" (Coates, 2005).

Although there are significant intersections in these bodies of literature and alignment with Bourdieu's (1986) framework, there are also disconnects in the existing scholarship on these topics. The final section of the literature review attends to the gaps in the literature related to the academic engagement of undergraduate international students.

Gaps in the Existing Literature

Despite the nearly overwhelming amount of scholarship in the distinct categories of student engagement, scholarship on the international student experience, and research on active learning contexts, there exist several gaps in the literature related to the academic engagement of undergraduate international students.

One such gap is the lack of research on undergraduate international students studying at four-year colleges and universities in the United States. Although there have been numerous studies with undergraduate subjects, the number is not commensurate with the rapid influx of undergraduate international students to the U.S. (Andrade, 2006; Zhang & Goodson, 2011). The gap between international undergraduate and graduate students has closed over the past two years (IIE, 2013a) with undergraduate students outnumbering their graduate counterparts for the first time.

For years, research trends matched the higher distribution of international graduate students in the United States and focused on students doing advanced degree work. In the early 1980s, Church (1982) pointed out the distinct disparity of research on international undergraduates in comparison to the amount of research regarding their

graduate student counterparts. Twenty years later, in their 2012 meta-analysis of the literature on international student transitions within higher education, Zhang and Goodson (2011) noted the same thing regarding more recent scholarship. It is inarguable that research has historically focused on graduate student experiences, but in light of such significant increases in undergraduate international student enrollments, it is clear that more research about the undergraduate international student experience is necessary. This study further focuses on upper-division undergraduate international students who have been significantly less studied than their first-year peers, as evidenced by the lack of available literature specific to upper-division international undergraduates.

A second gap concerns the lack of attention to international undergraduate students in the literature on undergraduate student engagement. In the NSSE survey's 13-year history, only one report (Zhao, Kuh & Carini, 2005) compares international and domestic student engagement using NSSE data. There is one similar report using SERU data (see Zhao & Douglass, 2011), and institution-specific reports on this topic are rarely published beyond their institutional contexts (Foot, 2009). The limited information provided by the 2011 SERU data (Zhao & Douglass, 2011) on international students in the research university, coupled with findings from the UMTC-specific 2014 SERU survey (see Yu & Isensee, 2014), are indicative of a distinct need to better understand the engagement of international students in this educational setting.

The NSSE and SERU surveys have expanded knowledge regarding student engagement, but focusing solely on these measures of engagement is problematic (Foot, 2009). Understanding the academic engagement of international students is limited by the fact that most research on academic and broader student engagement in U.S. higher

education focuses on NSSE and SERU data, two instruments that were designed by U.S. citizens and developed for U.S. students (Carini, Kuh & Zhao, 2005; Kuh & Umbach, 2005; Pike, Kuh & Gonyea, 2007). These instruments, which are exclusively quantitative in nature, do not allow an opportunity for undergraduate international students to address the differences they see in the academic engagement construct.

Similarly, the research on undergraduate international students' transition to the active learning environment has been minimal (Carroll & Ryan, 2005). Although the psychosocial literature has attended to this topic extensively, there are few empirical studies regarding the specific learning behaviors of international undergraduate students. What scholarship does exist, Biggs (2003) argues, fails to acknowledge the complexity of students' learning traditions beyond cultural stereotyping.

In short, the existing literature on the academic engagement of undergraduate international students is insufficient and not commensurate with the changing demographics of U.S. higher education. If academic engagement truly holds the potential that the research suggests for outcomes inside and beyond the classroom, there exists a significant opportunity to explore its transferability across student populations, as well as the factors that promote engagement toward the accomplishment of learning outcomes. Additionally, there exists a research opportunity to better understand what "academic engagement" means across cultures. Collectively, these bodies of literature and the identified gaps that exist among them provide salient justification for a study of this design.

Summary

This literature review includes three bodies of literature that are key to understanding the study and its position in the greater context of all three areas: the internationalization of higher education, student and academic engagement, and active learning pedagogies. The research methodology and methods for the study of the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities are described in the next chapter.   Chapter Three also includes detailed information regarding the way that the study was conducted. The chapter begins with a review of the statement of study purpose and the three research questions that are central to the study.

CHAPTER THREE: RESEARCH METHODOLOGY AND METHODS

Introduction

The purpose of the proposed study is to examine the factors influencing the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities (UMTC). As outlined in Chapter One, UMTC is a comprehensive, research extensive public institution in the upper Midwestern region of the United States. The University has a long tradition of enrolling international students and scholars and has been recognized as a leader in campus internationalization efforts (Mestenhauser, 2011).

Like many other universities in the United States, UMTC has seen a significant increase in the number of international students on campus. From 2009 to 2014, UMTC experienced an enrollment shift from 1,411 international undergraduate students to 2,758 international undergraduate students (University of Minnesota ISSS, 2014). This 95.5% increase over five academic years constitutes unprecedented growth in first-year undergraduate international student enrollment at UMTC.

The enrollment increase is the result of intentional recruitment efforts on the part of UMTC (McMaster, 2009) and is in keeping with a global trend of a record high number of globally mobile and college-ready students seeking higher education abroad (Altbach, Reisberg & Rumbley, 2009; IIE, 2013a; Teekens, 2014). As established in Chapters One and Two, the growth in the number of international student undergraduates at UMTC is concurrent with national enrollment trends, as well. In the 2012-13 academic year, for the first time in the history of international student matriculation in U.S. colleges and universities, undergraduate students outnumbered graduate student

enrollments (IIE, 2013a). Undergraduate international students continued to outnumber international graduate students in the 2013-14 academic year (IIE, 2014).

Research by the Institute of International Education (IIE) suggests that international students select higher education institutions for the purposes of gaining foundational knowledge in their fields of study, experiencing new ways of thinking, and for preparation to be competitive participants in the global workforce (Obst & Forster, 2004). There is a significant lack of research, however, regarding the educational experiences of these students upon arrival. The substantial body of evidence regarding the processes of and benefits for undergraduate student engagement (Kuh, 2005a; Kuh et al., 2007; Trowler, 2010) is deficient regarding international students, an omission that is misaligned with recent enrollment changes.

Given the prevalence of student engagement frameworks in the academic and co-curricular aspects of undergraduate education at UMTC (see *Student Learning and Development Outcomes*, University of Minnesota Office of the Provost, 2007), a lack of understanding of international students' academic engagement constitutes an unfilled gap in institutional knowledge, as well. The mixed-methods study outlined in the following chapter is designed to address several shortcomings in the existing literature on the academic engagement of undergraduate international students.

Statement of Study Purpose

The purpose of the study is to identify the factors influencing the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities.

Research Questions

The following research questions are proposed to investigate the statement of study purpose:

1. In what ways do upper-division undergraduate international students at the University of Minnesota-Twin Cities define "academic engagement"?

2. What individual factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?

3. What institutional factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?

Theoretical Framework of the Study

As detailed in Chapter One, the theoretical framework for this study is Bourdieu's (1986) forms of capital. Bourdieu (1986) organizes forms of capital into the following categories: human/economic capital, social capital, and cultural capital. In the context of this study, Bourdieu's (1986) framework explains how varying assets (*capital*) influence students' experiences in the education environment.

In U.S. higher education (what Bourdieu [1986] refers to as the '*field*'), the active learning paradigm reflects cultural values and practices (the '*habitus*') that may not align with international students' previous educational experiences. Applying Bourdieu's (1986) framework, this lack of alignment explains the difficulties often experienced by international students in U.S. higher education environments.

In Bourdieu's (1986) model, all aspects are malleable; they are not fixed or impossible to change. Types and amounts of capital can be exchanged, structural elements of the field can be altered, and habitus can be changed over time. This

malleability aligns with the literature on student engagement literature, the authors of which assert that institutional shifts can promote and shape meaningful student engagement (Coates, 2005; Kuh, 2005a; Kuh et al., 2007; Trowler, 2010).   Figure 2 is a visual representation of the theoretical framework as it relates to this study.

Figure 2 Theoretical Framework: Bourdieu's (1986) Forms of Capital
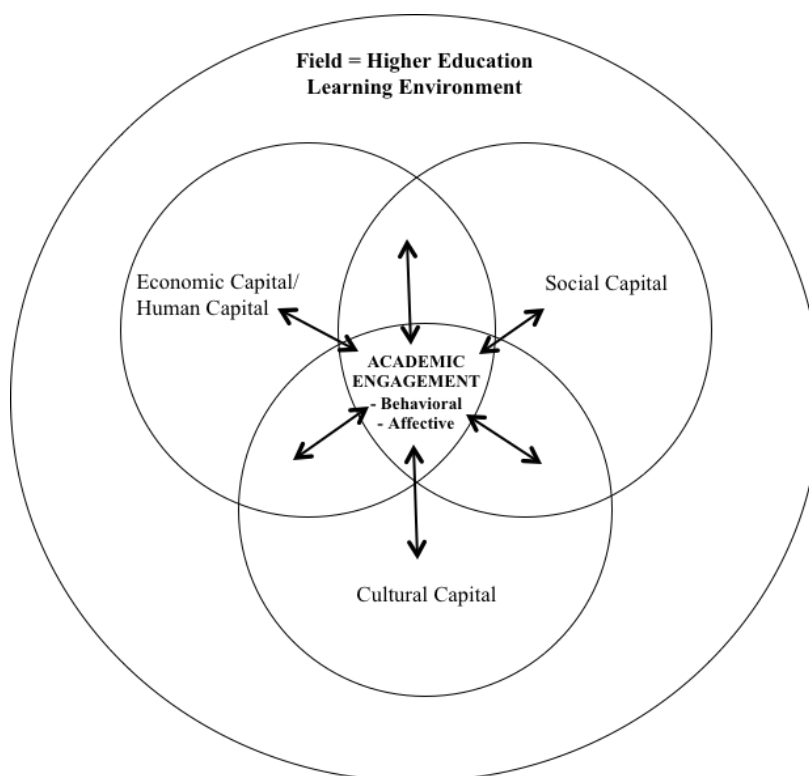
Study Methodology and Rationale

This study employs a two-phased, sequential mixed methods approach to address the individual and institutional aspects of international students' academic engagement. Creswell (2014) writes "The core assumption of [mixed methods] inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone" (p. 4).   Acknowledging

that "all methods [have] bias and weaknesses…the collection of both quantitative and qualitative data neutralize[s] the weaknesses of each form of data" (Creswell, 2014, 14-15). Patton (1999) underscores that a mixed methods approach is less vulnerable to the errors of any one particular method. The "triangulation" of multiple data sources reduces the risk that conclusions drawn from the data will reflect only the systematic biases or limitations of a specific source or method (Maxwell, 2005, p. 93).

Patton (1999) likens the use of a mixed methods design to a global positioning system that utilizes multiple satellites to pinpoint the location of a coordinate on the ground to triangulate the data to more precisely identify the phenomenon being studied. The mixed methods approach applies to the collection of data as well as data analysis procedures and the integration of quantitative and qualitative data in the study (Creswell, 2008). Triangulation of methods is one part of a four-part comprehensive approach of also triangulating sources, analysis, and theory/perspective in the mixed-methods approach to the study of this topic (Patton, 1999).

Research Design: Explanatory Sequential Mixed-Methods

The design for the study is *explanatory mixed methods*. In this approach, the study design is rooted in the study's theoretical framework (Bourdieu's [1986] forms of capital), and is composed of two distinct phases of data collection: quantitative and qualitative. Both types of data are synthesized to address the study's research questions.

In an explanatory mixed methods study, quantitative data is collected and analyzed first. This analysis informs the design and collection of qualitative data, which builds upon the initial findings of the quantitative research. The design is considered explanatory because the initial quantitative data results are explained further with the

qualitative data (Creswell, 2014). All three of the study's research questions are addressed with quantitative methods and with qualitative methods. Comparison and synthesis of quantitative and qualitative findings constitutes the final stage of data analysis, marrying the two data streams but allowing for contradictions and intersections among the data. Table 4 details the data collection plan:

Table 4: Data Collection and Analysis Strategies

| Research Question	Methods/Data Collection	Data Analysis
Q1: In what ways do undergraduate international students define "academic engagement"?	• Qualitative survey item • Qualitative interviews	• Thematic coding (use of NVivo for support) → Deductive coding using Bourdieu's (1986) forms of capital as organizing principle → Alignment of themes to theoretical framework
Q2: What individual factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?	• Quantitative survey items • Qualitative interviews	• Descriptive statistics • Thematic coding (use of NVivo for support) → Inductive coding using Bourdieu's (1986) forms of capital as organizing principle → Alignment to theoretical framework
Q3: What institutional factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?	• Quantitative survey items • Qualitative interviews	• Descriptive statistics • Thematic coding (use of NVivo for support) → Inductive coding using Bourdieu's (1986) forms of capital as organizing principle → Alignment to theoretical framework

Methods and Rationale

The study is composed of two data collection methods, congruent with Patton's (1999) assertion that "consistency in overall patterns of data from different sources… contribute significantly to the overall credibility of the study" (p. 1195). The following sections detail the rationale for the selection of each method and a detailed description of how the method was used in data collection.

Organizing the Study: Case Study Rationale

The study's organizing method is case study. Stake (1995) defines a case study as a "strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals" (p. 13).   According to Yin (2013), case studies are a form of "empirical inquiry that investigate a contemporary phenomenon within its real-life context" (Yin, 2013, p. 13). In this case, that phenomenon is the academic engagement of upper-division undergraduate international students in the specific context of the University of Minnesota-Twin Cities.

The study includes key qualitative research questions addressing "in what ways" or, essentially, "how" upper-division international students define and operationalize academic engagement during their time at UMTC. Case studies are particularly effective at addressing "how" and "why" questions such as these (Yin, 2013). Descriptive statistics from the quantitative survey paired with data from the qualitative interviews shed light on the development of academic engagement over time and the personal behaviors and experiences that students perceive as impactful to their academic engagement at UMTC.

The case study approach is bound by time and activity, providing an in-depth look at a phenomenon using multiple data collection methods. Yin (2013) writes, "the case study as a research strategy comprises an all-encompassing method, covering the logic of design, data collection techniques, and specific approaches to data analysis" (p. 14). Per the study rationale, the University of Minnesota-Twin Cities makes a suitable and exemplary case to study because of its rapid increase in the number of international undergraduate students on campus and the alignment of this growth with national and international trends. The case study method allows for rich description of the situational context as well as exploration of the transferability of findings in one context to other contexts (Yin, 2013).

Internet Survey for Quantitative Data Collection

The survey method was selected as the most viable way to collect quantitative data from the international student population of interest. Creswell (2014) asserts that surveys provide an opportunity to capture quantitative descriptions of trends from a broad population and can provide the researcher with opportunities to generalize or draw inferences from a specific data set to a larger population.

Dillman, Smyth and Christian (2009) underscore that on-line surveys are easy to distribute, are low in cost, and are generally high in coverage, making on-line surveying a viable quantitative data collection component of the mixed-methods study. An on-line survey format was also selected in consideration of two significant population characteristics: 1) the age of the population and the proliferation of technology usage across the undergraduate student age group (Wright, 2006), and 2) cultural considerations of the international student population. Krueger and Casey (2009) assert that giving

respondents unlimited time to read and respond to questions in a private setting can be beneficial to non-native English speakers and respondents from varying cultural backgrounds.

Semi-Structured Interviews for Qualitative Data Collection

The primary method of qualitative data collection is semi-structured qualitative interviewing. Seidman (2012) writes, "At the root of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience" (p. 9). Rubin and Rubin (2012) assert that interviewing is more personal than the use of questionnaires and surveys, resulting in a different type of data than the data collected during the quantitative survey portion of the research.

Semi-structured interviewing maintains focus on the respondents' perspectives rather than forcing them to respond to pre-conceived notions (Merriam, 2009). This approach provides the flexibility to elicit more detailed responses and to respond to new opportunities in the conversations through the use of probing questions. Semi-structured interviewing also provides the flexibility for question clarification and clarification of terminology. This proved to be particularly helpful when working with the study population, the majority of whom were non-native English speakers.

"Responsive" interviewing is a method in which the interviewer changes questions and inserts probing questions into the semi-structured questioning route as necessary and in keeping with the direction of the interview conversation (Rubin & Rubin, 2012). The focus of responsive interviewing is to "accept and adjust to the personalities of both conversational partners" and to "gather narratives, descriptions, and

interpretations from a variety of conversational partners and put them together in a reasoned way" to reflect the reality of the interviewee (Rubin & Rubin, 2012, p. 7).

Rubin and Rubin (2012) assert that retrospective interviews capture change and provide subjects with opportunities to compare their current experiences and perspectives with those in the past. Study participants were thus asked to think back to their first-year classroom and co-curricular experiences and to compare those perceptions with their current behaviors and experiences. van Manen (1990) argues for the research benefit of retrospective reflection and selection of this qualitative data collection method was made in part to mitigate some of the study limitations related to retrospective bias in the survey-based data.

Sampling Strategies

The study population is upper-division international undergraduate students enrolled in the seven UMTC academic units that enroll undergraduate students. Table 5 displays those academic units and the total number of undergraduate international students enrolled in each unit.

Table 5: 2014-15 International Student Enrollment by Academic Unit

UMTC Academic Unit	Undergraduate International Students
College of Liberal Arts	1480
College of Science & Engineering	675
Carlson School of Management	213
College of Food, Agricultural & Natural Resource Sciences	132
College of Design	108
College of Biological Science	92
College of Education and Human Development	72
TOTAL	2774

(Source: University of Minnesota Office of Institutional Research, 2015)

All participants are enrolled full-time at UMTC and hold current F-1 international student status, the United States Customs and Immigration Service designation for individuals who are in the U.S. temporarily to pursue a full course of study.   All students in the sample are degree-seeking and all student participants are 18 years of age or older. The determination of who met the criteria for inclusion was based on official UMTC student records for the Spring 2015 academic term, queried to filter out ineligible participants[9]. This determination was made by the UMTC Office of Institutional Research on behalf of the researcher who, in keeping with UMTC data handling procedures for student confidentiality, was not granted access to this data.

Quantitative Sampling

The study population was initially set as all second-year undergraduate international students at UMTC. As previously described, the UMTC Office of Institutional developed a data query that was used to pull eligible participants and their contact information. That list was sent to UMTC International Student & Scholar Services to distribute the invitation for study participation; communications related to the survey are included in Appendices A-C.

In quantitative research it is often difficult to determine an entire population and it can be difficult to obtain accurate contact information for members of the population group (Dillman, Smyth & Christian, 2009). In this particular case, and given the partnership with UMTC ISSS and OIR, the population size was both known and manageable to contact. Contacting each member of the population was not additionally

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[9] UMTC provides students with the option to conceal their directory information to the public. Students who made this election to keep their directory information private were also excluded from sampling or any attempts to contact those individuals.

time consuming or costly. Furthermore, the original hypothesis was that releasing the survey to the study population would result in a higher response rate.

As reflected in the revised Statement of Study Purpose and research questions, the study population was later redefined to upper-division students. The decision and subsequent process to redefine the study population are discussed later in this chapter in the Data Collection Strategies section.

Qualitative Sampling

Subjects for the qualitative interviews volunteered for participation via a question on the quantitative survey. Thirty-four (34) upper-division students expressed an interest in participating in qualitative interviews and were contacted via e-mail to schedule the interview session [Appendix E].

Twenty-one (21) students replied to the invitation for qualitative interviews and 20 interviews were conducted. As detailed in Chapter Four, the group included students from 11 distinct nationalities and five of the seven academic units at UMTC that enroll undergraduate international students (College of Liberal Arts; College of Science and Engineering; Carlson School of Management; College of Biological Sciences; and the College of Education and Human Development). Self-reported genders of the interview subjects were split at two-thirds females (n = 13) and one-third male (n = 7).

Creswell and Plano-Clark (2010) highlight that a smaller number of information rich cases are more useful to the researcher than larger numbers of superficial encounters. They write: "The qualitative idea is not to generalize from the sample (as in quantitative research) but to develop an in-depth understanding of a few people—the larger the

number of people, the less detail that typically can emerge from any one individual"
(Creswell & Plano-Clark, 2010).

The initial plan for sampling the qualitative interviews included the possibility of purposively sampling additional qualitative subjects for increased coverage of academic units, but saturation of themes was reached upon completion of 15 interviews. Five additional interviews were conducted to ensure depth and breadth of data, and based on the themes that emerged from the interviews, no further interview subjects were contacted. This determination was made after a review of the literature related to best practices in qualitative sampling (Creswell, 2014; Krueger & Casey, 2009; Rubin & Rubin, 2012).

Instrumentation

The following section addresses the development of the survey instrument and the interview protocol. The subsequent Data Collection Strategies section addresses the process of collecting data with these tools and data analysis procedures are described in the final section of Chapter Three.

Survey Instrument and Pilot

In the absence of a reliable and valid measure of academic-specific engagement in the context of higher education, and particularly one tailored to address the unique academic experiences of international students (Andrade, 2010; Zhao, Kuh & Carini, 2005), the researcher developed a survey for the purposes of this study.

The survey instrument [Appendix D] is composed of 37 items (29 quantitative closed-ended questions, 2 open-ended questions, and 6 demographic items). Of the

closed-format questions, 24 are Likert-scale items focusing on the frequency of certain academic behaviors or students' perceptions regarding the effectiveness of certain educational practices. The remaining five questions are short answer or fill-in-the blank. The demographic questions are either short-answer or drop-down menu selection items. Background questions focus on the educational environments that students studied in before arriving at UMTC, their self-assessed level of language proficiency upon arrival, previous intercultural experiences, and the educational levels attained by their parents.

Survey questions primarily address behaviors related to academic engagement; these selected behaviors are partially informed by validated measures of student engagement from the National Survey of Student Engagement (NSSE) and Student Experience at the Research University (SERU) instruments. Other survey items delve deeper into academic behaviors and use of resources aligned with Chickering and Gamson's (1987) active learning principles and the American Psychological Association's (1997) learner-centered pedagogical principles. As a survey designed for international undergraduate students, the survey also includes questions regarding culturally-informed ideas about engagement and experiences particular to international students in academic settings.

Two open-ended, qualitative questions are included to assess students' definitions of the term "academic engagement" and the factors they perceive as being impactful to their academic engagement in their first year of study at UMTC. Dillman, Smyth and Christian (2009) write, "The strength of open-ended question format is that it allows respondents to freely answer the question as they want without limiting their response" (p. 72). This type of question is ideal, they assert, when the surveyor or researcher wants

to elicit rich, detailed, information. Combined with the other, largely Likert-style and scaled items that provided set choices for respondents, the open-ended questions were intentionally integrated to provide space for more detailed and respondent-generated answers regarding academic engagement and the factors affecting academic engagement.

Prior to administration, the survey instrument was piloted in two phases. Dillman, Smyth and Christian (2009) define a pilot as a "mini-study in which the proposed questionnaire and all implementation procedures are tested on the survey population in an attempt to identify problems… The goal is to determine whether the proposed questionnaire and procedures are adequate for a larger population" (p. 228). Given that the survey was researcher-designed, piloting was deemed to be critical in making the determination of adequateness for larger distribution.

The first piloting phase was composed of a series of listening sessions with four professional staff advisors in the UMTC International Student & Scholar Services (ISSS), plus one additional former international student. These individuals were selected based on their expertise of advising a significant range of undergraduate international students and also because each participant was, at one time, an international student studying at the university level. Four females and one male participant took part in the one-on-one listening sessions and provided feedback regarding the survey instrument. Four different nationalities were represented in this group. Participants in this phase took the survey on their own and then walked through the instrument question-by-question with the researcher to provide feedback on all items.

The second phase of piloting took place with student volunteers from a structured, co-curricular peer support program coordinated by UMTC ISSS. Criteria for inclusion in

the pilot group included international undergraduate student status and enrollment at UMTC as a degree-seeking student. Eleven students took part in the pilot; six males and five females participated. Six nationalities were represented in this group.

For the second phase of survey piloting, the instrument included feedback questions, including: "How long did it take you to complete this survey?", "To what extent does this survey represent the concept of 'academic engagement' to you?", and "Were any of the items unclear to you?" Descriptive statistics for pilot data were compiled and data was analyzed for sufficient variance within items and for response rate across items. Open-ended questions and the supplemental feedback responses were reviewed and coded for patterns; one consistent set of comments was that the survey was too time consuming. Feedback from the listening sessions and the pilot were integrated into the final version of the survey and edits were made.

Qualitative Interview Protocol

The qualitative interview protocol [Appendix F] was developed using two streams of existing information: The literature that informed the survey instrument and the study design, and the data from the quantitative interviews. In keeping with Patton's (1999) guidance for finding consistency in overall patterns of data and Creswell's (2014) guidance for using an explanatory mixed-methods approach to explore both consistencies and contradictions in the data streams, the interview protocol includes main questions, paired with follow-up and probing questions, to query interview participants regarding their experiences around academic engagement and to supplement the survey data.

The key questions of the interview protocol are informed by Patton's (2002) six types of interview questions: (1) Experience and behavior; (2) Opinion and values; (3)

Feeling questions; (4) Knowledge questions; (5) Sensory questions; and, (6) Background and demographic questions.

The majority of the questions in the protocol focus on experience, behavior, and background. Examples of these types of questions include, "Can you start by telling me a little bit about your life as a student at UMTC?", and "In what ways are you academically engaged as a UMTC student?" The protocol also includes a question prompting students to define the academic engagement construct ("When I say "academic engagement" what does that term mean to you?") and a set of questions to assess their conception of a "good student" before arriving at UMTC and after studying at UMTC for a period of time. Follow-up questions and probes address more of the opinion and values items (e.g., "What did you think of that?", "How is that helpful to you?") and the feeling and sensory questions (e.g., "How did that make you feel?", "Do you share the same perception?") The interview protocol does not include any specific knowledge questions, although the semi-structured interview format provides opportunities for those questions to be asked on a need-to-know basis.

The interview protocol is secondarily informed by Strauss, Schatzman, Bucher, Ehrlich, and Sabshin's (1981) research on the types of questions that best elicit data from interviewees. The authors pose four additional types of useful interview questions:

1. Hypothetical question: Used to round out the interviewee's responses without the challenge imposed by a "devil's advocate" question.

2. "Devil's advocate" question: Confronts the interviewee with arguments of opponents.

3. Ideal position question: Approach 1—Ask respondent to describe ideal
situation, work conditions, study environment, etc. Approach 2—Present an ideal
to a response already given.

4. Interpretive question: Seeks to clarify the interviewee's responses by sharing
deductions made by the interviewer, giving the respondent a chance to clarify or
re-enforce their initial response.

In particular, the hypothetical question and the ideal position question are present
in the questioning protocol to help students articulate information without directly
probing their own behaviors or opinions. The two questions in the protocol designed to
accomplish these are, "If you had to tell an incoming student about how to engage
academically here at UMTC, what would you say?" and, "If you had a chance to tell a
UMTC instructor how to best help international undergraduate students adjust to life in
the classroom, what would you say?"

The following section outlines the ways that data was collected. An explanation
of the rationale and process for redefining the study population is also offered.

Data Collection Strategies

The following sections provide detail regarding the way the research project was
conducted, including the rationale for and the process by which the study population was
redefined. Data analysis strategies are presented in the final section of Chapter Three.
Findings from data collection follow in Chapter Four.

Quantitative Data Collection

As previously noted in the sampling section of this chapter, the Office of Institutional Research at the University of Minnesota-Twin Cities determined the list of students who met the criteria for population inclusion and UMTC International Student and Scholar Services was designated to send the invitation to participate. A condition of survey release was that the researcher would not have access to the names and contact information of the defined population.

The final version of the survey [Appendix D] was administered early in the data collection process (February 20-March 5, 2015). The survey was cross-sectional in nature, with multiple students surveyed at one point in time to capture an array of perspectives on the research topic (Mertens, 1998), and was administered in the University of Minnesota-licensed version of Qualtrics survey software.

Due to an error in the query that generated the list of eligible participants, all degree-seeking undergraduate international students who were in at least sophomore standing and who started at UMTC in Spring 2014 or earlier (n = 1,433) received the invitation to participate in the study. This was substantially higher than the anticipated n = 427, which was calculated using Fall 2014 UMTC enrollment numbers.

The survey was amended upon discovery of this error to include a question regarding survey respondents' academic level, with the intention of filtering out the upper-division students from the response set to achieve the intended second-year undergraduate international student population.

The on-line survey link remained active for two weeks and all participants who received an invitation to participate also received two reminders to complete the survey.

Survey participants were incentivized with entry into a drawing for one of three $150

Mall of America gift cards, which was completed after the survey was closed. Contrary

to the hypothesis that the combination of the incentive and the population-wide

distribution would increase the response rate, the number of surveys submitted did not

exceed n = 225, resulting in a 16% initial response rate.

Rationale for Redefining the Study Population

This section provides further information regarding the circumstances under

which the study population was redefined and the measures that were taken to ensure as

much data integrity as possible given the data collection error.

The primary consequence of the wider-than-intended release of the survey was

misalignment between the study population and the focus of the survey instrument. This

increased opportunities for non-response bias and a higher incidence of measurement

error. As previously described in this chapter's section on quantitative sampling, the

intended study population was all second-year undergraduate international students at

UMTC. Aligned with the original set of research questions regarding the academic

engagement of first-year undergraduate international students, the survey was designed

for a population of second-year students. Following van Manen's (1990) argument that

retrospection can be beneficial in the self-reflection process, one year of retrospection

was considered to be an asset to the study design. Nearly all of the questions were

phrased in ways that prompted respondents to think back to their first year of study. As

such, significant recall bias was also introduced into the quantitative data set. Given that

upper-division students also participated, this retrospection ranged anywhere from one

year (recent transfer students) to more than four years (so-called "super seniors" who started their programs at UMTC as first-year students).

Of the n = 225 respondents, 23 were in sophomore status, 39 were in junior status, and 56 were in senior status. The others were filtered out for incomplete responses or not meeting other study criteria. Nine participants provided their x.500 email address but not their academic classification and those students were later matched for academic classification using official UMTC student records.

Adopting what Creswell (2014) describes as a "pragmatic" approach, the situation was integrated into the data collection process and the decision was made to re-define the study population to upper-division students (n = 116). This decision was made upon review of the data and a determination that, while not aligned with the originally intended study population, the larger data set contained interesting and valuable information.

Creswell (2014) writes "pragmatism as a worldview arises out of actions, situations, and consequences rather than antecedent conditions" (p. 10). Redefinition of the study population, in fact, afforded the opportunity to explore the development of students' engagement behaviors over time and not only their perceived academic engagement at one point in time. As Creswell (2014) asserts, the benefit of pragmatism is that a researcher operating in this approach is able to make decisions regarding research methods, techniques, and procedures that best meet needs and purposes.

Students included in the final sample (n = 116) met the criteria of an "upper division student" by one of the following conditions: 1) self-reported junior or senior status on the on-line survey or 2) in the event that a student did not supply their academic level, but did provide their x.500 University of Minnesota identification, the x.500 was

used as match criteria to identify the students' academic level using official University enrollment data provided through the Office of Undergraduate Education at UMTC.

The quantitative data from the survey are useful in two ways. First, when analyzed alongside bodies of literature on student engagement, international student transition, and good practices in undergraduate education, the quantitative findings provided a basis for developing informed interview questions regarding the development of academic engagement for upper-division students. That is to say, rather than looking at academic engagement at one point in time, the resulting questions focus on the factors influencing academic engagement over the time students studied at UMTC.

Given the limitations of the quantitative data, the collection of qualitative data was emphasized and the majority of analysis was conducted on the qualitative data. The decision to include descriptive statistics from select survey questions was made as a way of integrating additional information from the student respondents to address in more depth the study research questions. The following section addresses the ways in which the qualitative interviewing method was employed during the second data collection phase.

Qualitative Data Collection

In keeping with the sequential mixed-methods design and given the limitations of the survey data, the majority of study data was qualitative in nature and was collected in the second phase of the study. As previously described, the interview protocol [Appendix F] was amended to ensure that it addressed key developmental aspects of academic engagement.

The qualitative phase of data collection took place in the last two weeks of March and the first two weeks of April, 2015. Twenty (20) student interviews were conducted over a two-and-a-half week period in the Spring 2015 semester. Students who volunteered for qualitative interview participation were contacted by email with a link to an on-line sign-up service. Students received a reminder email regarding the meeting location and time. All interviews were approximately 60-minutes in duration and were held on the UMTC campus. Interview participants were compensated for their time with a $15 retail gift card to Target or Starbucks Coffee.

At the time the fifteenth interview was conducted, thematic saturation began to occur. Five more interviews were conducted to ensure quality of the data given all that had transpired with the quantitative data collection.

All interview sessions were audio recorded. Audio recordings were subsequently downloaded and then prepared for transcription. The service rev.com prepared all 20 interview transcripts. The following sections address the ways in which the quantitative and qualitative data were analyzed to arrive at the study findings.

Data Analysis Procedures

Bernard (2006) asserts that "[a]nalysis is the search for patterns in the data and for ideas that help explain why those patterns are there in the first place" (p. 452). In this mixed-methods study, both quantitative and qualitative analysis techniques were employed to locate patterns regarding international students' academic engagement at UMTC. The following section addresses the ways in which data was analyzed at each phase of data collection.

Quantitative Data Analysis

Given the limitations of the survey, the extent of data analysis was the calculation of descriptive statistics. Mean, mode, and standard deviation were calculated for each item. According to Utts and Heckard (2012), descriptive statistics are numerical and graphical methods to look for patterns in a data set, to summarize the information revealed in a data set, and to present that information in a convenient form.

A full set of descriptive statistics is included in Appendix H; only seven quantitative items were selected for inclusion in the findings of the study. These items were selected because, per Patton's (1999) analogy of the global positioning satellite that collects data to triangulate and locate a particular phenomenon, they function to provide another dimension of information regarding the research questions. Broad patterns within the survey data are presented in Chapter Four to provide this information and also to explore intersections with the qualitative data. Analysis of the qualitative data, which was done in significantly more depth, is described in the section below.

Qualitative Data Analysis

Qualitative data was collected via two open-ended questions on the on-line survey and in the individual interviews. During data collection, a memoing procedure was used to record initial impressions regarding the data and to register emergent themes. Maxwell (2005) defines "memos" as research notations that the researcher makes during the research process outside of the field notes, transcription or coding processes. Memos are used to get ideas on paper and to record initial impressions regarding patterns in the data. Maxwell (2005) asserts that memos are the key mechanism by which a researcher

manages incoming qualitative data and puts initial organizing structures on the research information.

All 20 interviews were audio recorded and a transcription service (rev.com) was used to obtain written transcripts of the data. Upon receipt of the transcription documents, a process of in-depth review and editing of the transcripts was conducted by listening to the interview audio recordings for accuracy while editing the transcript documents. Once the accuracy of the transcripts was established, a second reading of the transcripts took place. Following Saldaña's (2009) qualitative data analysis procedure, pre-coding of the data was conducted at this stage, building upon the initial memos made during data collection.

There exists a significant amount of scholarly writing on the purpose of and the processes for coding qualitative data. Saldaña (2009) defines a code in qualitative inquiry as a word or a short phrase that "symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (p. 3), and he further asserts that coding is not just the labeling of data in this fashion, but the linking of data to the central ideas of the study. Miles and Huberman (1994) assert that the very act of coding "is analysis" (p. 56).

Saldaña's (2009) procedure for qualitative coding begins with memoing during data collection, followed by pre-coding the data. In the next step of analysis, a first set of formal codes is established and coded data is organized into relevant categories. Rossman and Rallis (2003) define a *category* as "a word or a phrase describing some segment of your data that is explicit, whereas a theme is a phrase or a sentence describing more subtle and tacit processes" (p. 282). In the analysis of the study data, these codes

were entered into the qualitative data analysis software NVivo as the primary organizing structures for the data.

An inductive approach to memoing and coding the qualitative data was employed, allowing the salient themes to emerge from the student responses to the interview questions. These inductive codes were also added to the NVivo coding matrix and organized under the larger categorical classifications.

In the next phase of data analysis, initial coding and categorization of data were aligned with the study's theoretical framework and the data, codes and categories were reviewed for alignment. This process, per Saldaña (2009), was repeated until all codes, themes, and categories were aligned. This follows Saldaña's (2009) assertion that coding is an iterative process and is supported by Richards and Morse (2007), who write that coding "leads you from the data to the idea, and from the idea to all the data pertaining to that idea" (p. 137).

Emerson, Fretz and Shaw's (1995) guiding questions were also used in coding the data from the open-ended survey questions, specifically:

> What are people doing? What are they trying to accomplish?
> How, exactly, do they do this? What specific means and/or strategies do they use?
> How do members talk about, characterize and understand what is going on?
> What assumptions are they making?
> What do I see going on here? What did I learn from these notes?
> Why did I include them?

The findings from the qualitative data are presented in Chapter Four, organized into categories and themes that serve to address the study's three research questions. Synthesis of both data streams, with significant focus on the qualitative data, is provided at the end of Chapter Four.

Summary

This chapter included an overview of the rationale, context, and research design for this study, including sampling procedures, methods, data collection techniques and data analysis strategies. The findings from the quantitative and qualitative data are synthesized and presented in Chapter Four.

CHAPTER FOUR: RESULTS

Introduction

This study regards the factors influencing the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities. Data collection for the study was mainly qualitative in nature (interviews), but the analysis is also informed by quantitative data from an on-line survey conducted over a 15-day period, February 20-March 5, 2015.

Presented in this chapter are the results and findings from both streams of data collection to address the study's three research questions:

1 In what ways do upper-division undergraduate international students at the University of Minnesota-Twin Cities define "academic engagement"?

2. What individual factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?

3. What institutional factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?

Chapter Four lays the groundwork for the dissertation's final chapter where findings are presented as they align with the study's theoretical framework, Bourdieu's (1986) forms of capital, and implications for the field of international education are explored.

Profile of Participants

The participants in this study are upper-division undergraduate international students at the University of Minnesota-Twin Cities. All student participants volunteered for study participation and were selected for each study activity using the criteria outlined below.

Survey Participants

As described in Chapter Three, an invitation to participate in the on-line survey was distributed by International Student & Scholar Services (ISSS) in mid-February 2015 to all degree-seeking undergraduate international students who were in at least sophomore standing and who started at UMTC in Spring 2014 or earlier (n = 1,433).

The initial response rate to the survey was n = 225 (16 % response rate). Upon redefinition of the study population of interest to upper-division students at UMTC (defined as students with junior standing or higher), the survey results were filtered to n = 116 valid responses. If the response rate is calculated from the original survey distribution population (n = 1,433) and the redefined study population (n = 116), the response rate changes to 8%. A more accurate response rate could be calculated if the original survey distribution list was filtered to exclude students in sophomore status, but given that the contact list was not disclosed, this was not possible. More information regarding the rationale and the procedure for redefining the study population is provided in Chapter Three in the Data Collection Strategies section.

Table 6, next page, shows the breakdown of survey respondents by geographic origin. Geographic origin is reported as self-reported citizenship (Question 30, "What is your country of primary citizenship?").

In keeping with broader national and institutional enrollment trends, students of Chinese (n = 43) and South Korean (n = 33) citizenship composed a two-thirds majority of respondents, n = 76 combined, or 66.1% of responses (valid n = 115[10]).

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[10]When quantitative items are included, a valid n is reported on a per question basis. Given the survey limitations explained in Chapter Three, this reporting method was selected to provide more complete information regarding the number of respondents per question and to provide more information in addition to response rate versus the overall n = 116.

Table 6: Survey Respondents' Citizenship (Self-Reported)

What is your country of primary citizenship?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	China	42	36.2	36.5	36.5
	Republic of Korea	33	28.4	28.7	65.2
	Malaysia	8	6.9	7.0	72.2
	India	6	5.2	5.2	77.4
	Hong Kong	3	2.6	2.6	80.0
	Canada	2	1.7	1.7	81.7
	Germany	2	1.7	1.7	83.5
	Japan	2	1.7	1.7	85.2
	Colombia	1	.9	.9	86.1
	Ecuador	1	.9	.9	87.0
	Egypt	1	.9	.9	87.8
	Honduras	1	.9	.9	88.7
	Iceland	1	.9	.9	89.6
	Indonesia	1	.9	.9	90.4
	Jordan	1	.9	.9	91.3
	Kuwait	1	.9	.9	92.2
	Mexico	1	.9	.9	93.0
	Nepal	1	.9	.9	93.9
	Nigeria	1	.9	.9	94.8
	Oman	1	.9	.9	95.7
	Singapore	1	.9	.9	96.5
	Sri Lanka	1	.9	.9	97.4
	Turkey	1	.9	.9	98.3
	Vietnam	1	.9	.9	99.1
	Yemen	1	.9	.9	100.0
	Total	115	99.1	100.0	
Missing	System	1	.9		
Total		116	100.0		

Table 7 shows the number and percentage of the self-reported gender of participants. There were slightly more male participants (n = 59, 50.9%) than females (n = 56, 48.3%) in the respondent group. One respondent (n = 1, 0.9%) identified as "other".

Table 7: Survey Respondents by Gender (Self-Reported)

Male		Female		Other		Total	
Count	N %	Count	N %	Count	N %	Count	N %
59	50.9%	56	48.3%	1	0.9%	116	100.0%

Table 8 shows the breakdown of respondents by self-reported enrollment in academic unit at UMTC. In keeping with UMTC enrollment trends for international undergraduates, more students from the College of Liberal Arts (n = 63) and the College of Science and Engineering (n = 35) answered the survey than students from other academic units at UMTC.

Table 8: Academic Units of Enrollment (Self-Reported)

	Frequency	Percent	Valid Percent
College of Liberal Arts (CLA)	63	54.3	54.8
College of Science & Engineering (CSE)	25	21.6	21.7
Carlson School of Management (CSOM)	10	8.6	8.7
College of Food, Agricultural and Natural Resource Sciences (CFANS)	5	4.3	4.3
College of Education & Human Development (CEHD)	5	4.3	4.3
College of Design (CDes)	4	3.4	3.5
College of Biological Sciences (CBS)	3	2.6	2.6
Total	115	99.1	99.9
Missing	1	0.9	
TOTAL	116	100	

Interview Participants

Interview participants were recruited via a question on the quantitative survey. All upper division volunteers from the survey (n = 34) were contacted and invited to participate in an individual interview. Twenty-one interviews (21) were scheduled and 20 interviews were conducted.

As detailed in Table 9, students of ten different nationalities volunteered for interviews. As with the distribution of survey respondents, the distribution of national origin of the interview participants aligns with broader patterns in the overall undergraduate international student population at UMTC.

Table 9: Geographic Origin of Interview Subjects (Self-Reported)

	Interview Subjects
China	5
Korea, Republic of	5
Malaysia	3
Germany	1
Honduras	1
India	1
Indonesia	1
Kuwait	1
Nepal	1
Sri Lanka	1
Total	20

Nearly twice as many females volunteered for interviews than males did. Table 10, next page, displays the gender composition of the interview population. No students who self-identified as "other" volunteered as interview subjects.

Table 10: Interview Subjects by Gender (Self-Reported)

Male		Female		Other		Total	
Count	N %	Count	N %	Count	N %	Count	N %
7	35.0%	13	65.0%	0	0.0%	20	100.0%

The final demographic table (Table 11) shows the academic unit of enrollment of the interview participants. Students from the College of Liberal Arts, College of Science & Engineering and Carlson School of Management comprised majority of the interview participants. This mirrors the three academic units that enroll the highest number and have the highest percentage of international undergraduate students at UMTC. There were no participants from the College of Food, Agricultural and Natural Resource Sciences (CFANS) or the College of Design (CDes).

Table 11: Academic Unit of Enrollment of Interview Subjects (Self-Reported)

	Interview Subjects
College of Liberal Arts (CLA)	11
College of Science & Engineering (CSE)	5
Carlson School of Management (CSOM)	2
College of Education & Human Development (CEHD)	1
College of Biological Sciences (CBS)	1
College of Food, Agricultural and Natural Resource Sciences (CFANS)	0
College of Design (CDes)	0
Total	20

Of the interview subjects, nine students self-identified as transfer students, having completed college-level coursework at an international or domestic university, college, or

community college that was transferrable to a degree at the University of Minnesota-Twin Cities.

Seven students self reported having a declared an academic minor or a double major. In some cases, the double majors were within the same academic unit, but in other cases, students with double majors and minors had experience across multiple colleges and academic units at UMTC. All students reported having taking a combination of major-required courses and liberal education requirements while enrolled at UMTC as undergraduate students.

Descriptive Statistics

Given the limitations of the survey data and the redefinition of the study population described in Chapter Three, this study remains largely qualitative in nature. Select survey results that align with the study's current research questions, however, are included in this first findings section of the chapter. The intersections of the two streams of data (quantitative and qualitative) are addressed in the final section of this chapter.

Considering the developmental lens used in the data analysis, basic analysis of the survey results provides a snapshot of the ways in which a population of more than 100 (n = 116) students perceived their first year of study at UMTC, contributing supplemental information to the 20 qualitative interviews conducted. In the following section, Tables 12-17 present the descriptive statistics related to student-driven behaviors and the descriptive statistics in Tables 18-22 represent institutional aspects of engagement. The complete set of descriptive statistics for all survey items is available in Appendix H.

The descriptive statistic tables are organized to display items with the highest means at the top, descending to the items with the lowest means. This presentation does not align with the order of the items on the survey instrument (Appendix D), but lends to clarity in reporting and interpreting the data.

Table 12 presents descriptive statistics regarding students' self-reported academic behaviors in class (Survey Question #2).

Table 12: In-Class Academic Behaviors During First-Year of Study at UMTC

In your first year of study at UMTC, how often did you:	Valid N	Mean	Standard Deviation
Take notes by hand during class?	115	4.2	.7
Participate in a small group discussion in class?	116	3.6	.9
Participate in a large group/whole class discussion?	116	3.1	.9
Ask a question in class?	116	2.8	1.0
Take notes on a computer/device during class?	115	2.7	1.2
Audio record a class lecture and listen to it later?	116	1.9	1.3

A quick comparison of item means [*M*] suggests that during their first year of study, students were more likely to engage in behaviors such as taking notes by hand (*M* = 4.2, *SD* = 0.7) and participating in small group discussions (*M* = 3.6, *SD* = 0.9) than they were to ask a question in class (*M* = 2.8, SD = 1.0) or audio record a class and listen to it later (*M* = 1.9, *SD* =1.3).

The range of standard deviations for items in Table 12 show variance across these survey items, particularly in those items related to asking a question or audio recording the course. The frequency tables provide a more nuanced picture of the self-reported

behaviors queried on the survey. Table 13 displays data related to the question "How often did you ask a question in class?" Only 18.1% of students reported "often" or "always" asking a question, while 40.5% of students reported asking a question never or rarely.

Table 13: Frequencies: How often did you ask a question in class?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	8	6.9	6.9	6.9
	Rarely	39	33.6	33.6	40.5
	Occasionally	48	41.4	41.4	81.9
	Often	14	12.1	12.1	94.0
	Always	7	6.0	6.0	100.0
	Total	116	100.0	100.0	

In comparison, the item with the highest mean, "How often did you take notes by hand in class?" (Table 14) shows that a cumulative 86.1% of students reported taking notes by hand "often" or "always", while only 1.7% reported taking notes "rarely". No students reported "never" taking notes by hand.

Table 14: Frequencies: How often did you take notes by hand?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely	2	1.7	1.7	1.7
	Occasionally	14	12.1	12.2	13.9
	Often	55	47.4	47.8	61.7
	Always	44	37.9	38.3	100.0
	Total	115	99.1	100.0	
Missing	System	1	.9		
Total		116	100.0		

Continuing with students' academic behaviors, Table 15 displays data regarding students' out of class academic behaviors (Survey Question #4).

Table 15: Out-of-Class Academic Behaviors During First-Year of Study at UMTC

In your first year of study at UMTC, how often did you:	Valid N	Mean	Standard Deviation
Earn extra credit when it was offered?	116	4.1	.9
Complete assigned readings for class?	116	3.8	.8
Write more than one draft of a writing assignment?	115	3.5	1.1
Review course material after class?	115	3.5	1.0
Seek out additional resources (i.e., articles, study guides, on-line resources) related to your coursework?	116	3.3	1.1
Complete suggested readings for class (beyond minimum required reading)?	115	3.1	1.2

In total, the means and medians in Table 15 are slightly higher than those in Table 12, suggesting more participation in course preparation activities such as completing assigned readings ($M = 3.8$, $SD = 0.8$), writing more than one draft of a writing assignment ($M = 3.5$, $SD = 1.1$) and reviewing material after class ($M = 3.5$, $SD = 1.0$). Earning extra credit had the highest mean of items ($M = 4.1$, $SD = 0.9$), suggesting a higher level of engagement with this activity than, for instance, seeking out additional materials to supplement the field of study ($M = 3.3$; $SD = 1.1$).

Again, however, the standard deviations and frequency tables for certain items offered a more nuanced picture of participation. Table 16, next page, addresses the survey item regarding writing more than one draft of a writing assignment ($M = 3.5$, $SD = 1.1$), showing that more than one-fifth of the valid N (20.9%) reported "always" writing more than one draft, and more than one-third (31.3%) reported doing so "often".

Table 16: Frequencies: How often did you write more than one draft of a writing assignment?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	7	6.0	6.1	6.1
	Rarely	16	13.8	13.9	20.0
	Occasionally	32	27.6	27.8	47.8
	Often	36	31.0	31.3	79.1
	Always	24	20.7	20.9	100.0
	Total	115	99.1	100.0	
Missing	System	1	.9		
Total		116	100.0		

The frequency table for the item "How often did you review material after class?" (Table 17), an item with the same mean ($M = 3.5$) and similar standard deviation ($SD = 1.0$), is a similarly right-skewed distribution with 16.5% of the valid N and 37.4% of the valid N reporting "always" or "often", respectively.

While the means for these items fall at 3.5 along a 1-5 Likert continuum, in both cases more than half of the student respondents for each question reported engaging in behaviors aligned with academic engagement, as based on relevant research findings in the student engagement literature.

Table 17: Frequencies: How often did you review material after class?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.7	1.7	1.7
	Rarely	16	13.8	13.9	15.7
	Occasionally	35	30.2	30.4	46.1
	Often	43	37.1	37.4	83.5
	Always	19	16.4	16.5	100.0
	Total	115	99.1	100.0	
Missing	System	1	.9		
Total		116	100.0		

Descriptive statistics regarding peer academic interactions (Survey Question #8) are presented in Table 18. Means across items for this question range from $M = 2.5$ to $M = 3.2$, with means slightly higher for reported involvement in group projects and slightly lower for students' peer-to-peer help-seeking behaviors. The lowest mean and one of the highest standard deviations for these items relate to how often student respondents participated in a formal study group ($M = 2.5$, $SD = 1.0$).

Table 18: *Students' Self-Reported Peer Academic Interactions During First Year of Study at UMTC*

In your first year of study at UMTC, how often did you:	Valid N	Mean	Standard Deviation
Work with American students on a group project?	116	3.2	.6
Work with international students on a group project?	116	3.1	.7
Ask a student from your own country for help?	116	2.9	1.0
Explain course material to another student?	116	2.9	.7
Meet with students outside of class to study in an informal group?	116	2.9	.8
Ask an international student from a country other than your own for help?	116	2.8	.8
Ask an American student for help?	116	2.8	.8
Join a formal study group for a course?	116	2.5	1.0

The results in Table 19, next page, regard respondents' interactions with their instructors (Survey Question #10), including the frequency and nature of the interactions between students and instructors.

The items "How often did you meet with a course instructor one-on-one?" ($M = 3.0$, $SD = 0.8$) and "How often did you meet with a course T.A. one-on-one?" ($M = 2.9$, $SD = 0.8$) registered the highest means for this item. Students were less likely to interact

with instructors in co-curricular settings ($M = 2.3$, $SD = 0.9$) or to engage in discussions

regarding future career plans ($M = 2.5$, $SD = 0.9$), which may reflect the first-year status

of the students and their commensurate priorities and ways of spending their time.

Table 19: Students' Self-Reported Interactions with Instructors During First-Year of Study at UMTC

In your first year of study at UMTC, how often did you:	Valid N	Mean	Standard Deviation
Meet with a course instructor one-on-one?	116	3.0	.8
Meet with a teaching assistant (T.A.) one-on-one?	116	2.9	.8
Discuss your academic progress with an instructor?	116	2.7	.7
Discuss your future career plans with a course instructor?	116	2.5	.9
Interact with a course instructor outside of class in non-course related campus activities (i.e., a student organization, departmental event, or campus committee)?	116	2.3	.9

Table 20, next page, presents descriptive statistics related to instructor and student

relationships, addressing specifically themes of inclusion from course instructors.

On the survey, Question #11 regarded inclusion and was designed as a Likert-

style item along a four-point scale (strongly disagree to strongly agree). The means for

this question are fairly closely clustered around 3.0, yet two items ranked lower means:

My professors knew my name ($M = 2.7$, $SD = 0.7$) and *My professors reached out to me as*

an international student to make sure I was doing okay in the class ($M = 2.4$, $SD = 1.0$).

Table 20 Perceived Classroom Inclusion During First Year of Study at UMTC

To what degree do you agree with the following statements?

	Valid N	Mean	Standard Deviation
My professors made me feel welcome in the classroom.	116	3.1	.8
My professors indicated that they valued my input in class.	116	3.0	.8
My professors encouraged me to share my opinions.	116	3.0	.9
My professors knew my name.	116	2.7	.7
My professors reached out to me as an international student to make sure I was doing okay in the class.	115	2.4	1.0

Table 21 regards respodents' perceptions of the helpfulness of specific types of instructor feedback (Survey Question #13). This item has the highest overall standard deviations ranging from $SD = 1.1$ to $SD = 1.3$, and also some of the higher means across the quantitative data selected for inclusion in Chapter Four. The item with the lowest mean and highest standard deviation is "Instructor feedback on in-class participation" ($M = 2.8$, $SD = 1.3$).

Table 21 Perceived Helpfulness of Instructor Feedback during First Year of Study at UMTC

In your first year as a student at UMTC, how helpful were the following types of instructor feedback:

	Valid N	Mean	Standard Deviation
Instructor feedback on my writing	115	3.6	1.1
Instructor feedback on a project	115	3.5	1.2
Instructor feedback on an exam	114	3.3	1.2
Instructor feedback on my in-class participation	112	2.8	1.3

Table 22 regards opportunities for international, global, and cultural learning during the first year of study at UMTC (Survey Question #12). Means for this item range from $M = 2.3$ to $M = 2.9$. Given the four-point scale for answers (not at all, very little, somewhat, a lot) these means suggest that students were given a limited number of opportunities to engage in international, global, and intercultural learning via their own class contributions, instructor-driven opportunities or an internationalized course design.

Of the eight items related to this question, students reported have more opportunities to incorporate their own experienecs in the class ($M = 2.9$, $SD = 0.7$), but fewer opportunities related to having international guest speakers in class ($M = 2.3$, $SD = 1.0$). All other means fell at $M = 2.7$ or $M = 2.8$, with limited variability in responses.

Table 22 Opportunities for International, Global and Cultural Learning During the First Year of Study at UMTC

During your first year at UMTC, to what extent did your instructors:

	Valid N	Mean	Standard Deviation
Incorporate their own intercultural experiences into classroom learning?	116	2.9	.7
Assign readings about countries other than the U.S.?	116	2.8	.7
Encourage class discussion on intercultural aspects of course topics?	115	2.8	.8
Encourage students to share information about their personal backgrounds?	116	2.8	.9
Assign readings from countries other than the U.S.?	116	2.7	.8
Integrate case studies from cultures/countries other than the U.S.?	116	2.7	.8
Encourage students to share their own cultural knowledge?	116	2.7	.9
Invite international guest speakers to share their expertise?	116	2.3	1.0

These quantitative findings are revisited at the end of Chapter Four in light of the themes that emerged from the qualitative interview data. Particular attention is paid to a comparison of the first-year data from the student survey presented in this section and the qualitative data collected in interviews regarding upper-division students' current strategies for academic engagement and the development of their academic engagement over time.

Qualitative Findings

The following sections are organized around the study's three research questions; each section is composed of thematic analysis and evidence from the qualitative data. The majority of qualitative data was collected via the 20 upper-division student interviews; this section also includes findings from two open-ended survey questions from the survey instrument.

Students' Ways of Defining and Enacting Academic Engagement

The first research question of the study is: *In what ways do upper-division undergraduate international students at the University of Minnesota-Twin Cities define "academic engagement"?* The purpose of this question is to understand the multiple ways in which a heterogeneous population of international undergraduate students defines the term *academic engagement* and ways in which this might differ from the engagement definitions found in scholarly literature. This question appeared on the quantitative survey as an open-ended item and in the interview protocol. Data from the survey is included first because it constitutes a broader representation of student definitions.

Ninety (n = 90) students answered the open-ended question on the survey phrased, "How would you define the term 'academic engagement'?" Five responses were excluded from the analysis for lack of relevance to the question. Four primary themes were identified in the inductive qualitative coding of the survey responses. The list below includes the themes and frequencies with which they appeared in the survey responses:

Academic relationships (n = 22)
> Instructors, peers, University staff

Participating in class (n = 21)
> Discussions, asking questions

Time spent on academic tasks (n = 17)
> Homework, "studying", completing assignments, reading, attending class meetings

Co-curricular involvement (n = 17)
> Academic and social organizations, conducting research

Aligned with the definition of academic engagement in this study as "a multidimensional construct of students' behaviors and affective involvement in the learning process" (per Fredricks, Blumenfeld & Paris, 2004), 61 student responses (more than two-thirds) included more than one dimension of engagement. While the themes that emerged predominantly reflect the behavioral and relational aspects of academic engagement, some of the student responses included affective dimensions, as well, as illustrated by following quotes[11]:

> "Commitment to your classes to achieve one's academic goals."
> "Being constantly motivated with your field of study."
> "This mean that study hard with our passion."
> "Being invested in learning."

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[11] Unless otherwise noted, student quotes have not been edited and appear verbatim from the survey responses or the interview transcripts. Transcripts were created by the transcription service rev.com and were edited from the audio recordings for interview fidelity by the author of this dissertation.

The qualitative interview protocol included the question "How would you define the term 'academic engagement'?" Students who participated in the interviews were also asked to provide examples of their own engagement as upper-division undergraduate students at UMTC.

Aligned with the themes that emerged from the open-ended survey question, the majority of interview participants also highlighted a relational aspect of academic engagement, focusing on the relationship with their professor or with fellow students. Comments to this effect included:

> I think [academic engagement is] mainly the relationship with others. Both the teachers and also the classmates, the students. Engagement is just everywhere and has all different meanings. All of them includes the relationship.

> It's a part of students learn from their instructor and also instructor learns from the students. How they collaborate and make positive education outcome.

> I think it's more about relationship with classmate.

> Very engaging, those academics like make an effort to study, very focused on study. Also have a good relationship with professor.

Since the qualitative interview subjects were selected from survey respondents, it is not surprising that the responses are thematically similar. The interviews did provide the opportunity to probe more deeply the themes, such as:

Academic engagement as participatory learning
> It's being present in a class, and knowing what's being discussed and then giving it some feedback on what my thoughts are and keeping the conversation flowing.

> Personal involvement and engagement, I think how much you learn from the class, depending on how much you put into the class. You know what I mean? You need to participate, not just sitting there taking notes, but engaging with the class. Otherwise, you don't really learn a lot.

Co-curricular involvement

> Academic engagement [pauses] …the time I spend on my academic life, no matter if it's, like, math club or the math courses or any academic-related activity.

> Academic engagement. Probably clubs that involve the major are part of academic engagement. Attending seminars or workshops related to the major might be considered academic engagement.

Time spent on academic tasks

> Going to class, doing your homework, reviewing for exams, anything related to that class.

> [A]ll academic might be considered in the class, where you would work on projects, in group projects or make things align for a specific purpose.

Commitment to studies

> It's about commitment to me, how much work you want to put into to really get the grade you pursue. If you go for an A, you really have to use all the resources really, do your homework and the study material. If a B's enough for you, you might be able to just take a break once in a while.

When asked specifically regarding their own academic engagement, students provided examples that, like their definitions of academic engagement, tended to reflect multiple dimensions of engagement within their academic lives:

> If I have to leave college, assuming I was graduating after this semester, I would have been proud of what I have done in my college life. I've studied abroad. I've got research opportunities. I've got good internships. I've done well socially. I've been part of a fraternity. I've made the most of the college experience. That's the one thing I'm most grateful for, definitely.

> I go to class. I participate in group activities. I do study quite hard.

> I'm not involved in board members and stuff, but I always attend the meetings. There's a lot international organizations, so I always to their events. It makes me feel more at home. Academically-wise I joined the ASCE, American Society of Civil Engineering. That's where we get to talk to other professors …more in depth about that specific field.

The main questions in the interview protocol were based in the survey data and the literature. In keeping with Rubin and Rubin's (2012) advice for qualitative

interviewing, follow-up questions were used to supplement the main questions of the interview protocol. These questions, combined with probes for clarification and further information, built upon the themes students raised in the interview sessions and provided opportunities to learn more about students' key academic relationships at UMTC, their in- and out-of-class learning behaviors, and involvement in co-curricular activities at UMTC.

Interview subjects were asked about their definition of a "good student" in their home country; as a follow-up question, students were asked about the ways in which their definition of a "good student" changed during their time as a student at UMTC. The purpose of these questions was to provide additional information about the behavioral and affective dimensions of the student experience that upper-division undergraduate international students in the sample regarded as beneficial to the student experience.

A comparison of student responses to these "before" and "after" questions shows a marked shift in the students' perception of the characteristics of a "good student." When asked retrospectively about the characteristics of a "good student" in their home country or their understanding of a "good student" upon arrival in the United States, more than half of the interview subjects selected a single attribute: good grades. Other characteristics included being "attentive" in class, sitting in the front of the room, taking notes, being quiet, and not asking questions of the instructor.

A female student from Latin America shared the following:

In [my home country] a good student is quiet, takes it all in, doesn't talk throughout the class, listens and takes notes, doesn't talk to anyone else or the teacher. …I think my concept of a good student was just good grades, going to class every week, turning in everything, all your homework, everything on time.

The changes in "good student" attributes over the upper division students' time at UMTC strongly reflect the same themes that emerged from the analysis of the responses to direct questions regarding academic engagement: Relationships with peers and instructors, participation in class and involvement in co-curricular activities. The data also included responses regarding the development of critical and analytical thinking skills and openness to new experiences. Rather than highlighting "time on task" alone, two students highlighted time management and "working smart" to prepare for class and to balance academic and co-curricular obligations.

The same Latin American student who provided her definition of a good student from her home country defined a "good student" at UMTC in the following manner:

> I would say someone who stands out from the rest of the class by participating a lot and then having input on what the teacher has to say and voicing their opinion. Also, being a good student would be involved in that field of study outside of their class, though research or job or something, and then drawing in from that experience in class. A good student would not necessarily be a 4.0, but it would be pretty good grades, no C's; an A-B student. And also, having really good connections with the professor, like, being known by the professor.

Other current "good student" definitions included:

> I feel that getting good grades is not everything. Once I come here, I feel a lot of places, they are looking for good communication skills and working experience and whether you can work with other people and all. It's not just all by your studies.

> I'd say college is more like a journey. It's a time to reinvent yourself. A good student, now that I think about it, would be somebody who changes for the better, who challenges himself, who lives his life outside of the comfort zone. Who's not afraid to change, basically. It's a lot about personal growth; more than I thought so.

> I feel here, also being a good student not only to do well academically. Academically is also important, it's a big part, but also to get involved in a lot of things, like activities, or doing club, or doing volunteer, [pause] being really social, good at meeting people. Socially, also good, just got involved more exposure, more have open mind, besides all the study.

> I would say the good students are students who can have critical thinking, can solve problems on their own, um, sometimes doing bare minimum and getting a good grade while doing other stuff might be considered as a good student.

Of the interview subjects, all 20 interviewees indicated that their concept of a "good student" had changed in at least one dimension during their time at UMTC.

When these quantitative and qualitative data are synthesized, the following patterns are evident: Students' definitions of academic engagement do align with definitions in the literature that emphasize academic behaviors and affective involvement in the learning process (e.g., Fredricks, Blumenfeld & Paris, 2004). They also speak to the benefits of being co-curricularly involved, mirroring the more holistic student engagement definitions found in the scholarship of Kuh (2005a, 2005c), Kuh et al. (2007), and Trowler (2010). Data from the qualitative interviews suggest that these definitions have evolved and changed over time for students and that students attribute this shift to their time at UMTC and in other U.S. education environments.

In the survey and during the student interviews, study participants most frequently cited the interpersonal and academic relationships that were key to their academic success at UMTC, as well as their engagement and involvement in class and on campus. This theme is prevalent in the literature on active learning and good practices for undergraduate education, yet the literature on student engagement includes academic relationships as only one facet of a multidimensional construct without as much focus. This prominence of relational impact is one point where the international students in the survey and interview populations conceptualized academic engagement in slightly different terms than the prevailing literature on the topic.

The following sections of Chapter Four move into further identification and exploration of the factors influencing the academic engagement of upper-division undergraduate international students at UMTC and analysis of those factors to understand the ways in which the factors impacted students' academic engagement.

Factors Influencing Academic Engagement

The study's main research questions address the factors influencing the academic engagement of undergraduate international students at UMTC. Research Question #2 is *What individual factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?* and Research Question #3 is *What institutional factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?* Presentation of the data to address these questions begins with analysis of an open-ended survey question regarding students' perceptions of factors influencing their academic engagement in, specifically, their first year of study at UMTC.

Survey participants were asked the question "What factors most affected your academic engagement in your first year of study at the University of Minnesota-Twin Cities?" Eighty-nine (n = 89) students answered the question; four responses were excluded from analysis for lack of relevance to the question.

Based on frequency counting, three factor types emerged from the analysis:
>Relational factors: Key relationships and interactions
>Academic factors: Quantity and nature of academic work
>Cultural factors: Different systems and expectations

Aligned with previous findings regarding academic engagement, respondents most frequently indicated that relational factors influenced their engagement; 37 items,

including the terms *professor*, *instructor*, *TA*, *classmates*, *friends*, and reference to *academic interactions*, such as "help from other students", "interacting with other students with similar interests" and "informal study group" were all coded within this theme.

The second most prevalent theme was related to academic work. Twenty-two (22) terms were coded, including "assignments, tests, projects", "grades", "the challenges of lab reports from some science courses", "classes", and "the atmosphere in class."

The third most prevalent theme, coded 19 times, was composed of issues related to cultural aspects of the international student experience. Items coded in this category included language, feelings of cultural isolation, references to living in a new environment, general cultural differences, and cultural differences specific to the educational environment.

Involvement in campus organizations was only noted eight times, with two specific references to residential life living-learning communities, three mentions of student clubs and organizations, and three references to campus involvement in general. Given the prevalence of "co-curricular involvement" references in students' definitions of academic engagement on the survey and as an integral part of the "good student" characteristics they identified, this seeming contradiction formed the basis for questions regarding co-curricular involvement during the qualitative interviews.

Two points are critical to note when considering the data collected via this survey question. The first is that the question specifically asked students about their first year of study at UMTC. As previously described in this chapter and in Chapter Three, the data collected are, therefore, retrospective in nature. The second key consideration is that,

with very few exceptions, students listed factors in response to this question without indicating whether the factors were helpful or a hindrance in their academic engagement.

The interviews provided the opportunity to follow up on the survey responses and understand the ways that students perceived the identified factors as influencing their engagement at UMTC, as well as the ways that their engagement changed over time as a result of those factors. Pursuant to Research Question #2, *What individual factors influence the development of undergraduate international students' academic engagement at the University of Minnesota-Twin Cities?*, the following section addresses the individual factors influencing students' academic engagement at UMTC.

Individual Factors Influencing Academic Engagement

Interview transcripts were coded inductively, per Saldaña's (2009) procedure for qualitative coding, which begins with memoing during data collection, followed by pre-coding the data, establishing a first set of formal codes and subsequent organization of data into relevant categories[12]. As part of the categorization process, factors were next designated as "individual" or "institutional" to align with the research questions. The *individual* factors were then organized into five categories:

Background
        Previous intercultural experiences, language training
Co-curricular Involvement
        Types of activities and perceived effects of co-curricular involvement
Academic Behaviors
        Participation patterns, use of learning strategies, time management
Peer Academic Network
        Types and purposes of academic friendships
Affective Involvement
        Confidence, motivation, perception of challenge

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[12] This process is described in more detail in Chapter Three.

Given that these themes were coded inductively from the qualitative interviews, they are not weighted or presented in terms of importance as they relate to one another (Creswell & Plano-Clark, 2010). These categories were selected for inclusion because there was a marked occurrence of the themes occurring in the data.

Once organized into these categories, another round of analysis was conducted on the individual factors, focusing on how students perceived the effect of these factors on academic engagement, including analysis of perceived benefits and barriers. Each factor category is described in further detail the following sub-sections.

Background factors.

The interview sample included individuals with a range of national backgrounds, secondary school experiences, levels of English language training, and previous intercultural exposure. In the interview sessions, students were asked about these dimensions of their experiences prior to their arrival at UMTC and were asked to reflect on the effects that they believed these background factors had on their academic engagement as UMTC students.

As one might expect given the heterogeneity of this group, students reported a range of transition experiences ranging from "horrible" to very little challenge at all upon first arriving at UMTC to begin their studies. Student reflections on the first-year experience included the following:

> I think the most horrible semester is the first semester. I was fresh here and I don't know what combination of courses that could help me get used to the environment and the academic life in the US, not the same as in my home country. At that semester I chose like … I chose my freshman writing that year and the physics, chemistry, math all things like this. Math is great though even I got a bad GPA for my standard. Physics and chemistry had a lot of lab reports to do, which is totally new for me I've never done that before. And the freshman

writing, which is also writing intensive before I came here I've never wrote a page… yeah, [never] wrote a paper over one page.

Yeah, it was for the first two years, because I did not quite adapt myself to this learning environment. I was still doing the same thing as I was in high school and in China. I go to every class … I did not take notes, [laughs] because in high school I did not take notes because there's not a lot to learn. I did not do really good in my grades. I was really stressful at that time.
Mostly [I felt] the cultural differences from Europe to the US. …[Other people] just understood that I came from a different cultural background and they helped me when I needed [help].

So coming to the American system, even, like, I mean staying away from my parents, I didn't notice a huge difference. So that's basically it. Nothing huge, nothing, no obstacles that stopped me from continuing my studies this far, my fourth year here.

When coded, two factors emerged as particularly impactful during students' transitions at UMTC: 1) level of familiarity with U.S. culture, values and systems, and 2) English language training. Aligned with the literature on international student adjustment (Leask, 2009; Mori, 2000; Zhang & Goodson, 2011), students who reported more intercultural experience and higher English language ability reported fewer challenges upon entry to their programs at UMTC and a faster rate of involvement in campus activities and peer networks.

Background factor: Previous intercultural experience.

One half (n = 10) of the interview subjects had prior, long-term intercultural experiences. Experiences that the following criteria and were coded as such included:

- previous participation in an educational exchange program
- previous study at a U.S. high school, university, community college, or intensive English program
- living for more than one year in a country other than the United States or other than the students' country of citizenship
- attending an international secondary school or other school where the educational system differed from what the student would have encountered in a national, public school

Students with these background experiences highlighted three primary benefits: prior immersion in English-speaking environments, increased familiarity with the educational system and related expectations, and acquisition of general cultural knowledge.

A student who had participated in a high school educational exchange program in the Western United States said:

> I think it helps, firstly, in language, because I know a lot of people who were my classmates in China who were as good as doing the English exams as I was, but coming here for high school really helps me to start talking in English, so that's something I don't have to work on when I was in college. The other thing is just getting to know about the United States…just, like, in general because you know what the United States is like, so you're not that afraid. …I have that one year, I already know, so it is not that much of a difference about going to a college in the U.S. than going to a college in China because I know how the United States is like.

A student from the Middle Eastern/North African region attended American schools for primary and secondary schooling, followed by intensive English language study and one year of university in the United States before coming to UMTC. He spoke of feeling academically prepared based on these experiences:

> I studied in American School in [my home country], first grade through twelve. So, I basically took the same classes they took here. I had the American teachers teach me all English sometimes, Canadians, and, I studied American history instead of [my national] history in my high school. We used the same textbooks they use in some high schools here... yeah. So, that was my transition, through my education up through I arrive in the University of Minnesota. So, yeah, I really didn't notice any obstacles coming into the American system.

Another student attended a high school with a British head of school and talked about similarities between the values underlying that curriculum and what he encountered in U.S. higher education:

My first high school, it was established by…a British citizen. There was definitely a lot of emphasis on English. It had a lot of Western values. Like there was a lot of emphasis on the individual, on personal growth and along same lines.

Background factor: English language training.

Although several of the interview participants had extensive English language training and schooling, none came from a country where English is the official language and all of the interview subjects had learned English in school or via intensive language training. Again, there was a range of experiences within the interview population. Several students spoke of initial language difficulties that affected their ability to engage academically:

> When I first came to the UofM, my English was so poor. …During class, since I wasn't able to know what the professor is saying, I always record it like this [points to audio recorder] and listen to every day to catch out what was the important thing. I have to pay more attention in every second and have to pay more time for reviewing and studying for exam.

> You find it harder to understand certain professors when they talk especially, in my Shakespeare class. I couldn't understand his accent. It took me a very long…It was very hard for me. I feel that it's the same for most of the international students as well. There was this one student, I think she's a Chinese student. She emailed all of the Asian students. I saw the email list. It was all the Asian names. She asked us if we understood whatever the professor has said. And then she was asking for our help.

> During my first semester, I was very shy because I am afraid my English is not good. I may not express my feelings fully; I may make other students make other students misunderstanding anything.

> We learned English since young, but the thing is the way we speak is different from ... the accent and stuff. It's like I couldn't really understand what people are talking, like what they say, and they couldn't understand what I'm talking about, so that's the most difficult part, to communicate.

Other students talked about the benefit of having more advanced language ability and the benefit it carried for their academic engagement and connection with peers and instructors:

Because my English was fairly good when I got here, I made friends quickly because I'm an outgoing person I think. They helped me with it, too. They helped me ease into it in no time, basically.

I would say that I helped me in terms of reading and writing. For speaking, I would say, yeah it helped me but I had to practice a lot. Because I talk … When I talk with students, maybe it's easier. Some people are, "Your English is really good." When [I] talk with professors, though, I'm usually nervous.

I like writing papers in English and Chinese and I'm really good at writing, I would say. I got almost a 4 score in my TOEFL writing section. I like it and I would prefer writing-intensive classes to the ones that don't have a W [writing designation] because writing paper is easier than taking exam.

As upper-division students, there was general agreement that students had improved their language skills through peer relationships, participation in class, and continued, intentional immersion in an English-speaking environment. A student from Latin America provided the following example:

I think the key for me was forcing myself to be around Americans and not let myself fall into the comfort of just finding a lot of people like me who are just really confused and we could just speak in Spanish all the time with no idea what these people are saying. When I started, I had a lot of that group of friends and it felt really comfortable. I was frequently tempted to just be, "Oh, I like those people more," but I think the key was just pushing myself to be around Americans who would know, who would teach me things that I didn't know and asking questions too.

When asked for his advice for first-year students, a South Korean senior didn't hesitate before saying:

International students have language problems, so that is the first concern for the international students so I'd advise them to speak English as much as possible in the university life. Inside [the classroom environment] is too academic. It's just too formal in the classroom, but outside can be just whatever subjects they can talk. I do advise to engage in outside activities.

This student was not alone in offering this advice. Several students who reported struggles with unfamiliar culture and English language difficulty upon arrival described the value of on-campus involvement in helping them to connect with other students and

to form valuable connections in communities of students of their own national backgrounds and with domestic peers. The following section describes in greater detail the interview data related to the co-curricular experience at UMTC.

Co-curricular Involvement.

All but one of the interview subjects reported being involved in a structured co-curricular activity at UMTC. Co-curricular activities pursued by the interview subjects included academic organizations, cultural organizations, involvement in religious communities, athletics, study abroad (third country), student leadership activities, on-campus employment and, specifically, research opportunities supplemental to students' academic programs.

There were nearly 100 references to these terms in the 20 interviews that were conducted. It bears mention that the interview protocol itself was designed to interrogate the contradiction in the survey data in which students included co-curricular involvement in their definitions of academic engagement, but did not list co-curricular involvement as one of the primary factors influencing their engagement. The depth and detail of responses, however, suggest the importance of co-curricular involvement for the interview subjects as well as the ways in which they perceived co-curricular involvement to be beneficial. The following section focuses on the types and ways in which co-curricular involvement relates to students' academic lives at UMTC and to their future intentions as UMTC graduates.

The interview data indicate a clear social aspect to co-curricular involvement. When asked the question "What advice would you give to a first-year international

student at UMTC?" more than half of interview participants highlighted involvement in on-campus activities for the explicit purpose of meeting others and making friends. This focus on making friends may be one reason why survey respondents highlighted the benefit of co-curricular involvement for engagement broadly, but named academic work, academic relationships, and cultural factors as more impactful on their *academic* engagement at UMTC.

Students did articulate broader academic rationales and agendas for their on-campus involvement, however, which was the focus of analysis for Research Question 2. Two themes related to academic engagement are presented in the following pages: Opportunities for deeper connection to students' academic programs and opportunities for leadership development.

Co-curricular involvement: Academic organizations.

Similar to their recommendations regarding using co-curricular involvement to make friends, students in the interview sample spoke to the benefit of joining academic organizations to specifically meet students within their major field of study and for gleaning information to better navigate their academic programs. Evidence of this connection includes the following student quotes:

> [In the Psychology International Student Association] different people work together and to have the same goal. Our purpose and mission are the same. We just want to help other international students here to just have their best experience as an undergrad in psychology major. Just kind of share our experience.

> I think joining [a student organization in the area of study] is good way to meet other successful students because only those students are good at… I mean, only if they have good grades, will they join this kind of organization to help others or to talk to each other, to meet each other.

>Go search the major's club. It may be some physics club, all kinds of clubs in the campus, and that club's founder are usually senior undergrad or just graduate student. They have experience in how to select courses and how the major looks like; yes they can provide very helpful information. Also I would suggest that if they don't have a major in mind, I would say pick something you like and just go through the activity.

Others talked about the professional connections, highly valued by students in the interview population and discussed in further detail later in this chapter, that could be made through participation in an academic organization on campus:

>I always go to [the Business Association of Multicultural Students] meetings. For those Carlson student group, there are always people from companies who come to present or they will tell us whether they have new positions they're hiring.

>There is an Actuary Club that always offers sessions with companies every week, every Thursday. If you want to, you can join that. There's also an internship fair and job fair just for actuaries in September, that is offered. They really, really help you with getting internships and jobs. It's a really good program in my books.

>While interviewees easily talked about opportunities for personal connection, most had difficulty articulating the ways in which participation in these organizations impacted their understanding of their field of study. When asked, "Are there connections between your academic work and the activities that you choose to do?," one student replied:

>I would say there is a not tight connection between the activities and academics, but sometimes it can be good to do it together. Because I'm taking the tax class this semester, so we'd have Volunteer in Tax Association Program kind of helps. It can help in some way, but not a huge difference.

Another said:

>Umm, the connection to my study. [long pause] Maybe studying about how to work in a group? Because all of us have a different interest in psychology so it's nice to work with people who is different from you.

Co-curricular involvement: Authentic experiences.

Two types of co-curricular involvement, in particular, gleaned detailed answers regarding practical learning, deeper understanding of students' academic fields, and short- and long-term skill development: Student research and community volunteer work. Students involved in these types of co-curricular activities reported the following:

Research.

> I wanted to complement my courses with some actual practical experience. That's why I wanted to go [conduct research] with that professor. It was really enlightening, I'd say. I definitely learned a lot of new techniques which I wouldn't get to learn otherwise in my major or in a lot of other job opportunities I would have so far, like this in college. I can see how it's very relevant to my coursework.

> I've met a lot of professors and I've been on two publications. I think that within that department, once you get in, it's really easy to just … There are so many open doors. It's really easy to move around in the science department.

> There are a lot of research going on. You can also join the research lab and then work together with the professor. You can be a RA, research assistant, help them on participant, do data analysis. During my during my second semester in the U of M I also joined a lab in cognitive psychology with the professor [name redacted]. What that do is running participants because they are doing something about your memory. I was running participant. After that, I feel like I'm a machine running participant over and over the time. I don't enjoy it, especially, I don't really enjoy doing data analysis. I more like a social person so I want to have more social interactions and help people grow. You can see them grow. That's why I shift my focus into education.

Volunteering.

> I also want to know how the field looks like. How does family education look like? How does the tutor in education setting elementary look like? Just go into the more applied setting. Moreover, I like applied stuff. I really like just learning knowledge but I want to apply that into the study. I feel it's really helpful for me to make the connections about what I learned into the reality [through my volunteer work].

> I get to volunteer in the Somali school. I chose Psychology because I like to work with people. I like to work in the settings that you get to treat patients and stuff

like that. It's either children or adult. I feel it's very applicable in a sense that you get to see different kinds of people in the different setting.

We have to volunteer for 40 hours. …I work there as a classroom aide. It's really exciting when you can contribute something to the community and learn how to work with children from low-income family, maybe something more meaningful. …I think that's a part of why I got [a professional job offer for after graduation], because I have this experience working with children.

The value that students placed on these practical, co-curricular learning experiences aligns strongly with the value that students placed on hands-on, practical, and applied curricular opportunities, as well. Those aspects of the curriculum are discussed later in the chapter and the synthesis of these themes is further addressed in Chapter Five.

Co-curricular involvement: Leadership.

Interview subjects articulated concrete motivations for seeking out leadership opportunities on campus and spoke to the connection between leadership and their future career plans. Perceived benefits of leadership included organizational, communication, promotional, and time management skills; making connections with other students; receiving recognition for academic or co-curricular strengths; and, development. This last item was the benefit coded most frequently, with students expressing interest in developing strong s to apply for internships and jobs. The following quote illustrates one student's explanation of student leadership development:

I would say pick something you like and just go through the activity. It's important to do it in the first semester, because if you want to develop some leadership later you have to be in the club when you are a freshman. Then you can gain some director position in the junior year. Then you can compete for the president for the third year. And the fourth year you can find a very good internship or a job who values your leadership.

These data align with a finding on the institutional factors influencing academic engagement, presented later in the chapter, regarding the strong emphasis that upper-

division interview participants put on the value of career preparation. This theme, and particularly the alignment between students' motivations for obtaining a college degree and the purpose they see for academic preparation, is discussed in more detail in Chapter Five as it relates to the forms of capital students are developing and exchanging as students at UMTC.

Leadership in cultural organizations was common among those students who sought out leadership experience. Those participants particularly highlighted a higher degree of comfort among peers of similar national or regional backgrounds early in their programs and as they initially explored opportunities for student leadership. Yet as upper-division students, the interview subjects stressed the importance of interacting with their domestic peers and "getting out of their comfort zone" more frequently. One Chinese student retold the story of her leadership development at UMTC:

> Second semester, I joined a student group called Chinese Student Association. Almost all of them are Chinese international students, so we speak Chinese in the student group and we do all of those student activities for the Chinese international students. It was a great time because … you know a lot of international students here are Chinese, so I was in my own comfort zone being with Chinese people and hang out with them. Also I got a lot of leadership experience from that. I became [leadership role redacted]. … I feel very good. Then suddenly, I think, I was thinking about transfer to Carlson, and then I realized I barely speak English besides class, which is not good. I'm not really involved in this campus. I'm sticking with my Chinese friends; that's not good.

After this realization, the student joined a university-wide first-year leadership organization for all students, and followed that program with a similar leadership development program for second-year students at UMTC. Through connections made through the leadership programs, the student found out about an off-campus internship opportunity that resulted in a full-time professional job offer.

Co-curricular involvement: Early participation.

The majority of students in the interview population talked about their increased involvement in co-curricular activities over time and, as upper-division students, spoke to the benefits of co-curricular involvement early on, especially for first-year students. Although interview subjects acknowledged barriers to co-curricular involvement for first-year students, namely unfamiliarity with the purpose and structures for co-curricular activities and the difficulties of integrating non-academic commitments into a busy academic schedule, several of the upper-division students advocated for establishing a study/life balance. A female student from Southeast Asia articulated the connection between involvement and success in the following way:

> I have a balance in life. Maybe for some engineering student they have to study more than anything. [laughs] But I'd say that, "Don't give too much pressure. Just enjoy," because if it's something that you don't enjoy … if you don't enjoy studying, it's kind of hard for you to just succeed in what you do. You have to enjoy it. I'd say you have to balance both social and academic life.

Academic Behaviors.

For the purposes of this study, the engagement construct is viewed as a "joint proposition" (David & Murrell, 1993, p. 5) between student effort and institutional conditions for student involvement and academic learning. The chapter's next section, institutional factors influencing academic engagement, delves into the institutional support structures for learning and, in detail, the instructional factors influencing the academic engagement of this student population. The current section focuses on students' self-reported academic behaviors as they relate to academic engagement.

The upper-division interview subjects readily supplied information about their own academic behaviors and the learning strategies they have adopted during their

academic programs. Based on data from the quantitative survey, the interview questions

were developed to specifically address the ways that students' academic behaviors

changed over time and to assess which factors they perceived to be impactful in that shift.

The next section includes student-driven examples of participation in class, academic

time management, and learning strategies the students themselves noted as being

particularly helpful.

Academic behavior: Participation in class.

One of the primary themes across the student interviews was participation in

class, both in large and small group discussions. When asked about the biggest cultural

difference they had encountered in education, interview subjects most frequently cited

expectations of in-class participation:

> I'm not sure if it's only for my program, but most of classes have more than 10%
> or 15% of participation credit or participation points, which is very significant in
> total. So when I first saw the syllabus, I felt pressure, because I'm not often
> participating in discussion if it's larger group than a few student. So I was kind of
> worrying. For a couple of class which is really big class, then I didn't participate
> and I just got half credit of the participation because I didn't feel like I want to.

> I noticed a lot of culture difference between South Korean education and United
> States education systems because in South Korea, for example, if you are in a
> lecture, then you are more likely to just listen rather than participate in active
> discussion. If you have any question, then you are allowed to ask question when
> the professor allow.

> In the class, they look for [interaction]. Teacher always ask, "Do you have any
> questions?" In China, teacher don't really say, "Do you have any questions?"
> Every end of each chapter or conversation, when the teachers switch to another
> subject, in China we don't really ask if you have any questions. In America the
> teacher always ask, professor always ask, "Oh, do you have any questions? Do
> you have any questions?"

As follow up, students named the following benefits related to in-class

participation: increased understanding of the material, increased connection with their

classmates, more confidence upon participating once (leading to further participation),

and more interest in the subject matter.

Students recounted the following specific strategies they developed for increasing

their participation, including:

> For international students, of course, it's difficult to engage in the discussion like other American students. For me, I always prepared that previous topic before I go in class so I knew what's going on in the discussions so that I can engage with them. But if I don't prepare before the class, it must be difficult to participate.

> I now know which person is fun to work with, actually I kind of have understanding. When I get into the class for the class, I see like someone is sitting around those persons or something and they just sit there. So I can be a group with them; like, I can work with them. In that case, I can kind of have fun working and like doing the activities.

> I found that really interesting and how confident the other students were. …A lot of us international students are quiet in class, like I said. I think it rubs off on people eventually. Now, in class I will raise my hand up and ask a question or answer a question and that was because of just feeding off the confidence shown by other students.

Interviewees also addressed the instructional supports for class participation, which are

included in the next section of Chapter Four, in which the institutional factors influencing

upper-division students' academic engagement are presented.

A secondary theme related to participation was the particular act of asking

questions. Thirteen (13) of the 20 interviewees discussed the benefits of asking questions

in class and approaching instructors with questions related to course material. The

following is an example from a female engineering student from Malaysia:

> I understand things better now. When you study and you don't question you just ... It's kind of like short-term memory, like you just remember it for the test and after that it's like, "I don't remember what I learned." Now, when you starts questioning and then you get the feedback and then it's like two way communication and then you will be like, "Oh." You really understand the stuff and it will stick to your mind. It's a true learning, like you actually learn it, not just memorize.

When asked about his "ah-ha" moment as an international student transitioning from the school system in his home country to UMTC, a student from Southeast Asia studying economics said:

> That it's okay to ask questions in class. Even if it's kind of silly or even if it seems obvious to other people, it's fine. Professors understand that. None of the professors ever give snappy remarks back.

It was common for interviewees to address the relationship between confidence and asking questions, as highlighted by the student comment presented previously in this section regarding building confidence through observation of other students. Confidence as an individual affective factor influencing academic engagement appears later in this chapter.

Academic behavior: Time management.

One of the academic behaviors that students identified as key to their academic success was time management. One subset of the data, related specifically to students' academic lives and responsibilities, comprised more than half of the time management references. Following joining co-curricular activities to make social connections on campus, learning how to manage one's time was the second most frequently cited piece of advice that the interview subjects would give to new international students at UMTC. Comments from the interviews to this effect included:

> If you can't manage your time well, you can't do well. The other thing is, what I've noticed is writing things down. So, having a crosslist that's dated, with due dates on, every assignment you have to do or everything you have to do. It makes it much easier. Because, normally we can't handle, like, five or six courses and remember everything at once. Few people can, but the majority can't. So, time management would be one [thing I would recommend to new students].

> I have to be more efficient with my time, really schedule it [because I am a student athlete]. I sit down every Sunday and just make a plan for the week so I can build in some free time for my friends to just hang out with them and just get

my thoughts off of school and [my sports schedule]. … Time management is a big one—to manage your time efficiently.

Several student interviewees talked about time management in terms of a skill they had developed in college. Often, they attributed the origins of this development to a specific event or realization that prompted them to adopt time management practices:

> I never thought about time regulation at that time, but when I came here I realized that it's really, really extremely important for studying in university. Because in China … I don't need to arrange that by myself, but here I have to arrange all by myself. I guess that's what US students will experience since they were in elementary school, time regulation -- which is what I was lacking of.

> There was a certain time that I was really, really busy that I was really nervous. Like I said, "Oh, I don't know when the homeworks are due" and that, so I started to do it on the UMN calendar to put all this stuff on it. I think it's really beneficial, so I continue doing it.

> I kind of ruined my first semester here, because I didn't expect that there would be so lot of things to be done. Yeah. My experience….and just like write the down what you have to do. Journaling … I would say that's really helpful. Like make a agenda and just prioritize which one is more important than the other.

> There were times where I would just procrastinate my work up until the last minute and then I would, I would get it done. However, it wouldn't be up to my expectation. After doing it once or twice, especially with papers, the third time or fourth time while I was taking my freshman writing class, it was the first time for me to actually write a paper and then read it before submitting it. And then I found many silly mistakes that could easily have edited. So that was the time when I started, no, I need to start working earlier on my projects, or at least, giving myself wiggle time that I can adjust later.

Regarding the tools for time management, students cited on-line and paper calendars, journals and planners as most beneficial. Only a couple of students mentioned the use of on-line resources beyond the suite of Google applications used by the University of Minnesota for e-mail, calendaring, and collaborative work.

Academic behavior: Adoption of effective learning strategies.

Approximately three-quarters of the students interviewed discussed the

development of strategies over time that helped them to learn more in their courses, to be

more efficient with their study time, and to overcome barriers such as lack of cultural

knowledge and challenges associated with language ability. Those strategies included:

> Use of online learning resources (Google and Wikipedia for quick cultural
> knowledge, library guidance for references and citations, finding additional
> equations and study problems for practice)
> Skim reading (particularly to manage high reading load)
> Audio recording and reviewing lectures
> Reviewing in-class lecture notes and materials alone or with peers
> Checking understanding with classmates and with instructors during office hours
> Reviewing exams and feedback with an instructor or TA for greater clarity
> regarding expectations and performance

Linked to the development of learning strategies, many of the interview subjects

also spoke to an increase over time in their self-awareness regarding their academic

preferences, strengths, and ways of accomplishing tasks. Quotes to this effect included:

> After I recognized the differences between Korean and American education
> system, I thought I have to communicate more actively inside and outside class. I
> started put hands up then. Sharing my thoughts and sharing my culture difference,
> something like that. I think I'm getting accustomed to here more enough.

> I'm doing great right now. I think it's [pauses] more about understanding the
> concepts rather than knowing how to do the example that the professor did in
> class.

> I'm not the straight-A student who would ace every test. I know that, yeah, I know
> that I do good in my tests so… I think the time I'm putting in, is what I'm getting,
> so I'm accepting that. Because I have other things that I'm doing, and so for the
> amount of time I'm putting in, I think I'm getting my grades that I deserve.

In addition to their own student-driven behaviors and adaptations to the learning

environment, interview subjects talked about the value of academic relationships that

helped them to perform better academically or to engage more deeply with their subject

matter. The next section addresses the academic peer networks that students described as particularly helpful; other key academic relationships, such as those with professors and teaching assistants (TAs), are included in the section on institutional factors later in this chapter.

Academic Peer Network.

When asked about the factors that contributed to their academic engagement and academic success at UMTC, students highlighted a very specific type of friendship: one within their major field of study. The following section addresses the nature of the academic peer network and the timing of making friends within one's field of study as they relate to academic engagement.

Academic peer network: Purpose.

Interview subjects who talked about having an academic peer network were able to articulate specific benefits to having friends in their major. Those benefits included assistance in selecting courses, opportunities for information about instructors and TAs, and working through coursework together. The following two interview subjects, a male student from Southeast Asia studying economics and a male from South Asia provide the following details regarding their own academic networks:

> A lot of it's come down to the kind of friends you make in your major and the people that you have classes with, [your] sequenced classes that are throughout your [program] ... I've met a bunch of people in Econ and we have the same classes together. We always work in groups. We know a few T.A.s now because they would teach the upper division and lower division, so we would be familiar with them. That's really helped me engage with Econ as a subject, the department, the advisors. That's really helped a lot.

> I'd say quite a few of my friends are the ones I met through labs or lectures. Which is funny because I was just thinking of one of my really close friends. I was at their family dinner this Saturday. I met him in a lab and he's one of my

closest friends, for sure. That's how I met quite a few of my friends, in lectures and labs. Just telling them to come study with me and help me out and just asking them in the lab questions about themselves. I'd say that's definitely a very important way through how I met people over here, I believe.

Students reported getting to know these students within their classes and also leveraging

friendships with older students who had already gone through their academic programs:

My friends who were in the same major [were the biggest help to me]. We studied always together and then we could help each other. Sometimes, the previous students who took the same courses, they can give us some information about the previous classes.

I would say those who came here earlier than me and take the same class [were the most helpful]. They would be, like, somehow like a mentor for the life. They lead me around the campus and teach me what classes is fun, what professor is good, and so forth. …I'm not very social, so I seldom make friends outside of class, so I met them in class and they have more experience and more stories and I can learn from their experience and stories.

I have two students that are doing the same major as I am, I think we're graduating the same time. However, they took courses I didn't take and I take courses that they didn't take so that's, where we would ask about how demanding is the course? How easy, how tough is, is it.

One student, however, asserted that the existence of a peer network alone is not sufficient

for making academic decisions:

I would say that asking classmates for advices is not a good idea, because people are different. I have been asking about friends, "What would you recommend to fulfill a Biology requirement?" and people have been asking me, "What classes would you recommend for my Finance class?" It has not gone well either way, because this Finance class I will say, "Oh, it's really easy, really easy to get an A. The professor is great," and all this stuff, but [another student] did not necessarily like the way the professor teaches and he might not be interested in this matter, and it might be just he's not good at Finance compared to me, something like that. When I took this Biology class, I ended up dropping it, but when my friend recommended to me, he was like, "Really easy. You have to go to class and you get an A," but it's just something that I can't do, I don't understand. I go to class everyday but I can't understand. I think when choosing classes, because everybody know themselves the best, like I know I'm good at literature, I'm good at writing, a lot people are not, so looking at the courses, you know what you can do better.

As highlighted in the anecdote above, *how* students use their peer academic network made a difference for the interview subjects. Although many students reported a preference for studying alone, they also spoke about reviewing and double checking assignments with peers or specifically preparing for exams together. Other students articulated benefits such as teaching one another course materials and utilizing study support resources together:

> I've had a lot of friends that understood something and can explain it to me better than other teachers because they know me as a person. They know how my brain works. I've understood course material that no teacher could explain to me, but a friend of mine that has taken the class before.

> Some of the [projects for my Econ courses], doing them alone, would take you at least seven to eight hours. But having four people cranking the problems out would reduce the time working on them. And it will also help you get a sense. I think if you read something you only gain somewhat of the knowledge. If you do it, you gain a bit more. But if you teach something, you'll gain the most amount of knowledge. So, give, working in a group, helping others understand what you understand would add to that experience.

> I will first work with other classmates, but really we can't figure out ourselves. The problems are really tricky. Then we will go to the office hour together.

> In addition to how the peer academic network was used, students also talked about the optimal timing of establishing the network, as discussed below.

Academic peer network: When.

Asked in the qualitative interviews about the ways in which their academic network changed over time, most students indicated that they spent the first few semesters without an academic peer network and struggled until they found one. One of the milestones that made a difference for many students was selecting a major, which does not happen at UMTC until a student has taken or transferred in the equivalent of 60 credit hours of coursework. Studying within a major in 3000- and 4000-level courses

which, by students' estimation were generally smaller than the 1000- and 2000-level

courses they took earlier in their programs, more effectively connected them to their

peers and opened opportunities such as formal, within-department study groups and

learning opportunities. When asked what would have made a difference in their first

year, the student suggestions centered on formal peer study groups to help new students:

> Peer-to-peer tutor [would help]. …Those students who are doing better in class and all, they would tutor the students who are doing worse in class. That would help the international student to get to know the system here better and to engage with different people.

> I think it would be really great if I am paired with student who is already studied here for a year or two year, even more, and before I came here and in the major I want to pursue, so he or she can provide me some insight for suggestion on my academics selection.

These suggestions mark the end of the section on the academic peer network. The

following section is related to the affective component of the engagement construct. The

information presented includes three dimensions of affective involvement as it relates to

academic engagement.

Affective Involvement.

Themes that were categorized as "affective involvement" included confidence,

motivation, and students' perception of challenge. These themes were not built into the

main questions of the interview protocol, but were explored further if initially raised by

the student interviewee.

Affective involvement: Confidence.

Of these three themes, "confidence" surfaced most frequently and was discussed

in each instance in developmental terms, particularly as a shift from a substantial lack of

confidence during the students' first year or years of study at UMTC to increased

confidence over time. Frequently cited reasons for lack of confidence included language

difficulties, uncertainty about academic and social norms, and lack of shared cultural

knowledge:

> Back in Malaysia, I never raise my hand and ask questions in class and all. Whereby here, whenever an instructor say something or if he's asking for opinions. I don't know. It's during my first year semester here, I wasn't very comfortable. After that, I sort of got used to it. I guess it made me ... It boosted up my confidence. Even my parents noticed it and my friends too.

> I think as an international student, sometimes it's hard to feel confident, because I don't know the roles. Sometimes people say something and I just go with it, even though I have no idea what they're saying, because I want to be, "Whoa, what does that joke mean?" With politics and everything, it's harder to feel confident in what you're saying, but I feel like all my [on-campus] employers have just really appreciated me for who I am, asked for my input and seen me as different, but cherished that or like, wanting me to bring that to the table.

Like the student who was quoted earlier in this chapter regarding gaining

confidence by watching his U.S. American peers in class, other student interviewees

addressed the ways that they built confidence at UMTC. These other ways of building

confidence included practice and encouragement from others:

> I took public speaking class for a semester and that class really helped a lot in building confidence. That's the thing, it's about practice also. When you have more practice of speaking front of a group of people you builds your confidence more and more. I remember the last presentation, the last speech I have to give. I wasn't really afraid at all. I was like, "It's just a speech. I've done it multiple times," and I just [think], "Oh. Get it out."

> I know every time I spoke, all the professors were like--they're all very affirming—like, "Yeah, good point," and they would like to build up on that. That would help my confidence.

> In the beginning of that class, I wasn't that active in participation, but when I first raised my hand and share my opinion, she was very glad to hear that. She expressed all of the supportive words like, "Oh, I really didn't know that. Could you share a little more?" After the class even she talked to me personally, "Oh, I'm so glad that you shared that experience. It was very helpful to show multicultural perspective," or something like that. She encourages me a lot about participation. That's another reason why I was able to participate more.

Further comments related to instructors and classroom conditions for academic engagement are revisited in the upcoming section on instructional factors.

Affective involvement: Intrinsic motivation.

A distinct theme around student effort and intrinsic motivation to work hard emerged from the qualitative interviews. Some of these quotes were given in response to questions regarding students' perceived keys to academic success and others when interviewees were asked about the advice they would give to first-year students. Select examples of quotes to this effect include:

> You need to learn to discipline yourself and you always have to ask more questions with things that you don't know, you just can't keep it to yourself. You always have to go out and seek help.

> Of course, you have to put a lot of effort on your part. Self-control is really important, to have the mind and focused on the study instead of distracted by other things.

> Run an extra mile, I would say. Maybe it doesn't sound so exciting, but what exciting is just like you learn how to … persevere.

> Most important I think, is self-motivation. I don't know. I am really responsible. I feel like I'm really responsible about my study. I take it seriously. I also put in…I also put the studying my first priorities. I always do study first and then play second.

Affective involvement: Perception of challenge.

Related to students' intrinsic motivation to do well and to engage academically was interviewees' recognition of the benefit of challenge. The following quotes and others in the student narrative include terms such as "worth it", "opportunity", "growth" and "developed":

> It was hard for my first semester but I found it's worth it to just struggle and learn a lot of things.

I was thinking about what is challenging, how I see challenging. In the end, I find I really like challenges because although you may feel and fail in the end, you might fail but it's always a good opportunity to help you grow.

In the end, I like the feeling of being challenged, or doing something I didn't want to do.

One student interviewee's experience at UMTC provides a counter example to the affective themes raised by the majority of the interview subjects, however. A female student in the College of Science and Engineering (CSE), Ji-hye Kim (pseudonym) entered the University in 2011 and still has not declared a major. Having completed courses toward two separate majors and a number of liberal education courses, many of which are no longer relevant to her degree plan, Ji-hye reported feelings of academic uncertainty and high levels of academic stress. When asked to characterize her current situation, Ji-hye said, "It feels really hopeless, like I wasted so much money on my tuition, and my grade is not changing."

On five separate occasions during the interview, Ji-hye expressed sentiments that early poor academic performance had contributed to significant demotivation around her studies. "When I got to the college, my score [in major program classes] was low and most of the other courses, too. Then when I decided like, 'Oh, it's time to study now, like, I should not play anymore,' and then when I realized and tried to be back on track, it was a bit too late because my academic success wasn't as satisfying as what CSE required for me to have." Ji-hye came to UMTC with two years of American public high school experience. She reported having done exceptionally well in that environment, receiving academic honors for her performance, integrating well culturally, and developing her English language skills and confidence.

When asked about her performance this semester, Ji-hye indicated that she had done well on her first exam, but felt discouraged by her grade on a second exam, which was below average. She was trying to work with an academic advisor and was developing new strategies to work with her instructors, but she said:

> They do offer me actually like, "Come to the office hours we can solve the problems together" but then if that's a problem where my concept is wrong and maybe the concept part that I didn't get and I cannot even start a problem then it's too … I feel like I'm asking them too much time to go over those concepts again and solving a problem with me.

Ji-hye said that she does enjoy and feels she is doing well in a public speaking course, where the course structure and type of instructor feedback are helpful to her:

> I put 50% and then I get 50, [I put in] 100% I get 100. Even though I'm not satisfied, I could always make up with extra credits and extra work. Participation would be grade too. Mostly because I get to speak a lot and communicate with the classmates on a regular basis. It's not a heavy subject like, "Oh, I cannot solve this problem."

Ji-hye attributes her academic difficulties to a lack of certain academic abilities (applying concepts and solving problems, in particular), the difficulty-level of her courses in CSE, and a first year of more "playing" than studying. Other students spoke to the effect of poor grades early on, but Ji-hye was the only student interviewee who reported ongoing effects of this degree and such a strong connection with her ongoing affective involvement with her studies.

While Ji-hye's story is unique to her own experience, it represents an important case in contrast to other narratives of overcoming challenges presented by the other interview subjects. Ji-hye's narrative is a reminder that while many students are able to develop skills and perspectives to address barriers, others are not or have not been reached with well-timed interventions or supports.

This section has presented five factors that emerged from the interview data in more detail: students' backgrounds, their co-curricular involvement, academic behaviors, academic peer networks, and affective involvement. The following section shifts away from the individual factors influencing the academic engagement of upper-division undergraduate students and focuses on the institutional factors influencing their academic engagement.

Institutional Factors Influencing Academic Engagement

The following section centers on the institutional factors that create optimal conditions for students' academic engagement. For clarity, the section is divided into two parts: structural elements of the UMTC student experience and instructional aspects of students' classroom learning, addressing the study's third research question: *What institutional factors influence the development of upper-division undergraduate international students' academic engagement at the University of Minnesota-Twin Cities*?

Structural Factors Influencing Engagement.

Three major aspects of the university structure emerged as impactful for the academic engagement of upper division undergraduate international students in the interview population: The size of the campus, the number and type of on-campus resources, and the selection of courses in a students' degree plan.

Structural factor: Size.

Interview subjects discussed campus size as both a challenge and a benefit to their academic engagement. Students who, in particular, had attended smaller colleges,

English language programs or community colleges in the United States remarked on their surprise at the actual size of UMTC once they arrived and began their studies on campus. (It is interesting to note that not one student who came directly to UMTC from a secondary school background indicated any surprise regarding the size of the UMTC campus.)

On one hand, students identified challenges specific to studying on a campus of more than 50,000 students: lack of interaction with professors, navigating the two Minneapolis and St. Paul campuses, and difficulty making friends. On the other hand, some interview participants highlighted that the large campus size equated to a higher number of resources for students, particularly for co-curricular involvement and academic support.

There was little disagreement, however, regarding the benefit of small class size for increased academic engagement. Comments to this effect included:

> I prefer small [class size] actually because …smaller, I would say … because I value relationship with teachers and classmates. I have the best experience, I would say, because I was close with the teacher and my classmates.

> I get to talk to my classmates in the class and it's tiny so I know everyone and they know me. I don't feel embarrassed by speaking out in the tiny class. CSE courses other like physics, material science and math class -- it's huge, like, 80 or over 100. Even though I pay attention and listen to it and maybe things come up and I don't understand it's hard to raise my hand ask questions because I feel like, "Oh, maybe this is a stupid question I shouldn't be asking right now. I should ask later." Then it's either I forget or I miss office hours or I have other stuff that is more important than asking this question.

A student who indicated initially that he liked large lectures later clarified that he thought the optimal learning combination was a large lecture for grasping the foundational concepts, followed by a discussion section: "I like how it's a mix between these two. Some classes have big lecture and then small discussion. It's a mixture, so it's

the best I think."   Another student interviewee characterized the TA-directed discussion

sections as helpful because they afford opportunity for further explanation of the material

and time for questions and assistance with problem solving.

Structural factor: On-campus resources.

Not all students in the interview sessions made an explicit connection between the

size of the UMTC campus and the number of available resources, yet all 20 interviewees

referred to using at least one on-campus resource during their time as a UMTC student.

Most did address appreciation for the number and diversity of resources, as well. The

following on-campus support resources were named across the 20 qualitative interviews:

Academic advising, mental health counseling services, the University Libraries,

individual tutoring, staff and peer mentorship, and the Tech Stop technology help center.

Interview subjects who had used these resources in ways that they deemed to be

helpful acknowledged that it had taken them some time to locate these resources and to

use them effectively. Students who had positive experiences with the Writing Center,

tutoring, and the University Libraries had planned ahead to make use of the on-campus

services and had very specific reasons for seeking out each resource. On the contrary,

students who sought help in a general sense or at the last minute were often frustrated by

the perceived lack of assistance.

Above any other resource, students talked extensively and in almost exclusively

positive terms about the university's options for professional preparation, including

formal internships, professional mentoring programs, college-based career centers, and

other opportunities focused on the development of professional skills[13]. Perceived

benefits of the internships included:

> I want to see how the career I want to do in the future, how that works and I want to know in practice -- how does the thing I learn apply to it. I want to know the value I study here, why I study here -- is that meaningful? That's why I want to get an intern[ship] now.

> I started to know how to interact with people in business environment.

> I can also learn how to lead the meeting, how to make the participants comfortable and learn very basic things, too, because I didn't have previous company working experience. I work on campus, like, part-time jobs, but not in real company. It is my first time to work off campus. I'm learning a lot to be professional.

> You had to maintain deadlines, you had to make presentations, you had to make reports. It was just interesting of how life is out there in the real world. That's why I would say it was really enlightening and one of the more important job opportunities I've had so far.

These formal opportunities for professional preparation were raised as particularly

important for international students who, given the restrictions on international student

employment due to USCIS visa regulations, often cannot take other off-campus job

opportunities. Due to that lack of work experience and differing cultures around

professional preparation, many students reported a distinct realization that a combination

of on-campus involvement, professor relationships and recommendations, and academic

achievements are considered desirable in the U.S. internship and job search:

> When I start to do my résumé, I find out, "Wow. I really need I really need more like activities, otherwise there will be nothing in my résumé." That's why I have the mind to search for different extracurricular. Also, I find out in America, in order for you to find a job, experience is really important. They really think highly

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[13] At the time the interviews were conducted (late March and early April 2015) many of the upper-division student interviewees were in the process of applying for internships or summer research positions. The focus on professional preparation might also reflect values regarding professional preparation that students brought with them to UMTC, as evidenced by student comments regarding perceived purpose of a higher education degree and future plans. This is discussed in Chapter Five in greater detail.

of what experience that you have. It also helped me have the mind to have experience outside studying, outside good GPA.

Once I come here, I feel a lot of [employers], they are looking for good communication skills and working experience and whether you can work with other people and all. It's not just all by your studies. That's what my friends told me when they applied for jobs. Of course, they will look for their grades. It has to be better, above average. Also, they want them to have good communication skills and working experience… It's all about how you could talk to other people in a good way, integrate and stuff like that.

Interview subjects who had taken advantage of UMTC's resources for career preparation and internship placement named the following sources of support as being particularly helpful: formal professional mentorship programs at UMTC, classes and workshops on professional topics such as résumé and cover letter writing, professors, and within-college career centers. Students in the College of Science and Engineering, in particular, highlighted specific mentorships that paired them with engineers and practitioners in industry for professional guidance and the Minnesota Innovation Corps (MIN-Corps), a program described on the CSE website as a program "aimed at helping science and engineering students and researchers identify the commercial potential of their discoveries and test those ideas in the marketplace." Similarly, Carlson School of Management students highlighted a well-developed internship infrastructure that aids in finding potential internships and employers, as well as job fairs, job talks, and strong connections between the CSOM and industry that helped them to know how they might eventually use their majors and what specific employment they could pursue with their degrees. These topics are revisited in greater detail in Chapter Five, particularly as they relate to the study's theoretical framework and the implications for serving international students in higher education.

Structural factor: Course selection and academic advising.

When asked about course selection within their academic programs, there was agreement across the 20 interview subjects regarding the importance of course sequencing and combinations in a given semester. Most students talked about course scheduling as it relates to time management and the ability to balance responsibilities and tasks across courses. Two students each highlighted a semester with a very busy course load that had impacted their involvement in other on-campus and community activities during those terms.

The majority of students indicated that they only used the assistance of the university's two primary advising structures, college advisors and academic advisors, for course registration and knowing what courses were required for their degree plans. Students were, in fact, more likely to name other students in their academic peer network as sources of information about their academic programs and course selection.

Students raised several instances of challenges they encountered related to selecting courses on their own. Three students brought up specifically that they had failed to sign up for international student sections of first-year writing courses because they were not aware the option existed for them. Another student said that she was unaware of the option to take a course S-N and damaged her GPA in her first semester with a liberal education requirement science course unrelated to her major. Several students reported taking courses that in their minds did not align with the description in the course catalogue or with what other students had told them about the course. Another student offered up an anecdote of a friend who was no longer on time for four-year completion of her degree because she had taken courses out of sequential order and did

not have the required courses in her junior year to move forward with her major requirements.

Students did attach a qualitative difference to the interactions they had with the generalist college advisor they met with upon entering UMTC and the academic advisor they were assigned upon declaring a major. One student said of the college advisor he was assigned in the first year of study:

> I don't think that's very helpful for a college advisor to advise something in the major because he does not know as much as academic advisor do. Basically I am making choice by myself. I think the college advisor may know the basic of the program like general math, general physics, general chemistry, but if the math is so specific to actuarial science or computer science, they don't know how to arrange the course load for you before you declare the major.

The upper-division students who had relationships with the academic advisors in their majors, however, shared positive experiences about the ways in which their advisors were helpful and provided academic support. A College of Liberal Arts (CLA) student majoring in economics provided the following characteristics when asked why he liked and had a positive relationship with his academic advisor:

> She's been really helpful. She's always given me a clear path of what to do. She always responds to my emails, even when I'm frantic, she'll make me calm. Since she's been around the Econ department too, it's been really good connection to have that.

A student athlete interviewee indicated that his college advisor had been very helpful in selecting a major, ensuring that he was meeting his degree program requirements and helping him to plan around his athletics schedule:

> I planned out my whole college credit load my second year to see what I have to take at what point [with the major I was considering]. … That definitely helped me. I feel like if there would be an extra hour that you have to schedule in your sophomore year, as soon as you figure out what major you want to pursue, that would definitely help because then you have your whole college career basically all scheduled out. Then it's way easier to go over the meetings in the future.

An interview subject who had a critical incident with an instructor in one of her courses described her advisor as an "advocate", indicating that she had worked intensively with the advisor for a semester to resolve the instructor issue. She met regularly with the advisor during this time; in her interview, the interviewee described how helpful it was that the advisor was responsive by email and willing to meet in person.

Another student was able to speak to the type of guidance she had received from an advisor at the Center for Academic Planning and Exploration (CAPE):

> I realized after talking to the CAPE adviser [that] maybe I'm asking more of too broad ranged questions to my professors. Because maybe I should have specific questions such as, "Oh, I'm struggling with this part but then how I can do this part to improve the other parts?" When I go talk to them I just ask, "How can I do better in the class? I'm doing this and this and this. What else?"

As with use of the peer academic network, student comments suggest that *how* students use the academic advising relationship may be critical to uncovering the relationship's benefit. The issue of guidance and advising is explored in greater detail in Chapter Five, where the implications for the findings are discussed and the connection to the study's theoretical framework are made. The following section moves from the structural elements that emerged from the student interviews to instructional aspects of the student experience.

Instructional Factors Influencing Engagement.

Bass (2012) argues that one of the problems with asking higher education students about curricular and pedagogical aspects of their programs is that very few, having zero training in this realm, are able to name the curricular and pedagogical strategies their faculty employ. The upper-division students in the interviews, however, were able to speak with specificity and detail regarding the instructional strategies that helped them to

learn and to engage academically. The coded themes organized under this category of "instruction" are:

> Teaching clarity and course organization
> Opportunities for hands-on and practical learning
> Support for group work
> Instructor feedback
> Support for participation and inclusion

Detailed attention to each of these themes is followed by a section regarding instructors (professors and teaching assistants), a sub-theme of this category that carried particular frequency and weight over the 20 student interviews. The final portion of this section addresses "culture in the classroom", the curricular and relational aspects of the learning experience for international students and students' perspectives on how this theme relates to their academic engagement at UMTC.

Instructional factor: Teaching clarity, course organization, and alignment.

Clarity of instruction, course organization, and alignment of teaching strategies and assessments emerged as instructional themes from the student interviews. Interview subjects raised all of these themes as significant factors related to learning and understanding class expectations.   The following interview quotes demonstrate the range of situations in which students highlighted lack of clarity and organization:

> *Lack of clarity, lecture.*
>> I think some international students don't really get what the professor is speaking sometimes probably because he's speaking too fast or using words that may be a bit too complex. I would say to professors or T.A.s maybe to keep the language you use maybe a bit more simpler.
>>
>> I have met some instructors with awful note taking, he write here and then he walk to another end started to write on the other side, most of the time just not arranged so well.

Lack of organization, course due dates.

> [The Moodle site] was not updated and [the instructor] even mentioned that if you see the deadlines, don't see the document deadline. You have to see the Moodle deadline and the Moodle deadline is very repetitive and not in order. If you have to find assignment submission tool then you have to scroll all the way back and forth, that kind of thing. Many of my classmates said, "Well I thought it was due this day," but it was not due on that day.

Lack of alignment between instruction and assignments.

> Some professors just give trivial questions. One of the class I'm taking this semester, almost everyone is complaining about the homework problem because we have no idea what he's asking for. That is not very helpful but other professors are good at this.

Lack of alignment between instruction and lab section.

> I remember this one class I had fall semester sophomore year. The lab was software based so it didn't mirror the lecture at all. The software was for SolidWorks and the class itself was concerned with a lot of physical stuff, like stress and strain. You used that software to plot those forces and physical phenomena on the objects, but you didn't really test out a lot of concepts that you learned in the lab itself.

Lack of alignment between instruction and exams.

> [The professor] gave us a sample exam before the midterm and we all did that, but the sample exam is very … like twenty years ago? Yes. I was not even born yet at that time [laughs]. I did all the sample exams and when I sat down there starting my midterms, I felt this is totally not the things he taught. Like, how could I know that? Like, if the subject I'm learning now is a building and he led us to see around the building, like how that looks outside -- but the in the midterm he's testing what is the decoration inside.

Interview subjects listed the following course materials that helped with course

clarity and for helping them to learn:

Detailed course syllabus
Clearly organized learning management system (e.g., Moodle site)
Providing PowerPoint slides from lecture
Use of multimedia (videos, on-line resources) to supplement lecture

When asked about the characteristics of a "good instructor" many students

highlighted these themes of clarity, organization, and alignment in their responses and

could name specific instructors who served as examples of these ideals. Examples of

these quotes include:

> I would just say that my favorite professor is [redacted]. I think it's because he was able to explain the materials really clearly in class and he is really approachable and helpful after class. He is the professor that I went to the office hour most frequently because he's really willing to help you. If I'm asking a specific question on this material, he'd extend it, not just focusing on this to make sure that I really do understand the whole thing.

> [It is most helpful] when they can really explain the class materials, because if they can't or in the way that we can't understand, then we feel this major to be really difficult, then we don't really want to go into. If the professor can really explains everything really clearly, help us understand the materials, then it helps us to make a better choice rather than that's easy or that's hard.

> She's a [international, country redacted] professor. I really like her class because her class is really organized. She has really clear line and she clearly said what she need and the exam is based on what she taught in class. Although the content is really hard, although she gave so much information in the class, but her exam is based on what she taught. She really clearly demonstrate all the knowledge and I learned so much from her class. I really like her class as well and I did really good in the end, too. I really like her. She's my best professor so far.

Finally, the theme of instructional clarity emerged in the hypothetical question in

which interview subjects were asked to provide advice to an instructor who wished to

more effectively teach international students. Sample advice aligned with these themes

include:

> I feel they could probably use languages which are easier to understand, but it's really hard to do that because some materials, it requires other level higher. I feel that the most of it ... I see a lot of people, like the international students, when they're in class, they don't really understand what the professor is talking about. I feel that's the one thing that really stops them from participating in class. Plus they couldn't understand and at the same time, they could not participate. So it's very hard for them.

> First, try to make every class modules, class materials as clear as possible. That class Moodle site is the worst because all of the deadlines are very confusing and it's not in order. …If you have to find assignment submission tool then you have to scroll all the way back and forth, that kind of thing.

I think sometimes professors can use words or phrases they could maybe make more simple for international students to actually understand. I think some international students don't really get what the professor is speaking sometimes probably because he's speaking too fast or using words that may be a bit too complex. I would say to professors or T.A.s maybe to keep the language you use maybe a bit more simpler.

Other aspects of instruction and the student/professor relationship as they relate to students' academic engagement are discussed in further detail in this chapter's section on instructors and teaching assistants.

Instructional factor: Hands-on and practical learning.

Contrary to literature regarding international students' instructional preference for lecture and passive modes of learning (Atkinson, 1999; Ballard, 1996), the students in the interview population voiced a strong preference for hands-on learning and methods of instruction that include practical examples and practical applications. The following comments are indicative of the types of evidence that support this claim:

They give us the models … to figure out that and they would give us homework where you calculate the GDP of a country in the world and then you look at data in the World Bank site or something. Then you have the option of choosing the countries. You're working with real numbers, the real GDP and stuff. That makes it very interesting.

I'm more excited to learn stuff in lab compared to a lecture, because you get to work it on yourself and test it out and then you see the results and you understand more from the results, like, "Oh, that's actually how it works." Because when you learn it from the, like this class where we design steel beam and column, I was like, "Yeah, I can see that. I can imagine that," but I don't really know how it is in front of me. I was like, yeah, in lab, maybe you can see how it is actually designed and how it actually works.

I think mainly the labs [have helped me to learn]. I would love to deal with those components. There a lot of little things, but I can make something with them. I can use my effort to make it work. It was really great [laughs].

These comments go in tandem with student feedback regarding courses that focus on theory without opportunities to apply the knowledge learned:

> I feel like accounting class is boring, but … because whatever the professor talks about in the class is pure knowledge. The interesting part is I have to do the study by myself and then I'll feel like, "Oh, that's the interesting part."

> Having students do these things just for them to doing so, or memorizing the integer of sine squared x plus, 2 times x, which might not help them the real life in solving problems, isn't the best way to have them---it isn't the best thing to take over outside the university.

One student who had been relatively quiet in the interview session became very excited and talked in great detail about a project that was completed for a computer science lab to simulate improvements to a city bus route. The following passage reflects his comments regarding the in-class project:

> [In my computer science lab] we were writing program for simulation and the assignment was to design the bus route, like the Connector for the UofM. …Say there's a business or the university to design a bus throughout system connector and then basically you would write a program with the number of stops and then number of buses, or something like that. Then you'd figure out how long this takes to get from one stop to the other stop and stuff like that. Then you could basically simulate that and you would have people getting in the bus in every stop randomly. You write a program to do that. Then every time people go in, there's a specific condition for the bus. So, you can't fit more than 40 people, 50 people. Random people who couldn't get in would be waiting there, right? In the same stop until the next bus comes on. Then after you run the whole simulation, you calculate the average weight time for the people, then the running. How long the buses run. After that you get all of the statistics, the results. Basically you can design in such a way that you could get …how long the buses run all together, so you can figure out the cost I think. Then you can say, it's a university system, but if it's a public system then people are paying to get into the bus and you could figure out the profit or something like that. Then you could figure how long people have waited so you can measure how they're satisfied or not depending on that. That's the average but some people could have waited a long time. I loved that project.

Even in contexts where learning could not be structured in a hands-on fashion, students spoke to the benefits of having opportunities to apply their knowledge to authentic situations:

I like applied stuff. I really like just learning knowledge but I want to apply that into the study. I feel it's really helpful for me to make the connections about what I learned into the reality. For example, last semester I took a [psychology] course. When I interact with the students, I really can see a lot of principles can be applied into that real life.

You can't really memorize stuff and go to the test. It doesn't work that way. You have to understand the concept and how to use that equation and how you apply it for different situations.

I would say the most helpful assignments were the assignments that had to do with problem-solving, and that were, I would say, things that we encountered in class, the same way as the problem is. Having the knowledge from the class and then applying it to other problems.

Finally, two students shared their positive experiences with more student-directed modes of learning in response to the interview question "What helps you to learn?":

The other thing I found helpful was when the professor asked the students what they, what assignment they would like to have. So, one of my classes, the professor asked us what books we wanted to read and then based on that book we chose, we had the assignments built upon that. So, that was a good way.

Especially when there is no requirement and [they] just assign you a topic you have to do a lot of research and then make a PowerPoint present in front of the class that will help me gain a lot of outside class experience like the searching ability for academic project and some interaction between the group members, yeah the communication goes. Pretty much that.

There's this one activity where he puts up this paper, science paper or something, on Moodle and he tells us to print this out or just bring it on a laptop. He assigns a group of around 3 or 4 people and tells them to read through the paper and answer an activity, another printout of questions which he has. That way we have to learn from scratch, completely on our own. Later on he gives us the answers and he goes over the concepts. I fell that gives us the ability to take the initiative to start trying to learn on our own, trying to understand on our own.

This preference for hands-on and practical learning aligns with student sentiments regarding the co-curricular benefits of research and leadership training addressed in this chapter's section on the individual factors influencing academic engagement, as well as

the resources for authentic professional preparation identified as a structural support for academic engagement.

Instructional factor: Supporting group work.

One single type of learning activity was discussed most frequently across the 20 student interviews: group work. Only one student interviewee, a mathematics major, reported that he did not have a high amount of group work related to his academic program. All of the other students in the qualitative interviews reported having substantial amounts of formal group work (projects and presentations) and also informal in-class collaborative learning activities (e.g., think-pair-share, small group discussions, in-class lab groups and work teams).

Some students did recount positive experiences in group learning, but more often students admitted to not liking group work and having difficulties in academic teams. Interview subjects reported the following issues as most problematic to group functioning and completion of academic group projects:

> Equity in the work distribution of group projects
> Communication and scheduling issues
> Confusion regarding group roles
> Interpersonal conflicts

Perceived conditions for success in group learning included the following:

> It depends on participation of each member. Some really have a passion to do the group project. Some are really just like whatever, doesn't care. If I'm grouped with the passionate people, it's really good for me if I just stay and they really do everything.

> Good group project means people engaging in the process and giving out their ideas at a timely manner and just working to succeed. Bad group project will be having a few people committing to your project and the rest just fooling around.

Usually class presentations are not that exciting because people usually just want a good grade and a lot of people are free riders. There should be someone to assign different roles or have different part of this project like you do problem one to four, something like that. We have a meeting, talk about our answers together and put it together.

A good group, I think, is if everyone can get involved and share what they want, brainstorm then it tends to be a good group. Bad group is everyone is really laid-back and doesn't really take the initiative to share their opinions. They just want others to take the responsibility. Also, a good group should have a leader and initiate the conversation and lead the conversation going and everyone have the right to share what they want.

There was a mixed response to the question of whether instructors provided sufficient guidance for group work, but most students felt that even if the guidance was given, other structural and directional modifications would benefit the group work process. One student also highlighted that group projects were often assigned in courses where it did not seem to benefit the learning, saying: "Not all courses can succeed with a group. Some courses, like freshman writing or a writing course, you don't need a group work to do that."

The majority of students advocated for groups to be assigned by the instructor (randomly or by design) as one way to improve group functioning. Comments regarding structuring groups included:

I personally do not really love voluntary groups because … well, because I'm an international student. I mean, I'm from Korea so I feel more comfortable to be with another international student. … When I do a group project or like group activities with international students, that's not really great a lot of times because this university has a lot of Chinese students. If I do group activities with the Chinese students they just speak in Chinese. It makes me feel, to be honest, bad. But if do that with American students, it's still fun although I do not really speak a lot.

Arrange the group discussion, because what happened is most international students were just grouping with other international students. They don't really learn how to just work with Americans. I think instructors need to encourage that.

You have to mix and blur. Maybe we just count 1,2,3. 1,2,3. I think that really helps.

I feel two to three [group members] is a good amount. Plus if you have four to five, some people they don't have the chance to speak at all. If you have that group size of about two to three, it's compulsory for them to speak.

I think that the instructor did purposely choose international students to be with local students. I think that [it was done] intentionally, so I was like, "Oh, it's a good thing." Its not random, it's intentional. …I can work both my home country students and common students here, yep.

I'm not the person who talks a lot in [big] groups. When it is small, I tend to talk. When I just need to pair up like only one person so like two people in total, I tend to speak quite a lot. But if there are like more than three or four people, I start to not talk. That's one part that I do not really like, that kind of activity.

While most students focused on themes of inclusion and the ease of completing a group project, one student highlighted the effect of group structure on student learning and the benefits of differing perspectives within a group:

There was a group that constitutes of all Chinese students--all of them together and I think that's why when that group presented in front of the class I feels a lot of deficiency in the topic they're talking about. I think some ideas that your students have comes from the way we grow up. We think differently, that's something they can think about and something we cannot because we don't know where the limit is, but we never go beyond that. It's really helpful for the project to do that…[to think in other ways].

Interviewees did not indicate that their experience with group work had improved over time. Interview subjects highlighted that the context, group members, and expectations changed from group to group, so it was difficult to prepare until group formation.

Instructional factor: Feedback.

The following section addresses instructor feedback on student work. As follow-up to some of the instructional questions, students were asked about the types, frequency, and characteristics of feedback that were most helpful. In the interview sessions, students

cited two types of feedback as being particularly helpful: Feedback on their writing and feedback on their participation. This finding aligns strongly with qualitative data presented previously in the section on background factors that influence academic engagement, where students reported significant transitions to the cultural norms and expectations around writing and participation.

Students shared the following about writing feedback:

In terms of writing, the T.A.s were pretty strict about it. It was really helpful at the same time because you could get feedback and stuff. I think that's helped improve my writing a lot, those freshman writing classes and those writing intensive electives…. At the end of the paper they would say something like, "Come see me," or, "If you need help, come here." They also made office hours mandatory in some classes, which is really helpful because it would actually push you to go to office hours. It was really good; added incentives helped.

The TA was a hard grader. It just requires me to just really learn and understand them because we have to make a paper based on the research paper. It just requires me to just have a close reading, just to make sure I will understand what is all about. Write carefully, because I sometimes I don't really check the grammar, punctuation and stuff. It's just you have to do extra work, but I think it's worth it, because you have to work hard if you want to earn something.

For our classes, it's mostly about writing assignments so he will give you feedback on how to construct your sentences, your formats, whether there's any grammar mistakes or any sentences that you have to change.

I would say mostly helpful for if you need to write a paper to get a higher grade especially from the same instructor or grader.

The upper-division international undergraduates also cited the helpfulness of ongoing support for learning the citation styles common to U.S. higher education, such as those from the American Psychological Association (APA) and the Modern Language Association (MLA) style standards. These student comments regarding writing feedback focused on structural aspects of writing and citations; only one student mentioned receiving writing coaching on content, argument, alignment or style:

> [My writing instructor] really took the time to explain to you concepts of your paper that needed fixing, how you could improve this section, how you could use a different word to really bring a section to life. She really showed a lot of attention to each and every student and I thought that was really good of her.

The following anecdote provided by one female Chinese student regarding feedback on her in-class participation typifies similar experiences retold by the interview subjects:

> I had a professor in my lower level accounting class. At first, I did really bad in that class, so I talked to him in office hour. He's like, "You have to speak up in class. In that way you will participate in and you will be more focused." I was like, "I'm really scared. I don't want to speak up," and he's like, "You know, there's a big part of participation points and I will call you in the class. When we were talking about homework I would be … I would like you to explain your homework, how do you do this problem." I was like, "Noooo." [laughs] He actually made me to do that. I was really thankful.

Feedback on participation was generally synonymous with encouragement for more in-class participation, which students said helped them to understand the expectations around speaking up and asking questions in class. Given that in the quantitative survey most first-year students reported only a moderate level of participation in large lectures and reported receiving a lower level of feedback on classroom participation than on other types of work, this finding carries practical implications. This theme re-emerges in the next section of this chapter, which focuses on professors and teaching assistants.

Aligned with the literature on educative assessment and feedback in active learning settings (e.g., Fink, 2013), students highlighted that timely feedback was important. Immediate feedback opportunities, such as quizzes on Moodle or opportunities to check answers in a book or on-line were named as helpful ways to learn foundational knowledge and facts. Interview subjects who did a lot of equations as part

of their assignments (students studying in STEM fields, actuarial science, and business-related majors) indicated that on-line answer keys were helpful to their out-of-class learning and development. In terms of more abstract assignments, particularly writing and papers, students highlighted frustrations around receiving feedback too late to apply to subsequent assignments.

In terms of characteristics of helpful feedback, most student interviewees highlighted that concrete, directive feedback was more helpful to them than general feedback:

> I think it's a part of, maybe, language barrier, maybe from … if it's vague feedback, I don't know. Maybe that language doesn't really translate to my native language. If you give specific they just say, "Oh yeah, that makes sense." Because the way we learn … I mean, we communicate in English differently. Maybe that's why.

> [The instructor] didn't give me a concrete feedback. It's just like, "Your writing doesn't make sense." And I would say "Okay. She's a hard grader."

> Step-by-step would be great because my math, yeah, because I don't have to look over my solutions again. They can fix my solution on my solution paper, which is the test example, they always say, "Just check the solutions up on the Moodle." I don't check usually, [b]ecause what I wrote in the test is what I know in the problem. I believe that problems that I go over is part that I really don't get it or partially I do believe I got it, but then if there's just an X mark there, then no.

> When you turn in paper homeworks, they will usually just mark it wrong. You get points off, that's all. They don't correct it for you. They don't tell you what's wrong. It depends on the students. If you care, then you go to office hours to talk them.

The next section of the chapter shifts slightly from the instructional strategies that students named as having influence over their academic engagement to a focus on the professors and teaching assistants that students encounter in their courses.

Instructional factor: Professors and teaching assistants.

Students in the qualitative interviews provided a significant amount of information regarding their professors and teaching assistants, and the following section addresses the role that an instructor may play in students' academic engagement. This section focuses particularly on student comments regarding the perceived "good" characteristics of an instructor, the nature of the student/instructor relationship, students' perceived benefits of the student/instructor relationship, and students' perceptions regarding the ways in which instructors influence classroom climate.

Students in the interviews addressed the characteristics of and the existence of a relationship with their instructors as much as they highlighted pedagogical strategies that helped them to learn. There was one main question in the interview protocol regarding the instructor ("If you were able to give advice to a UMTC professor who wanted to do a better job of teaching international students, what would you say?"); all other conversations focusing on the instructor were a result of follow-up or probing questions to student-supplied information.

One often-asked follow-up question was "What are the characteristics of a good instructor?", a question that generally followed a student's description of a specific instructor he or she encountered at UMTC. One quarter of the students interviewed provided the term "approachable" as a characteristic of a good instructor. When asked to define that word, one female student from Malaysia described it as, "[W]hen I talk to them, they are really helpful. They understand your needs and they will answer all the questions that you want and they will make sure that they reply your email really fast. I

think that's what we need as a student. When you're really lost and you really need help, they are always there to help you."

The other characteristics of a "good" instructor named by students included: recognition of the challenges faced by international students, willingness to help all students, being open to suggestions and questions, teaching with clarity, including "real life" examples in teaching, and aligning assessments with course content.

One student described a professor that he has during the Spring 2015 term as "one of the best that [he] ever had" and one who embodies all of the characteristics of a good instructor, elaborating:

> He's so engaged and he's so out there for the students. He's willing to make improvements. You can tell by the way he teaches, by the way he's structured the course, that he wants to help you out. He wants you to learn. He's going to help answer all of the questions you have. He wants to make this course engaging. He wants you to get a good grade. He has quizzes, he has teaching activities. He has a lot of different ways to grade the course because he wants to find out which is the best way to learn. He wants the students to constantly be engaged in the course itself. He's just structured the course really well, I would say. You know where you are, you know how you can do better, you know what's going to come later on in the syllabus. I would say that's what makes him a defining professor. He's willing to wait to clarify the concepts, make sure everybody understands what's going on before moving on.

In addition to discussing the professors they encountered at UMTC, several interview subjects also brought up the experiences that they had with UMTC teaching assistants (TAs). Students talked about using TA assistance in very specific ways to answer questions regarding course content, to review completed homework for accuracy, and for help in managing their progress in a course:

> The professor would give the TAs probably a task to do every week. They will carry in the class and they will help you and you have like a major project and you will always keep track with your TA. He will make sure that you do everything and you submit it on time. That's what we do. I feel that's very useful. It's very nice kind of system.

TA, they are like PhD student and they attended the class together with you so they are much better than the tutor in tutoring center because they know exactly what the professor talking about in each PowerPoint. So I go to the TA's office hour a lot, just to ask them to clarify what I don't understand.

Every time I go to see the TA I've done most of the questions, I solved the problem, but then I'm not sure if it meets the safety requirements, so I'll ask ... because we have a code to follow and it's like, "Does it follow the thing? What I'm doing, is it right?" If it's not, I will ask why, like, "Why can't I do this way? Why?" He will explain why you can't do this and it's like "Okay". It helps a lot.

Among the interview subjects, there was a range of familiarity with TAs given the students' majors and academic programs. Students in psychology, economics, and the STEM fields, all of whom described having several large lectures as part of their academic program structure, were more likely to have had more than one TA during their program. A male student studying economics in the College of Liberal Arts estimated that he had taken eight to nine courses in the Economics department and had only taken one course taught by a professor; TAs taught the rest of his departmental courses. Below, the student articulates the benefits and the drawbacks to that balance of teaching:

What's good about that is that they're students themselves. I feel like they understand us. They can relate to us a bit more. They're more approachable because they're young and you can talk to them less formal. On the other hand, you don't get the access to professors that you could really use. You could get a professor recommendation, or something like that, by connecting with a professor, or gaining experience. You could ask him about his research, etc, etc. or work with him or her. That's been the other side of it. I wish I had a few more professors in Econ.

Another student spoke to the challenge of having an international student comment on her writing, given that the TA was not a native English speaker, either:

If I want to sit down with a TA to discuss my paper thoroughly, just a three pages or four pages lab report, that may cost more than an hour. [It can be helpful], but if my TA is also an international students that has some of the same problems [I do with writing]. If it is a native TA that's quite helpful.

Overwhelmingly, the interview participants expressed a preference for in-person modes of communication with professors and TAs, particularly when they needed a problem addressed or a question answered. The term "office hours" was raised in the qualitative interviews more than 100 times. For a variety of reasons, students voiced a preference for seeing their professors in this venue; those reasons included opportunities to get to know their professors better and feeling more comfortable asking questions one-on-one (particularly at the beginning of their programs). As upper-division students, the interviewees also raised office hours as an opportunity to build relationships to obtain letters of recommendation and references.

In keeping with previous findings presented regarding professional preparation and the high value students placed on internships and career resources, the theme of the "letter of recommendation" for internships, jobs, and graduate programs was raised repeatedly. Students recognized the importance of the letter for their future plans, but voiced that it was sometimes difficult to make relationships with instructors in order to obtain a letter that was sufficiently detailed.

In addition to the use of office hours, interview participants were asked about their preferences for communicating with instructors. Approximately half of the students acknowledged that at an institution the size of UMTC it would be impossible for instructors to initiate contact with all of their students. The other half asserted that faculty should at least encourage students to visit office hours or should reach out, especially to new students, if they see an opportunity for improvement. Most acknowledged that while email communication can be effective, there is a limit to what can be discussed via email and that their professors and TAs receive a high volume of

messages. There was a divide among students regarding who should initiate

communication.

Much of the student feedback regarding professors and teaching assistants

pertained to the ways in which instructors create a classroom climate that students

perceive to be conducive to participation. A female student from Latin America shared

her feelings of uncertainty regarding class participation and how it reflects on the

professor's perception of her as a student:

> There's a lot of times where I know I'm engaged and I feel I'm learning a lot.
> And I'm in the class, but I'm not someone who is going to be giving, talking a lot
> to the class or responding to it. If the professors ask a question, I'm not the first
> one who is going to respond, but that doesn't mean I don't know the answer or
> I'm not involved. Sometimes, I just step back and think, "I wonder what this
> professor thinks, like, I don't know what's going on? Or that I'm not involved?"

The data in this section were coded differently than the data regarding student-

driven participation, which appeared in the section on individual factors influencing

academic engagement. This distinction emerged from the data and aligns with the

conceptualizations of engagement that integrate student-driven and institution-driven

elements. Specific encouragement to participate, whether by a structure of participation

points or verbally by the instructor, was highlighted across several interviews as helpful:

> [Give] opportunities to international students to answer in class, to respond in
> class. I noticed that here the students, especially American students, the students
> here, they would always, have, a response and something to answer or something
> that's asked in class, right? So I would say that the instructor should give more
> opportunities for international students to answer in class.
> I do like the design of Carlson course. There's a participation point, and you
> always notice a lot of international students, they're not willing to engage or
> speak. I hope the professor would reminded them to speak up or encourage them
> to come to office hours so that … especially for those incoming, not incoming,
> like freshman international student, the professor will have a better idea whether
> they really understand this class.

In the beginning of that class, I wasn't that active in participation, but when I first raised my hand and share my opinion, she was very glad to hear that. She expressed all of the supportive words like, "Oh, I really didn't know that. Could you share a little more?" After the class even she talked to me personally, "Oh, I'm so glad that you shared that experience. It was very helpful to show multicultural perspective," or something like that. She encourages me a lot about participation. That's another reason why I was able to participate more.

Towards the middle of the semester, I remember the professor telling me, "I feel I want to hear your voice more, because I like your papers and I'm quoting them in class or telling people that you do well, but it would be beneficial for the other people if you'd talk in class."

Participation is very important in that class and since [the professor] knew there were some international students, he mentioned that the participation doesn't mean you always have to raise your hand and speak it out. It also includes sending me email about my question or sending me some recommendations to show in class or link or suggestion of books, something like that, they could be also a part of participation.

Students in the interview population were very specific about the ways in which

professors received and reacted to questions. The following examples regard students'

impressions of the degree of openness instructors convey when fielding student inquiries,

requests or clarifications:

> For the current, the [course title redacted] class professor, even if I have a question, I'm even afraid to send her email about asking question because she said, "Guys, this is so easy." That means if I ask this question that could be a stupid question, too. So if even sending email is scary, then who would visit her office during office hour?

> Because some of us, we don't really confident in asking questions. Sometimes we'll think, "Oh, is that even appropriate questions?" I'm thinking giving the support it really builds confidence, like, 'Oh, okay." Maybe, giving attention and stuff it's like, "The professor noticed me," and it's like, "The instructor really cares."

> If someone asks a question, that already takes a lot of courage… so don't act like a question is stupid or don't assume that everyone should know some things. I'm sure that if we were in my country and I said and I use some slang, I use something, they wouldn't know what I was talking about. Just keep in mind, some people just got to this country.

I think it was kind of big classroom and I was sitting right in the front line, very front line, and I was very close sit to the professor. I said something and maybe he didn't hear me. He asked me again but his facial expressions he was like, "What? What did you say?" [furrows her brow] Rather than, "Oh, can you tell me again?" [demonstrates open face]. I was afraid if he is having that facial expression because he doesn't want to listen to me, or he just didn't hear me. They're minor things makes me this seems to be not open to me or something.

One student in particular highlighted that an instructor's response to a question or comment from an international student may influence the way that others perceive them in the classroom:

Just to realize how the way you respond to an international student affect how everyone else will. I have had teachers who if someone, like if I have a classmate who said something and it's really hard for them to pronounce it, if the professor's just making a weird face or kind of like ignoring it, then that's how the rest of the class is going to respond to it. Just to really realize and acknowledge how much influence they have for the rest of the class.

The frequency and depth with which these comments emerged in the interviews are in keeping with other findings regarding the relational aspect of academic engagement in the open-ended survey questions and the key questions regarding academic engagement in the interview protocol. The following section draws upon some of these relational and inclusion themes, as well as others that emerged from the interviews, to address the cultural aspects of students' experiences in UMTC classrooms and their academic engagement.

Instructional factor: Cultural dimensions of learning.

Given that the population of interest is international undergraduate students, the quantitative survey and the qualitative interviews both included questions regarding students' cultural experiences in the classroom and on campus. Rubin and Rubin (2012) assert that it is difficult for researchers to ask directly about culture and suggest instead that interviewers "ask about ordinary events and deduce the underlying rules or

definitions from these descriptions, paying particular attention to the ways words are used

and to the stories that convey cultural assumptions" (p. 20). Questions, therefore,

focused on:

> The role of cultural knowledge in the classroom
> Inclusion of course materials from different cultural perspectives and origins
> Integration of content related to other countries, cultures, and global problems
> Opportunities for students and instructors to share their own cultural knowledge
> and backgrounds

The University of Minnesota-Twin Cities has stated that part of its educational

mission is "to graduate lifelong learners, leaders, and global citizens" (University of

Minnesota Office of Undergraduate Education, 2013, para. 1), so the integration of these

elements carries potential learning outcomes for all students, not only international

students. The following sections address the emergent themes from the student

interviews regarding culture in the classroom and the international student experience on

campus.

The role of cultural knowledge in learning was highlighted by several students,

particularly in instances where a lack of shared culture and shared academic culture was

perceived as a divide between domestic students and instructors and international

students.

The following quotes typify the examples students provided:

> I know some professors like to talk about jokes or humors or reference some
> famous person or books that everybody read about in the U.S. and everybody
> started to laugh or they started to get it, but we don't because we don't know the
> person, we never read the book.

> In the US, there's a lot of mnemonics in math and sciences. I remember when I
> first started, I remember my freshman or sophomore year, this professor was like,
> "Remember the way you're going to do is PEMDAS. Please excuse my dear Ann
> Sally." I was like, "What the heck are they talking about? I don't know that."
> [laughing] Then I looked it up and it was, "Oh, parentheses, exponent,

multiplication, you know… Academically, most of the time, I feel… like I can do it, I have the grades, but then there's those little things that I don't know what they mean.

[In China] we use different letters in the formulas. When I first get into this major, I don't understand what the professor's teaching because I don't know what those letters represent; it's a cultural difference. …Yeah. I don't understand what's going on in the lecture at first. I will need to spend more time afterwards. When I get to know what we are learning, I can figure out the difference.

If we're in a history class they talk about, "Oh, back in this year when this happened," and they expect us to know. I think that's good, because I'm in college in the U.S., so I think it's okay for them to expect that, but I didn't follow the news or politics like in 2009 when I was living [at home]. They will quote people that everyone knows. A big one is people and stories and politics that I'm not familiar with and that sometime affects.

Echoing this last student comment, a little more than half of the students in the

qualitative interviews acknowledged that the integration of U.S.-specific knowledge is to

be expected given the context and that information shared in class can be beneficial for

learning about U.S. culture. One upper-division student stated, "I get it. I don't have to

[have] explained everything explicitly for international student. After two years you

should get over it." But there was also agreement that frequent use of these culturally-

bound examples without further explanation or outreach was difficult, particularly when

students are in their first years at UMTC. Advice to instructors included:

Maybe explain it a little bit or maybe not joking about it every time, because one or two times, it's okay, we don't get it, it's fine, but if you're talking about all the time, then we don't really understand and we started to feel like we are not understanding the course material because you are talking about it all the time. It's going to have to be something related to the course and we are not getting it.

I have not so much to say about my current courses, but I do want to say those who will teach freshmen that could provide more individual interaction in an accessible way to international student, because we are in a transition between their home country academic life to US academic life. There are a lot of things that we take time to put in the right track. Like some terminology, and some … I don't know… it appears for instructor to see something is natural for domestic

student and something is not natural for international student. But if they can see I hope they can tell us, right away.

One seemingly simple theme kept emerging across the qualitative interviews and was coded in about one-third of the interviews: recognition and pronunciation of student names. The following quotes are characteristic of the importance that students placed on instructors' willingness to call international students by name:

> The professor that remembered names is always a great professor no matter what he might do otherwise, because that gives the student the sense of, like, this professor knows you. Is this professor, when you're missing class, will know that you're missed in class, and I think this is one of the best characteristics a professor can have. …Like, three or four letters in my name are not even in the English alphabet, so, I get that. I never make them do my last name, it's very long, it's fourteen, fifteen letters. But my first name is six letters. It can be pronounced in English so I'm okay with that. I really find it nice when a professor can say the same or even…just tries. I don't feel offended when he makes the mistake because I know it's not easy to have the name.

> But if they really just take the time to, say, "I'm going to really try to get their name," not just going to be like, "Oh, I don't know what your name is" or "I'm going to make an effort to pronounce your name," then that's what the rest of the class is going to do. I have a friend whose name is Xian Xien [*pseudonym*]. The instructor was like, "I feel weird calling you that. Is it Xian Xien … what?" I was like, "That's his name." Xian Xien is probably a different name that I had never heard of, …but for an instructor to say that, I think that, that totally just changes the dynamics of how the class would respond. But if a professor asks with confidence, "Xian Xien, what is your response?", if they are just confident pronouncing his name or really listen or hear questions and give the same response that they would to anyone else, even if it sounds [wrong], then that will influence the rest of the class too.

With a few examples to the contrary, the interview subjects highlighted that often the curriculum they encounter is bound by U.S.-centric information and examples at deeper levels than jokes, symbols, or acronyms. Many students felt that the integration of international and global content, literature, and perspectives would provide more opportunities for international students to participate in class:

Providing more worldwide examples, not just American cultural things so that they can make the students interested about the subject [would be helpful]. … It rarely happened, just once a semester maybe.

Give more opportunity to international students as supposed by ... Let's say, by incorporating issues, international issues… by giving, opportunities to international students to answer in class, to respond in class.

In psychology, you can always tie that with finding from a research from different country. It's going to give, like, other global perspective rather than just studying those conducted in the US. It's getting a little bit mainstream, something different.

Maybe professors also study about other countries' cultures a little bit? I mean, like relevant to that subject. If they're teaching the advertising strategy, if they study other countries' advertising strategies a little bit, they study themselves and then make the examples about them, maybe it will be helpful to the international students.

Students had different perceptions around the types of courses that "could" or "should" include international content.   A male mathematics major from China asserted that mathematics is universal, without any opportunities for internationalizing a math course. A female Malaysian student indicated the same universal nature of psychology theories, countered by a female psychology major from China who said that her courses cross-cultural psychology were some of the most interesting parts of her degree program. A female Chinese student studying in the Carlson School of Management said that topics like accounting, which are often tied to licensure, are more culture-specific, but courses such as management or IT could include more comparative examples and international case studies. A male student from the Middle East/North African region indicated an interest in international content, but said that in the age of the Internet that content can be accessed on a need-to-know-basis.

Beyond course content, several students highlighted interactions or experiences with professors that suggested to the students that the instructors lacked interest or

knowledge to effectively integrate international students and international learning into

courses:

> I really think they kind of need to recognize that this community is really, really diverse. It is great, I mean, like their priority job is actually teaching students, so it is good that they are good at teaching. But sometimes, they do not really consider who they are teaching, not only American-born students. A lot of students are from, I mean, like abroad and even all different parts of the world, Asia, Europe, Africa, like all over the world.

> They firstly have to really know about [what they teach]. Either you have been there or you have did some research online rather than, "Oh, I read this news," "I heard from some people that this happens in your country," because there are a lot of weird news about China that I personally know. People are talking about it and some teachers, say, have never been there, they don't know what's going on. They just read a random article and they talk about it. That's misleading.

> I remember the first day of class, he would say that, "Oh, in this class we're going to talk about real political issues," blah-blah-blah. He didn't specify whether it was national or international. I felt uncomfortable. So, what I did after class was that I went up to him and I asked him, "Are you going to mainly talk about national issues and books and literature sources based on the American context?" He was, "Yeah, but…" He claimed that he's aware of the existence of BBC and Al Jazeera all the other news sources, but he wasn't very certain, you know? He didn't give that certain answer. I was, "Oh, okay." I felt uncomfortable after that. I ended up dropping the class because I found out that I could. I took another class last semester, the same class, and it was much better.
> Some professors, when they're talking, they say like, "The Third World countries," or they talk about Mexico, like "the poor countries". In that way, that is really embarrassing to talk about it.

> It is really important then to teach well but I think that they kind of have more interest with kind of the culture; not really, really deep culture but just very, very like a simple thing. How the students might consider if they do this in this country or Asian culture, the African culture. Yeah, so I do wish that they have that interest, learning about those. [pause] Then, that will make, not like everyone but…, feel better about the communication with like the students and the instructor.

Other anecdotal evidence, sometimes shared by the same interviewees who had

shared negative experiences, highlighted positive interactions with instructors and

domestic peers, as well as internationalized content and pedagogy they had encountered

in UMTC classrooms:

I have a professor who said, "In this class, you should really look at people around you and think about engaging with as many people as you can because you might meet people from far away lands or with parents in positions in companies there who might be able to help you one day." He really stressed the need to network in your class, and within your class with different students with different backgrounds.

It's nice to listen because in that class, it was an intercultural communication class so we have students from different countries and at the same time we had American students in class and we could listen from their perspective of things and our perspective of things too, and it was cool.

That professor actually really gave two different formulas. This is what we'll be taught in Oriental countries, and this is what we learn here. So, that is really helpful for us. To connect what we are learning now to in the previous education.

I'm taking a PoliSci class this semester and basically it was citizenship in the United States and democracy. The class is mostly based on the United States. However, when I went to the professor and said I would like to do my project basing it out of [my home country]. She was forthcoming, she said just write the proposal and I will look at it. And when she looked at it, she said, "You can go ahead and do that". So even though sometimes the courses might not be global, however, the professors would make them easier for you to do, so.

I pretty love the courses that I've taken so far. Since I'm a junior, I had to take a lot of courses from my major, which is Sociology. I pretty like the instructors. They are generous and they are nice. They are nice to the international students, which is really, really great --maybe because they are Sociology people and they know about like they study about diversity, which is very fine [laughs]. They helped me a lot and they were really supportive.

International students in the interviews frequently brought forward examples of international professors who had reached out to them and provided specific guidance as they transitioned to study in the United States. Only four students had examples of U.S. American professors reaching out to them for the same reason. One of these students was also aware of a professor in the Carlson School of Management who held a course meeting for international students to assess needs and offer help and resources, but he had not attended the meeting because he became aware of it as a fourth semester sophomore, not as a first-year student.

When asked follow-up questions regarding how to improve communications between international students and non-international faculty, students were fairly evenly divided regarding who should take ownership of making effort and creating better rapport. Some student interviewees said that students themselves, as international students studying in the United States, should be willing – or should at least expect – that responsibility lies with the student:

> I feel that even the international students, they place a huge role on themself. They have to approach other people and not just the professor. It has to be a two-way communication. The responsibility lies in the student as well, because the professor cannot make sure that you understand all the time. You have to voice out you opinions as well.

> Since my first year at the U, I have had a number of situations that I feel disrespected or I feel judged. I sometimes feel this is not equal, like that -- unfair, something like that. That always happen and it takes time to be changed. The thing I can do is try to be more open-minded than them. I don't know. Even if they have prejudice or something in their mind, if I try to be as nice as possible and if I try to show them I'm trying my best then they someday open their mind too. I think even if they feel uncomfortable and feel… [pause]… they don't like me, something like that, I think international students need to reach them more and be more open-minded than them.

> There's definitely a lot of opportunities over here but for international students, frankly speaking, I feel like the instructor is not going to do anything. It's always been and it's always going to be like the international students are going to have to take the initiative.

Others felt that the burden fell on faculty:

> Try to understand him, how he studies, how he approaches things. Really try to get his interest in the class in a way that it suits his personality or his way of approaching things. If you can't get him interested in a class, he won't study well. That's pretty much common sense to me.

> I'm not saying to give them a special offer because they are international students, but maybe it's because of this they are having a problem in this course. Maybe try to rethink them over, like, how it is and just ask them like their personal life too, not only the academic habits they are doing but also their individual lives.

I think the teacher has to make sure the student participate. In some classes, they don't really care whether you participate or not.

I hope the professor would reminded them to speak up or encourage them to come to office hours so that … especially for those incoming, not incoming, like freshman international student, the professor will have a better idea whether they really understand this class.

I feel like it's very important for the professor to get a feeling for how the students are doing in the lecture, just if they're following. You can kind of tell from the crowd if they're engaged or not.

In the interviews, students were specifically asked, "If you could give advice to a UMTC instructor who wants to do a better job teaching international students, what would you say?" In response to this, many students spoke about having empathy for international students and trying to understand the international student transition:

> I would like the instructor to empathize with the international students knowing that they're coming from different backgrounds. A lot of them might not have very good language skills, which doesn't mean that they're not smart. On the contrary, they must be really brave because jumping into a completely new environment knowing that their English, the means of communication over here, are not perfect and they might get mistaken a lot. They might tend to feel really alienated. Basically just ask them questions personally. Make sure that they're understanding everything. Just in general to the entire lecture hall, offer an environment which is conducive to learning, not strictly focused on completing the syllabus. Not divorced from the students. Making students engaged in the part of the learning is very important. That would benefit international students as a whole.

> My advice would be take the perspective as the international student or why you are visiting another country, like the foreigner's mind, to have the conversation with them and understand more about what their challenging are. If it's necessary, you can you can also talk to them more and do more connections to understand more.

> I'm not asking them to treat international students to the non-international students differently, but I do believe that there are a lot more things going on with the international students personally as an international student, like family issues, more of financial problems or even just the habit of their studying, from this country to United States. I strongly believe that there are different studies affecting their level of success in the academic ways.

One student replied to the question about instructors in the following way:

> Maybe think of them as a person who does not know anything about this course. I'm not saying to give them a special offer because they are international students, but maybe it's because of this they are having a problem in this course. Maybe try to rethink them over, like, how it is and just ask them like their personal life too, not only the academic habits they are doing but also their individual lives.

When asked the follow-up question "Have you had any faculty members who have done that for you?" the student paused, and then said, "Umm…no."

This is the last qualitative finding presented in Chapter Four. The following and final section of this chapter is a comparison of the descriptive statistics and the qualitative findings.

Synthesis of Data Streams

Given the focus of the quantitative survey data on the first-year student experience and the interviews with upper-division international undergraduate students, the two data streams cannot be merged in a traditional mixed-methods approach wherein the survey uncovers trends across a broad population and the qualitative methods are used to understand more deeply the same phenomena. In this case the survey data instead provide a snapshot of the perceived "starting point" of their first-year experiences at UMTC as reported by upper-division international undergraduate survey respondents The interviews fill in key information regarding academic engagement over time and, specifically, the ways in which those particular 20 students developed and enacted their academic engagement as University of Minnesota students. The transferability of these findings is discussed in further detail in Chapter Five.

This data analysis approach aligns with some of the fundamental assumptions underlying the scholarship and research on student engagement and academic engagement, which are largely rooted in constructivist student development theories that assume potential effect of time spent in an educational environment (Pascarella & Terenzini, 2005; Upcraft, Gardner & Barefoot, 2005). This assumption of student development is used, therefore, as a lens to examine the quantitative survey data and the qualitative interview data. Using this lens constitutes an attempt to provide a broad retrospective look at the first-year experience and compare that data to upper division students' current reflections on where they have been and where they are now in terms of their academic engagement at UMTC. The synthesis of these data streams thus employs a developmental approach to tie together the two methods of data collection used in the study.

Three themes cut across the data for all three research questions: Relational aspects of academic engagement, course-based factors for academic engagement, and cultural factors for academic engagement. The quantitative items selected for inclusion in the descriptive statistics section of Chapter Four were chosen to align with these themes, as well[14].

Qualitative data strongly suggest that the international students in the study place high value on the relational aspects of their UMTC experience, particularly in the forms of their academic peer networks and their relationships with professors and teaching assistants. This was a theme that cut across the findings for all three research questions.

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[14] The full set of descriptive statistics for all questions from the student survey appear in Appendix H.

Yet the quantitative survey data regarding students' interactions in the first year of study at UMTC show only a moderate amount of interaction with peers and instructors. Survey respondents also reported limited feelings of classroom inclusion during their first year of study, as measured through survey items related to students' perceptions of whether or not their input was valued, whether they were encouraged to share opinions in class, and their feelings of being welcomed into the classroom. The two items with the lowest means in the classroom inclusion question are "My professors knew my name" and "My professors reached out to me as an international student to make sure I was doing okay in the class".

There are several possible explanations of what is occurring in the quantitative data. Dillman, Smyth, and Christian (2009) outline some of the possibilities: Students could be susceptible to retrospective bias in which they answer questions in ways they think they experienced these relationships rather than the way that the experiences actually occurred. Students could be incorrectly remembering things or may have forgotten some information. Students could have answered the questions in ways that they thought the researcher wanted them to answer for social desirability. Students could have been unsure about the question or the answer that best matched their intended response and thus selected an item close to the center of the scaled options. Given what students reported in the qualitative interviews, however, there is also a possibility that students did indeed have only moderate levels of interactions with peers and instructors during their first year of study.

Data from the qualitative interviews do suggest that while students placed a high degree of importance on the peer and instructional relationships during their years of

study at UMTC, the relationships took time to develop. Students reported having specific

feelings of uncertainty in their first years about making friends within their academic

programs and indicated the importance of co-curricular involvement and declaring a

major in establishing those meaningful and helpful relationships with peers. The value

that students in the qualitative interviews placed on instructional relationships, those with

professors and teaching assistants, was significant both for short-term returns and, as

upper-division students, for longer-term returns such as recommendations for internships

and future careers. Similar to the development of peer networks, students reported

developing these relationships over time through the use of office hours, establishing

rapport in class through participation and strong course-based performance, and through

activities such as research. Many interviewees described having an "ah ha" moment

regarding the need for a closer relationship with instructors for improved academic

performance or for future gain; a realization that they reported having much later than

their first year or two at UMTC.

It is also possible that the quantitative finding regarding lower feelings of

classroom inclusion in the first year of study is accurate. Several student interviewees

reported specific examples of difficult interactions with instructors, with feelings of

exclusion, and limited opportunities to share cultural knowledge in the classroom. It also

bears mention that all but one of the student interviewees addressed the amount of time

that it took to understand the expectations around classroom participation and to develop

the skills to engage in class. Approximately half of the students reported having

significant difficulties with studying full-time in English and slightly less than half

reported having a difficult transition to studying at UMTC. Although students may have

felt isolated from their classmates for these reasons, and in fact reported that connection in some cases, key relationships emerged as a support factor in addressing these challenges. Several interviewees provided specific examples of professors, teaching assistants, advisors, and peers who had helped them to better understand classroom expectations and norms, to develop their English language skills, and to navigate university systems and support resources through outreach, feedback, and individual interaction.

The second major theme that cut across the research questions and both data streams was course-based factors for academic engagement. These included students' academic behaviors and learning strategies, as well as the instructional design that faculty employed to create learning environments for optimal student learning and engagement outcomes.

The primary quantitative evidence was students' self-reported in-class academic behaviors and self-reported out-of-class behaviors during first-year of study at UMTC. Collectively, the data for these items show that students were far more likely to engage in passive learning behaviors (e.g., taking notes by hand or completing assigned readings) or structured ones (e.g., participating in in-class small group discussions) versus more self-directed forms of engagement, such as asking a question in class or completing suggested readings for a course.

Again, there are possible limitations for the quantitative data, but the data from the qualitative interviews also suggest an over-time effect in the ways that students developed awareness of the classroom differences in U.S. higher education and evaluated and employed effective strategies to learn better and to be more engaged in their classes.

In-class participation emerged repeatedly related to academic behavior, with more than half of the students in the interviews reporting that participation was, at first, an unfamiliar aspect of classroom learning. Means by which students learned to participate included watching other students in class, receiving feedback from instructors, and recognizing the optimal conditions for participating. The upper-division student interviewees, by and large, voiced a value for in-class participation in terms of their learning, interest in their courses, connection with their peers, and feelings of belonging in U.S. higher education classrooms.

The third theme relates to cultural factors that influence academic engagement. Given the range of national and regional backgrounds of the survey respondents and, subsequently, the interview subjects, there were a number of educational traditions represented in the study.   In quantitative survey data, however, respondents reported encountering an equally culturally-bound education upon arrival at UMTC. Although students reported being slightly more likely to be asked to incorporate their own experiences in class, they reported fewer opportunities for international, global, and cultural learning on items such as reading sources from non-U.S. authors or about intenational or global topics, to work on global or international case studies or to explore the intercultural dimensions of the topics that they were learning in a course. In the qualitative interviews the majority of students described a curriculum that was only partially internationalized and only moderately and disparately inclusive of international, global, and intercultural dimensions of learning.

The interviews allowed for further exploration of cultural factors with follow-up questions and probes regarding students' perceptions of the impact of their time at

UMTC. All of the student interviewees, for example, reported having definitions of academic engagement that changed considerably over time, commensurate with their shifting definitions of a "good" student in their home country to their new context at UMTC. When asked about the keys to their academic success at UMTC, students described high-level adaptations to the active learning environment, unfamiliar to most before arrival, and a newfound value placed on practical and hands-on learning for all 20 interviewees. These personal shifts were coupled with observations from many participants about the ways that international students were successfully and not-so-successfully integrated into their academic programs and campus community, coupled with suggestions of what both first-year students and UMTC faculty can do as international students go through that academic transition.

All of these themes are revisited in Chapter Five, in which the implications of these findings are presented as they relate to the study's theoretical framework and, more broadly, for the field of international education.

Summary

The findings in this chapter are presented to showcase the factors identified by upper-division undergraduate international students as impactful to their academic engagement at UMTC and to explore at a deeper level the ways in which the factors influenced their academic engagement. This chapter included findings regarding students' definitions of academic engagement and the individual and institutional factors influencing their academic engagement at UMTC, as well as the supports and barriers for academic engagement perceived by upper-division undergraduate international students.

Quantitative and qualitative evidence were presented to support key findings regarding students' relationships with faculty, peers, and University staff; participatory learning in active learning settings; and, the ways in which the cultural backgrounds of students play a role in student learning.

Chapter Five begins with an exploration of the relationship between the study findings and the study's theoretical framework, Bourdieu's (1986) forms of capital. Analysis and evidence are provided to align with Bourdieu's theory as related to the types of capital that upper-division students in the study report developing and exchanging as UMTC students, as well as the barriers they perceive to capital development and exchange. The final chapter of the dissertation concludes with implications of these findings for the fields of higher education and international education and, given the context of the study, leadership and instructional staff at the University of Minnesota-Twin Cities. Study limitations and directions for future research are also included in the dissertation's final chapter.

CHAPTER FIVE: IMPLICATIONS FOR THEORY, POLICY AND PRACTICE

Introduction

The focus of this study is the factors influencing the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities (UMTC). Previous chapters provided background information for the topic, a review of the relevant literature, an outline of the study methods and study findings. The key findings from the data analysis are revisited in the current chapter, with special attention to implications for theory. This alignment of the findings with Bourdieu's (1986) forms of capital theory is followed by sections regarding directions for future research and the limitations of the study. The chapter concludes with a section on implications for policy and practice within higher education and summary remarks.

Discussion of Findings and Implications for Theory

As introduced in Chapter One, the theoretical framework employed in the study is Pierre Bourdieu's (1986) forms of capital. Within the framework, specific emphasis was placed on the ways that students develop and exchange forms of capital in the context of their studies at UMTC and the relationship of capital development and exchange to the construct of academic engagement. The following paragraphs provide a brief review of the theoretical framework and are followed by integration of key findings from the study.

Bourdieu (1986) organizes the forms of capital into broad categories of *economic* and *human capital* (money and assets), *social capital* (relationships, group membership), and *cultural capital* (knowledge and experience). Each form of capital is of intrinsic equal value to the others and may be exchanged for other types of capital; individuals

who maximize all types of capital are more likely to experience success (Bourdieu, 1986).

Bourdieu (1986) theorizes that society is composed of diverse "fields" in which capital may be used. These fields may be academic, religious, national, or representative of other affiliations, and they are constantly changing and evolving. In a given field, capital is used to gain power and influence, which may also give rise to conflict and competition as individuals attempt gain and trade capital resources.

Bourdieu (1986) argues that altering the distribution of capital within a field changes the field itself. He defines this organic, inevitable change the "habitus". Habitus is the internalized knowledge of a lifetime's worth of external messages and instruction. Habitus is the catalyst for thoughts and actions, which results in continued creation of the external world. Habitus structures society, but society also structures the habitus; the habitus may guide, shape, and constrain our thoughts and actions but it doesn't *determine* our thoughts and actions (Bourdieu, 1986).

Bourdieu (1986) asserts that when habitus and field are aligned, individuals react instantaneously and with ease. This alignment is what Bourdieu (1986) calls "cohesion without concept". Cohesion without concept speaks to the level to which an individual is ingrained in a group. It represents adhesion to a value system in a way that lacks self-awareness or contextual analysis; it is "how we do things around here" (Fullan & Hargreaves, 1996, p. 37). Yet when habitus and field aren't aligned, individuals have to navigate an unfamiliar field governed by unknown "rules". The interactions between the forms of capital, fields, and habitus culminate in the potential for what Bourdieu (1986) calls *symbolic violence*. Symbolic violence is not physical violence, but rather the

unconscious exertion of cultural domination (Bourdieu, 1986). According to Bourdieu

(1986), the inequality and injustice of symbolic violence are often invisible, even to the

groups who are being marginalized. Throughout the dissertation, the following figure

(Figure 3) has provided a visual representation of the theoretical framework as it relates

to the context of the study:

Figure 3 Academic Engagement and Bourdieu's (1986) Forms of Capital
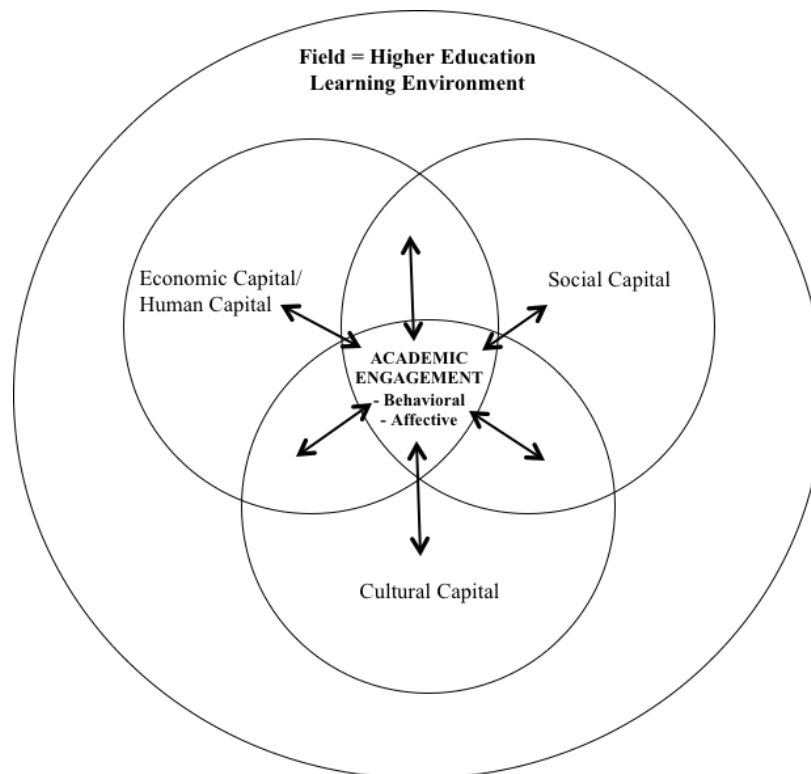
For the purposes of this study, the "field" is the U.S. higher education

environment that international students enter when they elect to go to an institution such

as the University of Minnesota-Twin Cities. Although this field may vary in some

regards across institutional contexts and cultures, there is a defined *habitus* related to the

ways of thinking, interacting, advancing, and succeeding in a given field. Literature on

the active learning environment and the proliferation of what are considered to be "good"

practices in undergraduate education (e.g., Bonwell & Eison, 1991; Chickering & Gamson, 1987; Upcraft, Gardner & Barefoot, 2005) serve as evidence of a dominant paradigm or habitus within U.S. higher education.

Findings from the student interviews leave little doubt that encountering a new field and habitus constitutes a significant transition for newly arrived students. In addition to general cultural differences, students articulated specific differences in academic expectations, procedures, values and interactions compared to the habitus they had internalized in their fields of origin. Indeed, all of the interview subjects spoke of arriving at UMTC with a definition of a "good student" that was informed by their own national education system and all defined a "good student" significantly different ways nearing the end of their time at UMTC.

Not surprisingly, students who experienced a less difficult field-to-field transition had attended international schools, American schools or had previous intercultural experience that increased their awareness of the habitus of U.S. higher education and resulted in the development of tools and skills to better navigate that field. In short, they had cultural knowledge that they used effectively as exchange for social capital and increased cultural capital in the new field. Social capital was primarily generated with U.S. American peers and faculty; by knowing the norms of interaction, these individuals were able to leverage that knowledge and connect with others on terms common to the U.S. higher education field. Students without these background factors reported being more likely to experience a misalignment between habitus and field. Interview subjects raised numerous and specific examples of their encounters with "how we do things

around here" (Fullan & Hargreaves, 1996, p. 37) and their initial uncertainties regarding the resources, relationships, and the types of knowledge necessary to adapt.

According to Bourdieu's (1986) forms of capital, there is inherent potential for conflict upon transitioning fields, yet the differences in the fields themselves are not ultimately the problem. The literature on international student transition (Biggs, 2003; Leask, 2009; Mori, 2000; Zhang & Goodson, 2011) indicates that international students coming to the United States to study will almost certainly encounter cultural and educational "differences that make a difference" (Jehn, Northcraft & Neale, 1999, p. 3) as they enter their academic programs. Students in the interview sessions acknowledged this and even framed this as a motivation for seeking out an education in the United States. Equal to the number of students who said their primary motivation for attending UMTC was to increase their desirability on the job market were students who indicated intentional action to seek out diversity as part of their higher education experience. According to the students, the difference itself wasn't necessarily the problem.

It is rather an unyielding habitus, Bourdieu (1986) argues, that gives way to symbolic violence, or the unconscious exertion of cultural domination by one group onto another. Evidence of this was collected in student comments regarding rigid standards around writing, group work, instructor communication, and navigating UMTC systems without assistance or clarification of expectations or processes.

The following paragraphs highlight specific findings regarding the resources, relationships and types of knowledge that emerged from the student data, aligned respectively with Bourdieu's (1986) conceptualizations of *economic* and *human capital* (money and assets), *social capital* (relationships, group membership), and *cultural*

capital (knowledge and experience). Each section also includes examples of capital exchange or areas in which lack of capital or a specific barrier to developing or exchanging capital emerged from the interview data.

Economic and Human Capital

In the most basic terms, several interviewees acknowledged the economic investment of attending UMTC. Some students spoke to the benefits of working on-campus to have more financial flexibility and others talked about the pressure of large tuition payments for their families.

What was more common, however, was the framing of the educational experience in human capital terms. Students placed high value on the skills, competencies, attitudes and behaviors to perform labor and to produce economic value (per Shultz, 1961). Aligned with Shultz' (1961) conceptualization of human capital, many talked about the concrete benefits of attaining a college degree to better their own lives, their family's situation, or to contribute to society. Earning a higher salary in one's chosen career (more economic capital) was also cited as a motivator for doing well in school and getting a "good" job.

Professional preparedness was a primary and recurring theme in the interviews. This was true for students in a variety of majors, from a range of national backgrounds and across both self-reported genders. This trend is not entirely surprising given that the interview population was composed of upper-division students, yet the frequency with which this theme was coded warrants its mention in relation to these forms of capital.

Students in the interviews voiced the connections they saw between good academic performance and eventual job attainment. Beyond developing human capital in

the classroom, survey respondents and interviewees highlighted the benefits of co-curricular opportunities for practical learning (internships, research, and volunteer work) and leadership training as integral to the development of a strong résumé.

Social Capital

The most prevalent theme across the qualitative data streams was the importance that students placed on the relational aspects of engagement. In the open-ended survey question "How would you define the term 'academic engagement'?", more than two-thirds of the respondents highlighted relationships as a key component of academic engagement. In the second open-ended item, regarding the factors most influencing academic engagement during their first-year of study at UMTC, respondents again indicated that relationships were most impactful. Two groups were named specifically: fellow students and university instructors.

Student interviewees named international peers and, to a lesser degree, domestic students as significant sources of support in the contexts of specific courses and across their academic programs. In the case of domestic students, a small subset of the interviewees talked about the benefit of interacting with domestic students for the express purpose of increased cultural familiarity, illustrating an exchange of social capital for cultural capital.

In the qualitative data, the instructor/student relationship emerged as impactful in terms of students' classroom learning, feelings of inclusion, and excitement for learning. Interactions with instructors, and particularly professors, were described as highly culturally-bound. Interviewees reported the difficulties they encountered at the beginning of their studies at UMTC as they adjusted to the informality of some U.S. American

professors and differing expectations regarding classroom behavior, expectations for high achievement, and standards of academic integrity.

While the primary form of capital exchange among students was social for cultural capital, upper-division students in the process of finding internships and jobs talked about the difficulty of building sufficient social capital with instructors for achievement of goals such as obtaining a letter of recommendation or a professional connection. This barrier to exchanging social capital for increase human capital development was reported as problematic for many.

Cultural Capital

Two types of cultural capital were coded in the interview transcripts: Acquired cultural capital and existing cultural capital.   In terms of acquired cultural capital, students spoke to the usefulness of three distinct types of cultural knowledge: knowledge about U.S. culture in general, knowledge about the expectations regarding U.S. higher education, and most specifically, knowledge of the institution-specific culture of UMTC. Students who had studied at other universities or community colleges in the United States highlighted this last distinction in cultural knowledge more than any other group. Collectively, these types of knowledge aided students in better navigating systems at a large university, in meeting in-class expectations, developing stronger and more diverse peer networks, and meeting the challenges of cultural adjustment.   In short, the more field-specific knowledge students were able to build, the more familiarity and affiliation they felt with the institution, growing their cultural capital.

Students in the interviews voiced that intricate knowledge of educational systems at home (including how to excel academically and how to interact with faculty) were

rendered mostly useless upon entry into the U.S. higher education environment. The South Korean student quoted earlier in Chapter Four as saying "My English was so poor I could not even say 'I need to change my key,'" provides a good example of this. Many student interviewees voiced similar difficulties regarding a transfer of cultural capital to the new field. Many likened their experiences to feeling "childlike" with language abilities upon arrival or feeling "lost" on such a big campus.

The findings of this study suggest that the UMTC classroom environment represents a missed opportunity for students to share existing cultural capital. Interview subjects reported having limited chances to share knowledge from their own national backgrounds, cultural experiences, or personal histories with fellow students or with instructors. When asked for advice for UMTC professors who want to more effectively teach international students, many interviewees highlighted these types of sharing as possible ways in increase international students' participation in class and feelings of inclusion on campus. Students who did have opportunities to work on activities such as international case studies, to read news and sources from and about other countries, to integrate multiple perspectives and to consider the intercultural dimensions of their chosen fields indicated positive impact on their academic engagement in these courses.

Although the study's quantitative data have significant limitations, they provide a starting point from which to examine the gains in academic engagement that the upper-division students reported in the qualitative interviews. Svanum and Bigatti (2009) frame the benefits of engagement as "students who earn a degree, do it faster, and do it better" in their article of the same name, speaking to the ways that academic engagement is a catalyst for significant learning and educational outcomes, such as degree attainment and

student satisfaction. Yet for students entering a new field and encountering an unfamiliar habitus, the promises of engagement may be elusive or delayed. Perhaps the most meaningful aspect of the implications for theory are not the apparent tight alignment between the themes that emerged from the study data and the forms of capital, but rather the framework and language that Bourdieu's (1986) forms of capital lend to explaining the areas for increased attention and intentionality within the field itself.

The following section addresses directions for future research, including additional possibilities for use of the data collected for the present study and also strategies for additional data collection regarding the academic engagement of undergraduate international students. Special attention is given in the latter set of recommendations for research approaches that could mitigate the limitations of the current study, as outlined in the section that follows.

Directions for Future Research

This study attempted to fill a gap in the existing research on the academic engagement of undergraduate international students studying in the context of U.S. higher education. Using an approach informed by exceptionally limited literature related to the study population and their experiences with the engagement construct, the study was designed to collect initial, context-specific findings to better understand the academic engagement of undergraduate international students at UMTC. Given how under-studied this phenomenon is, there are several directions for future research that would glean additional information regarding this topic.

The most logical direction for future research relates to the large-scale data sets from the NSSE and SERU surveys, which have largely gone untouched by researchers looking to study the student and academic engagement of undergraduate international students (Foot, 2009). Given the wide range of institution types that administer these instruments annually, there exists an extensive and rich aggregate data set regarding dimensions of student engagement, as well as data sets by institution type and for specific institutions, as measured by a validated instrument with large sample size. Although institutions may be utilizing NSSE or SERU data for their own purposes, an exceptionally limited number of published articles have emerged based upon analysis of these data. Given that the phenomenon of international students' co-curricular and curricular engagement is not yet well understood, this represents a significant opportunity.

One consideration related to utilizing the large NSSE and SERU data sets is that international student response rates tend to be significantly lower than those of their U.S. American peers (Zhao, Kuh & Carini, 2005). If information from these large-scale surveys is used for data-driven decision making related to curricular and co-curricular resources, investments, staffing, and institutional priorities, as Trowler (2010) suggests, an additional and pragmatic direction for additional research would be to identify the barriers and supports for students taking the NSSE and SERU surveys on their campuses. Data collected from a random sample of students would provide information from across the student population regarding the reasons for taking or ignoring the survey.

Further case study research would also constitute a meaningful contribution to the research on the topic of international undergraduate students' academic engagement.

These designs might utilize existing study data or a secondary study might be re-designed with different sampling and parameters. Both methods are described here.

Given the richness of the qualitative interviews conducted for this study, there exists the possibility of further data analysis aligned with the key study findings. Several interview participants provided personal accounts of the peer and instructor relationships that were influential to the development of their academic engagement, but additional analysis could be conducted for further exploration of the relational dimension of students' experiences at UMTC. Similar to the vignette of Ji-hye Kim (pseudonym) provided in Chapter Four, these detailed accounts are representative of the study themes, told in the "thick description" style advocated by the anthropologist Clifford Geertz to include personal experience in a given context (Geertz, 1973). This research approach would constitute what Yin (2013) would characterize as a multiple case study design. According to Yin (2013) "multiple case studies can be used to either, "(a) predict similar results (a literal replication) or (b) predicts contrasting results but for predictable reasons (a theoretical replication)" (p. 47). This methodology would also provide additional opportunities to explore correlations to Bourdieu's (1986) forms of capital and the explanatory power of the theory in greater depth.

A re-envisioned study design might also follow Patton's (1990) "extreme cases". Patton (1990) defines the use of "extreme cases" as the process of selecting or searching for highly unusual cases of the phenomenon of interest, cases that are considered outliers, or those cases that, on the surface, appear to be the "exception to the rule" that emerge from the analysis. Extreme cases are considered to be information rich (Creswell, 2014; Krueger & Casey, 2009), or those from which "one can learn a great deal about issues of

central importance to the research" (Patton, 1990, p. 169). In the proposed research approach, students who demonstrate exceptionally high or exceptionally low levels of engagement would serve as these "extreme cases". These extreme cases could be identified by qualitative criteria (leadership in student organizations or participation in a support program for students who are struggling academically) or could be selected based on a more quantitative measure, such as data from NSSE or SERU.

Finally, one of the most compelling research methods to understand the development of a construct over time is the use of a tracer study design. Developed by Dr. Pan Eng Fong, a Singaporean economist (Pan & Leong, 1976), a tracer study is an attempt by the researcher to follow and continue following up with research subjects over time. Long-term surveying and interviewing provides the opportunity for the researcher to understand the effect of an experience, such as higher education study, on an individual's life trajectory, career, and civic engagement over time. In this case, the tracer study design would provide the opportunity to track a small number of students throughout their academic careers at UMTC with scheduled "check points" along the way so that the researcher could understand the factors, in real time, influencing individuals' development of academic engagement.

Paige, Fry, Stallman, Jon and Josic (2009) set a precedent for using the retrospective tracer design in the context of international education with the Study Abroad For Global Engagement (SAGE). Following the SAGE study design, international student participants in the qualitative study could be contacted for follow-up data collection after graduation to enrich the data set collected while they are enrolled at UMTC to gather information regarding the post-graduate effects of their academic

engagement. Paige et al. (2009) make the case that while similar to the use of a longitudinal study design, the retrospective tracer study is more cost and time effective, especially given uncertainties regarding students' possible post-graduate whereabouts. Given the interview subjects' focus on their future careers and their concern with building the types of capital to be successful after graduation, this type of study may be viable from a participant recruitment standpoint.

The next section addresses the study limitations. The dissertation concludes with discussion of the implications of the findings for the field of higher education and brief summary remarks.

Limitations of the Study

The study's primary limitation is the sampling method. The survey was released population-wide, which likely resulted in selection bias among participants. Indeed, analysis of the survey data showed some variance, but not what a researcher would anticipate finding in a random sample. The participants for the qualitative interviews volunteered for participation, as well; while it could easily be argued by the range and depth of activities and types of engagement the interviewees described that they are truly "extreme cases" of engagement within the international student population at UMTC, they were not selected based on any metric or criteria beyond their own election.

As previously noted in Chapter Three related to errors in the survey administration and the subsequent redefinition of the survey population, it is likely that two types of survey error are present in the survey data: non-response bias and retrospection bias. Non-response bias may be a possible limitation given the lapse of

time; students may have opted to not complete items or to abandon the survey upon discovering that it focused on the first-year experience. Retrospection bias is related to students' inability to accurately remember their first year of study while still answering survey questions. It is also possible that other types of measurement error were introduced to the quantitative data given the misalignment of the survey focus and the revised study population.

These limitations raise doubts that the study findings are transferable across UMTC widely or beyond the UMTC context. Given the prevalence and congruence of themes across the backgrounds, genders, and academic units of enrollment of the interviewees in the study, however, this dissertation does provide initial evidence of factors influencing the academic engagement of undergraduate international students at UMTC. The study is, essentially, exploratory in nature. Its purpose was to identify factors influencing the academic engagement of upper-division undergraduate international students and not to test or validate those factors with a scaled measure.

As a case study, the findings from this case should also be considered in light of the large, research extensive institution at which the data was collected. Yin (2013) cautions against blind generalization of findings from one context to another. Although some of the study findings transcend the given environment (i.e., the usefulness of instructor feedback in developing skills for participation) many of the study's findings may be context-dependent.

Implications for Practice

According to Bourdieu's (1986) model, a given field is inherently malleable and holds potential for change; habitus structures society but society also structures the habitus. Per "the joint proposition" (Davis & Murrell, 1993, p. 5) of student and institutional efforts toward increased academic engagement, the following section addresses ways that UMTC might improve institutional conditions for international students to engage academically, to do it faster, and to do it better.

This study carries potential implications for practice at three institutional levels: strategic planning, classroom instruction and student support services. Findings from the study are most closely tied to these last two spheres of influence, yet recent shifts in the international student population on the UMTC campus and across the United States underscore the relevance of broader, more strategic planning to meet the academic needs of international students on campus.

The findings in this study, therefore, carry implications for campus internationalization and resource allocation as much as they do for the individuals who work with this student population in the classroom and across campus. These institutional implications are addressed first.

Strategic Planning

Mestenhauser (2002) once said, "There are disturbing signs that universities lack clear definitions of international education and have failed to internationalize it" (p. 165). Indeed, Leask (2009) argues that the mere presence of international students does not equate to an internationalization strategy. Without concentrated efforts to engage in broad activities such as integrating international students and internationalizing the

curriculum, universities stand to increase diversity on campus without actually accomplishing the goals of global learning for all students (Andrade & Evans, 2009; Harari, 1989; Leask, 2009).

Yet recruitment of international students is only one facet of an institutional comprehensive internationalization plan, which Hudzik (2011) argues must be "a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education" (p. 10). He furthers states that comprehensive internationalization "shapes institutional ethos and values and touches the entire higher education enterprise. It is essential that it be embraced by institutional leadership, governance, faculty, students, and all academic service and support units. It is an institutional imperative, not just a desirable possibility" (Hudzik, 2011, p. 10). In his review of institutional strategies for internationalization in the article *The American Case: The University of Minnesota*, Paige (2003) similarly highlights the strength of and necessity for a comprehensive internationalization in the context of UMTC.

The University of Minnesota's educational mission is to "recruit, educate, challenge, and graduate outstanding students who become highly motivated lifelong learners, leaders, and global citizens" (Regents of the University of Minnesota, 2011 para 1). While UMTC has celebrated significant successes related to education abroad participation and international student enrollment, strategic planning to improve the academic experience of the growing population of students may be required, if not only for the international students on campus but to enhance the global learning opportunities for all students.

The issue of undergraduate international student engagement is positioned at the intersection of multiple campus interests. At an institutional level, key collaborations between UMTC units such as the Global Programs and Strategy Alliance, the Office of Institutional Research, the Office of Undergraduate Education, International Student & Scholar Services, Office of Student Affairs, and the Center for Educational Innovation, provide platforms by which expertise, resources, and efforts can be shared.

The role of a chief international officer is key, not only for guiding these efforts but also for bringing interested stakeholders to the table. In an article for a NAFSA: Association of International Educators (2011) publication entitled *Internationalization: Where are We Going and Where Have We Been?*, academic governance scholar Matthew Hartley argues that leaders in internationalization efforts must be able to convene people and to create buy-in for the ideal, often at multiple levels of the institution. He is further quoted as saying "The first thing a leader has to do is engage others in creating a shared and compelling rationale for the ideal. In other words, people need a reason to get behind something. So to say it's really important for students to gain an understanding of other cultures and places, that's fine, but why, and why in this particular context? Those rationales have to be developed in the specific institutional context," (NAFSA, 2011, p. 5).

In recent years the University has committed significant resources to investigate student engagement within the undergraduate student population at UMTC. Based on findings in the SERU data, the campus has established and strengthened campus resources for student engagement. The university has leveraged resources, expertise, and effort toward this end and has, subsequently, seen increases on a number of the SERU

engagement measures in the time the instrument has been administered on campus (University of Minnesota Office of Institutional Research, 2015).

International student participation in the UMTC SERU remains low, however. Only n = 614 students (out of a valid n = 6,129 for that item) indicate that they were born outside of the United States. One direction for future research, as outlined previously in this chapter, is an effort to determine what barriers exist to broader international student participation in the SERU. A secondary institutional effort would be resources to further investigate some of the current SERU findings, including respondent's lower satisfaction with their academic experience, feelings of belonging and perceptions of campus climate for diversity and differing worldviews (Yu & Isensee, 2014).

The findings of this dissertation study also suggest that the needs of the undergraduate international student population are unique and that the engagement of this population may subject to factors that are slightly different than those influencing their domestic peers. Institutional decisions to increase student engagement efforts based on aggregate SERU data, therefore, may not be well matched to the international student population. Suggestions for more broadly understanding the academic engagement of undergraduate international students, in particular, are proposed in the section of this chapter entitled "Directions for Future Research".

The following two sections address more concretely the intersection of the study findings and the practical implications for the classroom and for student services on campus.

Classroom Instruction

The implications for the findings regarding classroom instruction are particularly strong given the study's focus on academic engagement. In the NAFSA (2011) publication *Internationalization: Where are We Going and Where Have We Been?*, Knight argues that faculty are the "most important engines of internationalization. They are the champions of internationalization in the teaching/learning process inside the classroom, in research labs, in community internships and in campus co-curricular activities" (p. 6), thus positioning faculty in a key role for helping international students in ways that may extend beyond traditional views of classroom teaching. Fink (2013) further reinforces that the work of teaching occurs beyond content delivery, asserting that ideal classroom learning includes dimensions of foundational knowledge, application, integration, human interaction, learning-how-to-learn, and caring, the latter of which represents students' investment in learning.

Key instructional factors for academic engagement were identified from the current study data and include teaching clarity and course organization; opportunities for hands-on and practical learning; support for group work; feedback; and, support for participation and inclusion. Although these themes emerge from a study population of undergraduate international students, these dimensions align more broadly with the types of good educational practice outlined by Bonwell and Eison (1991) and Chickering and Gamson (1987). Similarly, Carroll and Ryan (2005) advocate for universal course design that improves learning for all students and addresses barriers that exist for other groups beyond just international students.

Beyond universal design, there is a considerable body of literature regarding the challenges that international students face during their academic transition (Andrade 2006, 2010; Arkoudis, et al., 2010; Biggs, 2003); these publications provide recommendations and guidance for increasing awareness of and ways of responding to learning differences. Echoing the study findings, specific guidance includes attention to teaching clarity and pacing, increasing group participation through scaffolded learning opportunities (think-pair-share and small group interaction before large group discussion), and diversification of ways that students can participate in a given course. Carroll and Ryan (2005) advocate for a balance of awareness of culture-specific learning cultures that may be present in the classroom and also a "culture general" approach (e.g., adopting intercultural practices such as careful listening, awareness of bias, and responsive interactional style).

Study findings regarding the instructor/student relationship also carry implications for classroom instruction. Student interviewees highlighted the positive difference it made to have instructors who could recognize the challenges faced by international students, who are willing to help all students, who are open to suggestions and questions, who encourage participation, and who set a tone for classroom inclusion.

Popadiuk (2008) conducted a study on the key academic relationships for international students in the context of a Canadian university and concluded that the most statistically significant indicator of students' wellbeing was the presence of one adult in the relational network that the student perceived as "caring". Aligned with this, several students in the sample named instructors who had been intentionally helpful or who taught in a way that made them more interested in the subject matter or helped them to

choose a major. Students also highlighted the large impact of small actions such as inquiring about their backgrounds, taking the time to learn and correctly pronounce student names, and encouraging international students to visit office hours.

One of the areas in which students expressed the most difficulty in building capital was the task of building social capital with instructors. This lack of capital creates high stakes for the interview population; as upper-division students, several noted the challenges they had faced in obtaining instructor recommendations and references for internships, professional opportunities, and future employment. Student data suggest that earlier intervention and an uncovering of the hidden rules regarding how, why, and when a student can leverage instructor support would be helpful for this student population and would support students' broader agendas regarding job attainment and professional preparation.

The third stream within the findings relates to internationalization of the curriculum. Leask (2009) identifies "internationalization of the curriculum" as the "incorporation of international, intercultural, and/or global dimensions into the content of the curriculum as well as the learning outcomes, assessment tasks, teaching methods, and support systems of a program of study" (p. 209).

Following Sanderson's (2011) argument regarding effective campus internationalization strategies, intentional pedagogies to internationalize the on-campus curriculum provide unique opportunities for learning and, in particular, for supporting international students as learning resources on campus. Mestenhauser and Barsig (1977) wrote nearly 40 years ago that international students are essential to the learning outcomes of U.S. American students. Yet both the quantitative and qualitative findings

of this study suggest that international students have limited opportunities for sharing their own backgrounds, cultural perspectives, and applying their knowledge to classroom tasks, nor are they exposed to more than a moderate amount of international, global or intercultural content related to their fields of study.

Paige (2003) underscores the pedagogical opportunities for faculty in campus internationalization and the support of international students in the classroom: "They can include international students as learning resources in their courses …They can use international examples, readings, and resource persons in their classes. They can encourage students to do international research and to study abroad" (p. 58). Paige (2003) also highlights the antithesis to these types of supports, saying that faculty may also "model alternative behaviors such as intellectual parochialism, ethnocentrism, and disinterest in international learning" (p. 58) that are contrary to the international learning of all students and were, in some interviews, reported by study participants as characteristics of some learning environments they encountered on campus.

In the report *Finding Common Ground: Enhancing Interactions Between Domestic & International Students* Australian researchers Arkoudis et al. (2010) speak to the power that faculty can play in enhancing students' exposure to differing perspectives and cultural traditions, and the accomplishment or more complex learning outcomes. Other research regarding the educational potential of domestic and international student interaction suggests that these types of student relations implicitly offer unique learning opportunities and are integral to developing cognitive understanding (Eames & Stewart, 2008; Huijser & Kimmins, 2008). Furthermore, peer interaction can provide learners with a greater sense of belonging and support, which may

have a positive impact on student retention and learning achievement (Huijser & Kimmins, 2008). As voiced by students in the interview population, these connections among students can result in increased social capital and cultural capital exchange.

Student Support Services

In addition to the implications for campus leadership and classroom instruction, the study findings carry implications for student affairs and student support service professionals, as well. More than a decade ago, Davies (1995) argued that "support services are often not geared to considerable international effort" (p. 16) and Hudzik (2011) similarly acknowledges that "although sometimes ignored, these offices and programs are in strategic positions on campus to either help or hinder (by omission or commission) facilitating and supporting comprehensive internationalization" (p. 21).

Yet in U.S. higher education, the task of developing the "whole student" frequently falls to individuals working in student affairs who support the co-curricular aspects of the student experience (NASPA, 2004). Study findings suggest that students view the university's co-curricular offerings as integral to the way they conceptualize engagement on campus and that campus and community involvement support their academic engagement, despite the majority of study participants indicating that they were not familiar with co-curricular aspects of education before their arrival at UMTC. Beyond the social benefits of co-curricular involvement, students in the interviews also spoke to perceived educational outcomes such as opportunities to put learning into practice, increased interest in their fields of study, and development of meta-skills such as planning, communications, networking, and organization.

Students named the importance of academic peer networks and opportunities for meeting students within their academic programs. Support for these types of activities relates directly to opportunities to develop Putnam's bonding and bridging forms of social capital (1995, 2000). Putnam advocates for the existence organizations and activities that bring people together in ways that promote bonding capital and, eventually, the development of bridging capital as well.

As previously addressed in the literature review, "bonding" capital among peers of the same national background or area of interest can support "bridging" across national origin or area of study. This was particularly evident in the student narrative of the Chinese student who invested considerable time during her first year taking on leadership roles within Chinese cultural organizations only to realize that her English had not improved and that she had a very limited number of U.S. American friends. By her own description, she was able to transfer the leadership and time management skills she had developed within that organization and apply to a university-sponsored leadership development program that serve all students on campus. Per Putnam's (1995, 2000) bridging capital hypothesis, the student has continued to thrive in co-curricular and professional development opportunities that have a mix of international and domestic students. In keeping with this study's framework of student-driven and institution-supported engagement, there are significant implications for the ways in which this student's development of bonding and bridging forms of capital through co-curricular involvement might be replicated and further supported by university community members who design and oversee co-curricular opportunities for students.

Student interviewees reported a range of experiences with on-campus support resources for their academic engagement and with academic advising. This suggests an area of opportunity for training and professional development offerings to intentionally support staff that interact with students in these capacities. Andrew (2012) writes "An internationalised curriculum has a duty of care not only for students, but also for the staff. All of the activities are equally important to provide an education and the knowledge on how to operate in a globalised world for domestic and international students; to the academics who teach them, and to the professional staff who have dealings with them" (p. 5). These types of training might center on building intercultural awareness (per Sanderson, 2011), or include participation in culture-specific trainings offered by ISSS's intercultural training unit to heighten the awareness of university staff to specific population needs and ways of more effectively providing services.

Conclusion

The primary goal of this study was to fill a gap in the existing literature regarding the academic engagement of upper-division undergraduate international students at the University of Minnesota-Twin Cities. International undergraduate students are enrolling at U.S. higher education institutions at a pace never seen before (IIE, 2014), and these resulting shifts in enrollment have dramatically changed the demographics of classrooms and campuses across the country. These conditions necessitate new dimensions of teaching, learning and meeting the academic needs of these students (Andrade, 2010; Mestenhauser, 2011).

Two features make UMTC an ideal case for studying the academic engagement of undergraduate international students: the unprecedented growth in international undergraduate student enrollments over the past five years (UMTC ISSS, 2014) and the study, academic engagement was defined as "a multidimensional construct of students' behaviors and affective involvement in the learning process" (per Fredricks, Blumenfeld & Paris, 2004) and conceptualized as having both student-driven and institution-driven components.

Upper-division students in the study sample were asked to define academic engagement as part of the quantitative survey and the qualitative interviews. Their responses elevated the importance of relationships with students, instructors and staff as a dimension of and a factor influencing their academic engagement as UMTC students. Survey respondents also highlighted participation in class, time spent on academic tasks and co-curricular involvement as components of academic engagement. In addition to key relationships, survey respondents highlighted the influence of the nature of academic work and the differences in academic cultural as impactful for their academic engagement at UMTC.

Study findings were further organized into individual factors influencing students' academic engagement and institutional factors influencing students' academic engagement. Analysis of quantitative and qualitative data uncovered the following individual factors as influential: previous language training and intercultural exposure; co-curricular involvement; academic behaviors; existence of an academic peer network; and, affective involvement in learning. Key institutional factors are divided into structural and instructional factors, with the latter including teaching clarity and course

organization; opportunities for hands-on and practical learning; support for group work; and support for participation and inclusion. The influence of the instructor and student relationship and cultural dimensions of learning are included in the analysis, as well.

An underlying premise of this study is that the recruitment, admission, and enrollment of international students must be met with an awareness of the unique educational needs of this study population and a willingness to accommodate and support the transitions students experience upon entry into the new higher education environment. As Mestenhauser (2011) puts forth, " the presence of foreign students is indeed an aspect of educational change and reform because it prompts our teachers and faculties to adjust their way of teaching to peoples of other cultures where meanings of what we teach may be different. Foreign students thus confront their host countries with the idea that what is taught may be culture-bound and may need adjusting" (p. 151).

Bourdieu's (1986) concepts of field and habitus, and the potential for symbolic violence upon misalignment of the two, provide an accessible set of lenses through which to identify and interpret the key differences that international students encounter when they enter U.S. higher education. The study data do, in fact, include evidence of difficult peer and instructor encounters, unclear academic expectations, limited opportunities for intercultural learning, and cultural misunderstandings.

Yet the students in the interview population also provide numerous and rich examples of the ways they are academically engaged on the UMTC campus. In the study interviews, students reported leadership opportunities in academic and cultural organizations, hard-won academic gains, well-established peer networks within their academic programs, and evidence of positive interactions with faculty.

Overwhelmingly, the student interviewees were engaged in forms of professional preparation and more than half indicated doing service in the Minneapolis-St. Paul metro area. Evidence of difficulty was matched almost equally with evidence of academic skill development, increased confidence and more participation in academic activities over time.

If institutions are to maximize the presence of international students by providing opportunities for their engagement, it is critical to acknowledge the strengths that they bring to the community and not focus on the "problems" alone. "When foreign students are singled out as being the problem," Mestenhauser (2011) writes, "it involves another ethnocentric assumption that in our culture it is the outsider who has to do all of the adjusting to the dominant group if they wish to be seen and counted. In this sense their presence is challenging and confronts our often-highlighted branding strategy that we 'educate global citizens.' In a global setting the need to do the adjusting is reciprocal and mutual and should be based on substantial knowledge and skills that international students could teach and that they could also learn from U.S. students" (p. 157).

Congruent with Bourdieu's (1986) framework, the malleable aspects of a given field can be altered to leverage and maximize benefits and supports. Misalignments can be realigned and the habitus can be redefined. The study findings carry practical implications for the ways that institutions can support international students in their development of context-specific capital and ways of using and exchanging capital toward increased academic performance and success.

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APPENDIX A

E-mail of Invitation for Survey Participation
(sent: February 20, 2015 by International Student & Scholar Services)

Subject: Survey on int'l student academic engagement: Win a $150 Mall of America gift
card

Dear [student name, first/last],

You are invited to complete the following survey regarding the ways that new international students engage in their academic programs at the University of Minnesota-Twin Cities.

You can access the survey at http://tinyurl.com/n9ys5mu.

The purpose of the study is to identify the factors affecting the academic engagement of first-year international undergraduate students at UMTC. As a second year student, you have gained valuable insights that will help move this research forward.

Upon submission of the survey you will have a change to enter a drawing for one of three $150 Mall of America gift cards to be used at any Mall of America retailer or vendor.   The winner will be selected at random from completed survey entries.

Survey information:

The 40-item survey is voluntary. It is estimated that completing the survey will take approximately 30 minutes of your time. The survey is confidential. The deadline for taking this survey is **March 9, 2015**.

This research is being conducted by Mary Katherine O'Brien, a doctoral candidate in the Department of Organizational Leadership, Policy and Development in the College of Education and Human Development at the University of Minnesota. If you have any questions or concerns regarding the study, please contact Mary Katherine at obrie713@umn.edu.

Thank you!

APPENDIX B

Survey Reminder Email I
(sent March 2)

Subject: One week left! Take the survey on international student academic engagement: Win a $150 Mall of America gift card

Dear [student name, first/last],

Please remember to complete the survey on undergraduate international students' academic engagement: **http://tinyurl.com/n9ys5mu**

As an international student at UMTC, you have gained valuable insights that will help the researcher to understand the academic engagement of first-year international students at UMTC. We hope that you will participate! Additionally, by completing this survey, you will be entered to win one of three $150 Mall of America gift cards, to be selected at random from completed survey entries.

Survey information:

The 40-item survey is voluntary. It is estimated that completing the survey will take approximately 30 minutes of your time. The survey is confidential. The deadline for taking this survey is **Monday, March 9, 2015 -- one week from today**.

This research is being conducted by Mary Katherine O'Brien, a doctoral candidate in the Department of Organizational Leadership, Policy and Development in the College of Education and Human Development at the University of Minnesota.   The purpose of the study is to identify the factors affecting the academic engagement of first-year international undergraduate students at UMTC.

If you have any questions or concerns regarding the study (or need technical assistance), please contact Mary Katherine at obrie713@umn.edu.

Thank you!

APPENDIX C

Survey Reminder Email II
(sent March 6, 2015)

Subject: Ends soon! Win a $150 Mall of America gift card for completing survey!

Dear [student name, first/last],

Time is running out! Take a survey on the academic engagement of undergraduate international students—and be entered to win one of three $150 Mall of America gift cards upon completion: **http://tinyurl.com/n9ys5mu**

Survey information:
 It is estimated that completing the survey will take approximately 30 minutes of your time. The survey is confidential. The survey will close on Tuesday, March 10, 2015. Gift card winners will be selected at random from completed survey entries.

This research is being conducted by Mary Katherine O'Brien, a doctoral candidate in the Department of Organizational Leadership, Policy and Development in the College of Education and Human Development at the University of Minnesota. If you have any questions or concerns regarding the study, please contact Mary Katherine at obrie713@umn.edu.

Thank you!

APPENDIX D

Survey Informed Consent and Survey Instrument

SURVEY: ACADEMIC ENGAGEMENT OF FIRST-YEAR UNDERGRADUATE INTERNATIONAL STUDENTS AT UMTC

The purpose of this study is to collect data regarding the academic engagement of early career undergraduate international students at the University of Minnesota-Twin Cities. You are receiving this survey because you are an undergraduate international student who has completed one year of study at UMTC. Your honest responses to this questionnaire will provide valuable information regarding the academic experiences of first year international students at UMTC.

The 35-question survey should take approximately 30 minutes to complete, but you can take as much time as you need. The survey will not "time out". You can use the "back" buttons to return to your answers at any time before you submit the survey. At the end of the survey, you will have the opportunity to volunteer for in-person interviewing to share more information if you choose.

All identifying information from this survey will be kept confidential. This survey is anonymous unless you volunteer for further participation and supply your own name. Any data that is shared, whether you supply your name or not, will be presented in a way that makes it impossible for anyone to draw a connection between you and your answers.

Please be sure to hit "submit" at the end of this survey so that your answers are recorded. After you submit, you will have the change to enter into the random drawing for one of three $150 Mall of America gift cards that can be used at any retailer or vender at MOA.

The following page includes further information regarding the survey and a link to answer the survey questions.

Click the arrows below to proceed.
[→ next page]

STUDY INFORMATION & INFORMED CONSENT:

Study Information
This focus of this study is the academic engagement of first-year undergraduate international students at the University of Minnesota-Twin Cities (UMTC). The study is designed with a mixed-methods approach to collect quantitative and qualitative data on the factors affecting international students' academic engagement in their first year of study at UMTC.

Procedures
Students who agree to participate in this study will be asked to complete a brief internet survey and will have the opportunity to volunteer for a follow up interview and/or focus group interview.

Confidentiality
The records of this study will be kept private. Any report of findings that the researcher publishes or presents in a public venue will not include any information that will make it possible to identify any of the research subjects. Research records will be stored securely and only the researcher will have access to the records. Audio recordings of interviews and focus groups will be destroyed after the dissertation is complete.

Voluntary Nature of the Study
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relationships, student status, or academic standing at the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time. Individuals who wish to volunteer for the qualitative component of the study will have the option to participate in a one-on-one interview with only the researcher or a group interview with other students based on their personal preference and election.

Risks and Benefits of Participating in the Study
There are no perceived risks in participating in this study.
The benefits of participating in this study include the opportunity to advance understanding of an under-researched area of the international student experience at the University of Minnesota-Twin Cities.

Compensation
Participants who complete the study will be entered into a drawing for one of three $150 Mall of America gift cards. Participants who elect to participate in the qualitative interviews and focus groups will be given a $15 Starbucks gift card and refreshments at the time of the individual or group interview.

The Researcher
Mary Katherine O'Brien is a doctoral candidate in the Comparative & International Development Education track of the Department of Organizational Leadership, Policy & Development. She is co-advised by Dr. Deanne L. Magnusson and Dr. Gerald W. Fry in the Department of Organizational Leadership, Policy and Development in the College of Education and Human Development.

If you have any questions about this study, you are encouraged to contact the researcher: Mary Katherine O'Brien (primary investigator):   obrie713@umn.edu / (512) 658-9639.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Research Subjects'

Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

By beginning the survey, you acknowledge that you have read this information and agree to participate in this research, with the knowledge that you are free to withdraw your participation at any time without penalty. To begin the survey, click the arrows below.
[→ BEGIN SURVEY]

1. On a scale of 1 – 10, how important it is to you to be academically successful? (1 = not important at all; 10 = extremely important)
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8
- ○ 9
- ○ 10

2. In your first year of study at UMTC, how often did you:

	Never	Rarely	Occasionally	Often	Always
Ask a question in class?	○	○	○	○	○
Take notes by hand during class?	○	○	○	○	○
Take notes on a computer/device during class?	○	○	○	○	○
Participate in a small group discussion in class?	○	○	○	○	○
Participate in a large group/whole class discussion?	○	○	○	○	○
Audio record a class lecture and listen to it later?	○	○	○	○	○

3. In your first year at UMTC, approximately how many hours per week did you spend engaged in your "academic life"? Examples would include reading course materials, completing writing assignments, reviewing course materials, meeting with your instructors, completing course-related projects, conducting research, etc.

4. In your first year of study at UMTC, how often did you:

	Never	Rarely	Occasionally	Often	Always
Complete assigned readings for class?	○	○	○	○	○
Complete suggested readings for class (beyond minimum required reading)?	○	○	○	○	○
Write more than one draft of a writing assignment?	○	○	○	○	○
Earn extra credit when it was offered?	○	○	○	○	○
Review course material after class?	○	○	○	○	○
Seek out additional resources (i.e., articles, study guides, on-line resources) related to your coursework?	○	○	○	○	○

5. To what extent did the following in-class activities help you to be more academically engaged during your first year at UMTC?

	Not at all	Very little	Somewhat	Significantly	I did not have this opportunity
Participating in class discussions	❍	❍	❍	❍	❍
Formal group work	❍	❍	❍	❍	❍
Informal interactions with other students	❍	❍	❍	❍	❍
Giving a presentation	❍	❍	❍	❍	❍
Visiting an instructor's office hours	❍	❍	❍	❍	❍
Use of case studies	❍	❍	❍	❍	❍
Real life examples presented in class	❍	❍	❍	❍	❍
Reflective writing assignments related to course topics	❍	❍	❍	❍	❍

6. How would you rate your development of the following competencies in your first year of study at UMTC?

	No development	Some development	Substantial development
Academic writing	❍	❍	❍
Critically analyzing the content in course readings	❍	❍	❍
Ability to work in academic groups/teams	❍	❍	❍

Q6, cont.			
Skills to work with people of different cultural backgrounds	❍	❍	❍
Creativity	❍	❍	❍
Problem solving	❍	❍	❍
Application of information from my courses to other areas of study	❍	❍	❍
Application of information from my courses to real life	❍	❍	❍

7. Did you use an "American" or English-language name (instead of the name you use in your home country) during your first year of study at UMTC?
❍ Yes
❍ No

→ 7b. Why did you use an "American" or English name during your first year at UMTC?

8. In your first year at UMTC, how often did you:

	Never	Rarely	Occasionally	Frequently
Ask a student from your own country for help?	❍	❍	❍	❍
Ask an international student from a country other than your own for help?	❍	❍	❍	❍
Ask an American student for help?	❍	❍	❍	❍

Q8, cont.				
Explain course material to another student?	○	○	○	○
Work with international students on a group project?	○	○	○	○
Work with American students on a group project?	○	○	○	○
Meet with students outside of class to study in an informal group?	○	○	○	○
Join a formal study group for a course?	○	○	○	○

9. When you think about the friendships you made during your first year at UMTC, how many of these friendships were with U.S./American students? _____

INTERACTIONS WITH FACULTY

10. In your first year of study at UMTC, how often did you:

	Never	Rarely	Occasionally	Often
Meet with a course instructor one-on-one?	○	○	○	○
Discuss your academic progress with an instructor?	○	○	○	○
Discuss your future career plans with a course instructor?	○	○	○	○

Q10, cont.				
Interact with a course instructor outside of class in non-course related campus activities (i.e., a student organization, departmental event, or campus committee)?	○	○	○	○
Meet with a teaching assistant (T.A.) one-on-one?	○	○	○	○

11. To what extent to you agree with the following statements?
During my first year at UMTC _____:

	Not at all	Very little	Somewhat	A lot
My professors knew my name.	○	○	○	○
My professors made me feel welcome in the classroom.	○	○	○	○
My professors indicated that they valued my input in class.	○	○	○	○
My professors encouraged me to share my opinions.	○	○	○	○
My professors reached out to me as an international student to make sure I was doing okay in class.	○	○	○	○

12. During your first year at UMTC, to what extent did your instructors:

	Not at all	Very little	Somewhat	A lot
Incorporate their own intercultural experiences into classroom learning?	○	○	○	○
Assign readings about countries other than the U.S.?	○	○	○	○
Assign readings from countries other than the U.S.?	○	○	○	○
Integrate case studies from cultures/countries other than the U.S.?	○	○	○	○
Encourage class discussion on intercultural aspects of course topics?	○	○	○	○
Invite international guest speakers to share their expertise?	○	○	○	○
Encourage students to share their own cultural knowledge?	○	○	○	○
Encourage students to share information about their personal backgrounds?	○	○	○	○

13. In your first year as a student at UMTC, how helpful were the following types of instructor feedback? Slide the bar indicator left-to-right to select your answer for each item.

_____ Instructor feedback on my writing
_____ Instructor feedback on a project
_____ Instructor feedback on my in-class participation
_____ Instructor feedback on an exam

USE OF LEARNING TECHNOLOGIES

14. In your first year of study at UMTC, how often did you:

	Never	Rarely	Occasionally	Frequently
Post to a discussion forum for a course?	○	○	○	○
Use an electronic translation device for your academic work?	○	○	○	○
Use a social media/social networking site (Facebook, Twitter, etc.) for academic purposes?	○	○	○	○
Access on-line materials from the University libraries?	○	○	○	○
Use VoiceThread in a course?	○	○	○	○
Use Google Hangout for academic purposes?	○	○	○	○
Use video technology in a course?	○	○	○	○

15. Did you take an on-line course during your first year at UMTC?
○ Yes
○ No

→ 15b. For me, it was:
○ Easier to engage in the on-line environment than in an in-person class.
○ More difficult to engage in the on-line environment than in an in-person class.
○ Neither easier nor more difficult to engage than in an in-person class.

16. Approximately how many hours do you spend on-line per day? _____

17. How many of those hours are for academic purposes?
○ More than 75%
○ Between 50% and 75%
○ Between 25% and 50%
○ Less than 25%

PREVIOUS ACADEMIC PREPARATION & EXPERIENCES

18. What type of school did you attend the year before you enrolled at UMTC? Check all that apply.
❑ Public (national) high school
❑ Private high school
❑ International school
❑ Community college/vocational school in the United States
❑ Community college/vocational school outside of the United States
❑ A four-year college/university in the United States
❑ Intensive language school
❑ Other (please list): _____

19. Prior to enrolling at UMTC, what types of language training did you receive? Check all that apply.
❑ I took English courses in my school.
❑ I took private English classes in an environment other than my school.
❑ I had a private English tutor.
❑ Someone in my home spoke English fluently.
❑ I have lived or traveled extensively in English speaking countries.
❑ Other (please describe): _____
❑ I did not have any English language training before coming to UMTC
❑ N/A : I am a native English speaker

20. How would you rate your English language proficiency at the time of your first class at UMTC?   Slide the bar indicator left-to-right to select your answer for each item
_____ Speaking
_____ Listening
_____ Reading comprehension
_____ Academic writing

21. How would you rate your English language proficiency at the end of your first year of study at UMTC?   Slide the bar indicator left-to-right to select your answer for each item
_____ Speaking
_____ Listening
_____ Reading comprehension
_____ Academic writing

You are halfway done!
The remaining portion of the survey should take you approximately 10 minutes.

22. In what college or school are you enrolled at the University of Minnesota-Twin Cities?   Select from the drop-down menu below.
- ❍ Carlson School of Management
- ❍ College of Biological Science
- ❍ College of Continuing Education
- ❍ College of Design
- ❍ College of Education and Human Development
- ❍ College of Food, Agricultural & Natural Resource Sciences
- ❍ College of Liberal Arts
- ❍ College of Science and Engineering
- ❍ School of Nursing

23. Have you declared a major?
- ❍ Yes
- ❍ No

What is your major field of study? _____

What is your intended major? _____

24. Have you declared a minor?
- ❍ Yes
- ❍ No

 Please write your minor field of study in the space provided below.

_____

25. Complete the following sentence with the choices provided: In my first year, my academic transition to UMTC was _____.
❍ Very easy
❍ Easy
❍ Moderately difficult
❍ Very difficult

26. What academic resources did you use at UMTC last year? Check all that apply.
❑ Academic advising in my academic unit
❑ Center for Writing
❑ International Student & Scholar Services
❑ LASk for-credit academic support courses
❑ Minnesota English Language Program (MELP)
❑ Multicultural Center for Academic Excellence (MCAE)
❑ Peer Learning Consultants (University Libraries)
❑ Private tutor
❑ University Counseling & Consulting Services Academic Skills Development
❑ Other, please list _____
❑ I did not use any academic resources

27. Did you have an on-campus job during your first year at UMTC?
❍ Yes
❍ No

   → 27b. What type of job(s) did you have?

   → 27c. Approximately how many hours per week did you work at your job(s)?
   ❍ Less than 5
   ❍ 5-10
   ❍ 10-15
   ❍ 15-20
   ❍ More than 20

28. Did you participate in any co-curricular activities during your first year at UMTC?(Examples: student organizations, clubs, sports teams)
❍ Yes
❍ No

   → 28b. In what types of activities were you involved? Check all that apply:
   ❑ Student organization(s)
   ❑ Cultural organization(s)
   ❑ Sports team(s)
   ❑ Fraternity/sorority
   ❑ Volunteer activity
   ❑ Off-campus activity
   ❑ Other (please list): _____

→ 28c. Approximately how many hours per week were you involved in co-curricular activities during your first year of study at UMTC?
- ○ Less than 5
- ○ 5-10
- ○ 10-15
- ○ 15-20
- ○ More than 20

29. In what environment did you live during your first year of study at UMTC?   Check all that apply.

	With American students	With other international students	Alone
ON CAMPUS	❏	❏	❏
OFF CAMPUS	❏	❏	❏

→ 29b. Did you live in the Students Crossing Borders living-learning community?
- ○ Yes
- ○ No

DEMOGRAPHIC QUESTIONS

30. What is your country of primary citizenship?   [Select from the drop-down menu]

31. What is your gender?
- ○ Male
- ○ Female
- ○ Other

32. What year were you born?   [Select from the drop-down menu]

33. What is the highest educational level obtained by your father?
- ○ My father didn't have any formal schooling
- ○ Primary school
- ○ Secondary school/high school
- ○ Vocational school/2-yr college
- ○ University degree
- ○ Post-graduate degree

34. What is the highest educational level obtained by your mother?
- ○ My mother didn't have any formal schooling
- ○ Primary school
- ○ Secondary school/high school
- ○ Vocational school/2-yr college
- ○ University degree
- ○ Post-graduate degree

35. What is your academic classification at UMTC?
- ○ First-year/Freshman
- ○ Second-Year/Sophomore
- ○ Third-Year/Junior
- ○ Senior

FINAL QUESTION

How would you define the term "academic engagement"?

What factors most affected your academic engagement in your first year of study at the University of Minnesota-Twin Cities?

Thank you for your responses!
The second phase of this study includes one-on-one interviews and group interviews for students to share their opinions and experiences on their academic experience at UMTC. Volunteers for these interviews are needed and your help would be much appreciated. Refreshments will be provided at each session and participants will get a $15 Starbucks gift card in appreciation of their participation.

Please select from the following options:
- ❏ I am interested in participating in a one-on-one interview (60-minute time commitment).
- ❏ I am interested in participating in a group interview with fellow undergraduate students (90-minute time commitment).
- ❏ I am not interested.

Thank you for your interest in the next phase of the research project. Please provide your contact information so that we may be in touch.

       Your name:
       Your e-mail address:
       Your phone number: [→ SUBMIT]

Enter to win one of three $150 Mall of America gift cards!

Thank you for submitting your survey responses. All individuals who complete the survey have an opportunity to enter a drawing for one of three $150 Mall of America gift cards to be used at any MOA retailer or vendor within the Mall. The recipients of the gift cards will be selected at random.

Your contact information for this portion of the survey cannot be tied to your responses for the survey. Winners will be notified by March 23, 2015.

Do you want to enter the MOA gift card drawing?
   a) YES, I want to enter the drawing for one of three $150 MOA gift cards
   b) NO, I am not interested in entering the drawing

If you would like to enter the MoA gift card drawing, please provide your contact information below. Be sure to click the arrows below to ensure that your survey is submitted and your answer is recorded.
       Your name:
       Your e-mail address:
       Your phone number:

[→ SUBMIT]

APPENDIX E

Letter of Invitation for Interview Participation

Dear [student name, first/last],

Thank you for your interest in doing a one-on-one interview regarding international student academic engagement. You expressed this interest on a survey of the same topic that you took before spring break.

You can sign up for an interview time at the following link: APPOINTMENT SIGN UP.   You do not need an account to sign up for an appointment. **If none of the available times work for your schedule, please let me know and I will find an alternate time for us to meet.**

Beverages and cookies will be provided during your interview session. Upon completion of your interview, you will receive a $15 gift card to Starbucks or Target (your choice!) You will receive a confirmation email 24 hours before your appointment that will confirm the place & time of the meeting. All interviews will take place on the UMTC campus in university conference rooms.

This interview is part of my doctoral dissertation research. The purpose of the study is to identify the factors affecting the academic engagement of international undergraduate students at UMTC.   I am very appreciative of your willingness to help me in this research and I look forward to meeting you soon.

If you have any questions or concerns, I can be reached by telephone at (512) 658-9639 or by e-mail at obrie713@umn.edu.

Sincerely, Mary Katherine O'Brien

APPENDIX F

Qualitative Interview Protocol

1. Can you start by telling me a little bit about your life as a student at UMTC?
   Probing questions:
   What is your major? When did you declare?
   Why did you select your college/major field of study?
   When did you begin your studies?

2. What was your idea of "good student" before you arrived at UMTC? / What are the characteristics of a "good student" in your home country?
   What did you expect the academic environment would be like when you arrived   at UMTC?
   What were your primary academic challenges when you arrived?
   What did you need to learn how to do to be academically successful here?
   How did you learn that? From who? From what activity?

3. When I say "academic engagement" what does that term mean to you?
   Time on task?
   What excites you about learning?

4. In what ways are you academically engaged as a UMTC student?

5. In what ways did your professors help you to engage academically?
   What types of school work are most helpful to your learning? (In class/out of class)
   Probing questions:
   Instructional strategies
   Group work strategies: What do you learn from your peers?
   Internationalization of the curriculum

6. Who has been the most helpful in your academic transition to life as college student here?
   What relationships have helped you?)
   What other knowledge has been helpful to you? (Where did that come from?)

7. What has made you successful as a student here?

8. If you had to tell an incoming student about how to engage academically here at UMTC, what would you say?

9. If you had a chance to tell a UMTC instructor how to best help international undergraduate students adjust to life in the classroom, what would you say?

APPENDIX G

Interview Informed Consent

Hello and thank you for speaking with me today.

My name is Mary Katherine O'Brien and I am PhD Candidate at the University of Minnesota in the Department of Organizational Leadership, Policy and Development. I am currently collecting data for my dissertation research, which focuses on the academic engagement of upper-division undergraduate international students at UMTC. You volunteered for this interview after taking a survey on this topic before spring break this year.

It is my hope that this research will contribute to a better understanding of the academic experiences of international students on campus and will help inform good practices for assisting international students in their academic transitions. Your experiences will be helpful to me as I research this topic and I am hopeful that you will share your thoughts with me honestly during our interview.

Before we begin, please allow me to read the following statement. Do I have your permission to record this part of the conversation?
 [IF YES TURN ON TAPE RECORDER]
 [IF NO, DO NOT TURN ON TAPE RECORDER]

Today you will be involved with an educational research study. If you choose to participate, I will conduct an individual interview with you that should take approximately 60 minutes. Your participation is voluntary. You may stop at any time.

All responses will be used for research purposes only. Your name or other identifying information will not be listed in the research. If I choose to quote you directly, I will use a description that will not identify you. For instance, "Carlson School of Management student."

There are no known risks associated with this interview. I have provided you with a detailed letter explaining how the data will be secured as well as my contact information if you should have questions later.

At the conclusion of the interview, I will provide you with a $15 gift card [Starbucks or Target] in appreciation of your time. If you agree to this, please say "yes".

[BEGIN INTERVIEW]

APPENDIX H

Descriptive Statistics

The tables on the following pages are numbered to correspond with the survey question numbers. Within questions, the items reflect the order the items appeared on the survey instrument, for ease of comparison with the survey instrument. This differs with the presentation in Chapter Four, in which means were sorted in descending order for ease of interpretation. Qualitative items are not included in the analysis. Descriptive statistics were not calculated for Questions 3, 9, 16, and 17, due to question type. Question 22 was validated from official UMTC records and not included in this appendix based on survey response.

1. On a scale of 1 – 10, how important it is to you to be academically successful?

Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
116	104	3	10	8.7	9.0	1.3

2. In your first year of study at UMTC, how often did you:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Ask a question in class?	116	116	1	5	2.8	3.0	1.0
Take notes by hand during class?	116	115	2	5	4.2	4.0	.7
Take notes on a computer/device during class?	116	115	1	5	2.7	3.0	1.2
Participate in a small group discussion in class?	116	116	1	5	3.6	4.0	.9
Audio record a class lecture and listen to it later?	116	116	1	5	1.9	1.0	1.3
Participate in a large group/whole class discussion?	116	116	1	5	3.1	3.0	.9

4. In your first year of study at UMTC, how often did you:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Complete assigned readings for class?	116	116	2	5	3.8	4.0	.8
Complete suggested readings for class (beyond minimum required reading)?	116	115	1	5	3.1	3.0	1.2
Write more than one draft of a writing assignment?	116	115	1	5	3.5	4.0	1.1
Earn extra credit when it was offered?	116	116	1	5	4.1	4.0	.9
Review course material after class?	116	115	1	5	3.5	4.0	1.0
Seek out additional resources (i.e., articles, study guides, on-line resources) related to your coursework?	116	116	1	5	3.3	3.0	1.1

5. To what extent did the following in-class activities help you to be more academically engaged:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Participating in class discussions	116	116	1	4	3.3	3.0	.8
Informal interactions with other students	116	116	1	5	3.4	4.0	.8
Formal group work	116	116	1	5	3.4	4.0	.8
Giving a presentation	116	115	1	5	3.3	3.0	.9
Visiting an instructor's office hours	116	116	2	5	3.6	4.0	.7
Use of case studies	116	116	1	5	3.3	3.0	.9
Real life examples presented in class	116	116	1	5	3.5	4.0	.8
Reflective writing assignments related to course topics	116	116	2	5	3.4	3.0	.7

6. How would you rate your development of the following competencies in your first year of study:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Academic writing	116	116	2	3	2.4	2.0	.5
Critically analyzing the content in course readings	116	116	1	3	2.4	2.0	.5
Ability to work in academic groups/teams	116	116	1	3	2.4	2.0	.6
Skills to work with people of different cultural backgrounds	116	116	1	3	2.5	3.0	.6
Creativity	116	116	1	3	2.2	2.0	.6
Problem solving	116	116	1	3	2.4	2.0	.5
Application of information from my courses to other areas of study	116	116	1	3	2.5	2.0	.5
Application of information from my courses to real life	116	116	1	3	2.4	2.0	.6

7. Did you use an "American" or English-language name (instead of the name you use in your home country) during your first year of study at UMTC?

Yes		No		Total	
Count	*N %*	*Count*	*N %*	*Count*	*N %*
40	*34.5%*	*76*	*65.5%*	*116*	*100.0%*

8. In your first year at UMTC, how often did you:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Ask a student from your own country for help?	116	116	1	4	2.9	3.0	1.0
Ask an international student from a country other than your own for help?	116	116	1	4	2.8	3.0	.8
Ask an American student for help?	116	116	1	4	2.8	3.0	.8
Explain course material to another student?	116	116	1	4	2.9	3.0	.7
Work with international students on a group project?	116	116	1	4	3.1	3.0	.7
Work with American students on a group project?	116	116	2	4	3.2	3.0	.6
Meet with students outside of class to study in an informal group?	116	116	1	4	2.9	3.0	.8
Join a formal study group for a course?	116	116	1	4	2.5	3.0	1.0

10. In your first year at UMTC, how often did you:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Meet with a course instructor one-on-one?	116	116	1	4	3.0	3.0	.8
Discuss your academic progress with an instructor?	116	116	1	4	2.7	3.0	.7
Discuss your future career plans with a course instructor?	116	116	1	4	2.5	2.0	.9
Interact with a course instructor outside of class in non-course related campus activities (i.e., a student organization, departmental event, or campus committee)?	116	116	1	4	2.3	2.0	.9
Meet with a teaching assistant (T.A.) one-on-one?	116	116	1	4	2.9	3.0	.8

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11. During my first year at UMTC:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
My professors knew my name.	116	116	1	4	2.7	3.0	.7
My professors made me feel welcome in the classroom.	116	116	1	4	3.1	3.0	.8
My professors indicated that they valued my input in class.	116	116	1	4	3.0	3.0	.8
My professors encouraged me to share my opinions.	116	116	1	4	3.0	3.0	.9
My professors reached out to me as an international student to make sure I was doing okay in the class.	116	115	1	4	2.4	3.0	1.0

12. During your first year at UMTC, to what extent did your instructors:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Incorporate their own intercultural experiences into classroom learning?	116	116	1	4	2.9	3.0	.7
Assign readings about countries other than the U.S.?	116	116	1	4	2.8	3.0	.7
Assign readings from countries other than the U.S.?	116	116	1	4	2.7	3.0	.8
Integrate case studies from cultures/countries other than the U.S.?	116	116	1	4	2.7	3.0	.8
Encourage class discussion on intercultural aspects of course topics?	116	115	1	4	2.8	3.0	.8
Invite international guest speakers to share their expertise?	116	116	1	4	2.3	2.0	1.0
Encourage students to share their own cultural knowledge?	116	116	1	4	2.7	3.0	.9
Encourage students to share information about their personal backgrounds?	116	116	1	4	2.8	3.0	.9

13. In your first year as a student at UMTC, how helpful were the following types of instructor feedback:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Instructor feedback on my writing	116	115	1	5	3.6	4.0	1.1
Instructor feedback on a project	116	115	0	5	3.5	4.0	1.2
Instructor feedback on my in-class participation	116	112	0	5	2.8	3.0	1.3
Instructor feedback on an exam	116	114	0	5	3.3	3.0	1.2

14. In your first year of study at UMTC, how often did you:

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Post to a discussion forum for a course?	116	115	1	4	2.6	3.0	.9
Use an electronic translation device for your academic work?	116	115	1	4	2.7	3.0	1.0
Use a social media/social networking site (Facebook, Twitter, etc.) for academic purposes?	116	116	1	4	2.4	2.0	1.0
Access on-line materials from the University libraries?	116	116	1	4	2.9	3.0	.8
Use VoiceThread in a course?	116	116	1	4	1.9	2.0	.9
Use Google Hangout for academic purposes?	116	116	1	4	2.1	2.0	1.1
Use video technology in a course?	116	116	1	4	2.5	3.0	.9

15. Did you take an on-line course during your first year at UMTC?

Yes		No		Total	
Count	Row N %	Count	Row N %	Count	Row N %
51	46.4%	59	53.6%	110	100.0%

15b. For me it [the on-line course] was:

Easier to engage in the on-line environment than in an in-person class.		More difficult to engage in the on-line environment than in an in-person class.		Neither easier nor more difficult to engage than in an in-person class.		Total	
Count	N %	Count	N %	Count	N %	Count	N %
16	31.4%	16	31.4%	19	37.3%	51	100.0%

18. What type of school did you attend the year before you enrolled at UMTC? Check all that apply

	Responses	Column Responses %	Layer Column Response % (Base: Count)
Public (national) high school	47	27.5%	40.9%
Private high school	33	19.3%	28.7%
International school	28	16.4%	24.3%
Community college/vocational school in the United States	13	7.6%	11.3%
Community college/vocational school outside of the United States	12	7.0%	10.4%
A four-year college/university in the United States	22	12.9%	19.1%
Intensive language school	4	2.3%	3.5%
Other (please list):	12	7.0%	10.4%
Total	171	100.0%	148.7%

n=115

19. Prior to enrolling at UMTC, what types of language training did you receive? Check all that apply

	Responses	Column Responses %	Layer Column Response % (Base: Count)
I took English courses in my school.	92	48.7%	79.3%
I took private English classes in an environment other than my school.	22	11.6%	19.0%
I had a private English tutor.	17	9.0%	14.7%
Someone in my home spoke English fluently.	16	8.5%	13.8%
I have lived or traveled extensively in English speaking countries.	26	13.8%	22.4%
Other (please describe):	6	3.2%	5.2%
I did not have any English language training before coming to UMTC	4	2.1%	3.4%
N/A : I am a native English speaker	6	3.2%	5.2%
Total	189	100.0%	162.9%

n=116

20. On a scale of 1-100, how would you rate your English language proficiency at the time of your first class at UMTC?

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Speaking	116	116	7	100	61.1	60.0	23.6
Listening	116	116	10	100	67.8	68.0	22.7
Reading comprehension	116	116	9	100	66.2	63.5	21.5
Academic writing	116	116	0	100	61.2	60.0	22.7

21. On a scale of 1-100, how would you rate your English language proficiency at the end of your first year of study at UMTC?

	Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
Speaking	116	116	19	100	73.3	73.0	20.3
Listening	116	116	29	100	78.4	80.0	16.8
Reading comprehension	116	116	24	100	77.7	80.0	17.2
Academic writing	116	116	19	100	74.0	72.5	17.9

23. Have you declared a major?

Yes		No		Total	
Count	N %	Count	N %	Count	N %
113	97.4%	3	2.6%	116	100.0%

24. Have you declared a minor?

Yes		No		Total	
Count	N %	Count	N %	Count	N %
56	48.7%	59	51.3%	115	100.0%

25. In my first year, my academic transition to UMTC was:
(Very Easy->Very Difficult)

Total N	Valid N	Minimum	Maximum	Mean	Median	Standard Deviation
116	116	1	4	2.7	3.0	.9

26. What academic resources did you use at UMTC last year? Check all that apply.

	Responses	Column Responses %	Layer Column Response % (Base: Count)
Academic advising in my academic unit	67	26.8%	57.8%
Center for Writing	61	24.4%	52.6%
International Student & Scholar Services	53	21.2%	45.7%
LASk for-credit academic support courses	6	2.4%	5.2%
Minnesota English Language Program (MELP)	5	2.0%	4.3%
Multicultural Center for Academic Excellence (MCAE)	9	3.6%	7.8%
Peer Learning Consultants (University Libraries)	20	8.0%	17.2%
Private tutor	6	2.4%	5.2%
University Counseling & Consulting Services Academic Skills Development	10	4.0%	8.6%
Other, please list	1	0.4%	0.9%
I did not use any academic resources	12	4.8%	10.3%
Total	250	100.0%	215.5%

n=116

27. Did you have an on-campus job during your first year at UMTC?

Yes		No		Total	
Count	N %	Count	N %	Count	N %
49	42.2%	67	57.8%	116	100.0%

27b. Approximately how many hours per week did you work at your job(s)?

Less than 5		5-10		10-15		15-20		More than 20		Total	
Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
6	12.2%	26	53.1%	13	26.5%	2	4.1%	2	4.1%	49	100.0%

28. Did you participate in any co-curricular activities during your first year at UMTC?

Yes		No		Total	
Count	N %	Count	N %	Count	N %
67	58.3%	48	41.7%	115	100.0%

28b. In what types of activities were you involved? Check all that apply.

	Responses	Column Responses %	Layer Column Response % (Base: Count)
Student organization(s)	50	37.6%	74.6%
Cultural organization(s)	28	21.1%	41.8%
Sports team(s)	17	12.8%	25.4%
Fraternity/sorority	4	3.0%	6.0%
Volunteer activity	23	17.3%	34.3%
Off-campus activity	9	6.8%	13.4%
Other (please list):	2	1.5%	3.0%
Total	133	100.0%	198.5%

n=67

28c. Approximately how many hours per week were you involved in co-curricular activities during your first year of study at UMTC?

Less than 5		5-10		10-15		15-20		More than 20		Total	
Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
36	53.7%	20	29.9%	8	11.9%	1	1.5%	2	3.0%	67	100.0%

29. In what environment did you live during your first year of study at UMTC?

	Responses	Column Responses %	Layer Column Response % (Base: Count)
ON CAMPUS-With American students	50	25.5%	43.1%
ON CAMPUS-With other international students	51	26.0%	44.0%
ON CAMPUS-Alone	11	5.6%	9.5%
OFF CAMPUS-With American students	12	6.1%	10.3%
OFF CAMPUS-With other international students	54	27.6%	46.6%
OFF CAMPUS-Alone	18	9.2%	15.5%
Total	196	100.0%	169.0%

n=116

29b. Did you live in the Students Crossing Borders living-learning community?

Yes		No		Total	
Count	N %	Count	N %	Count	N %
20	23.3%	66	76.7%	86	100.0%

30. What is your country of primary citizenship? (n = 115)

		Frequency	Percent	Valid Percent	Cumulative
Valid	China	42	36.2	36.5	36.5
	Korea, Republic of	33	28.4	28.7	65.2
	Malaysia	8	6.9	7.0	72.2
	India	6	5.2	5.2	77.4
	Hong Kong	3	2.6	2.6	80.0
	Canada	2	1.7	1.7	81.7
	Germany	2	1.7	1.7	83.5
	Japan	2	1.7	1.7	85.2
	Colombia	1	.9	.9	86.1
	Ecuador	1	.9	.9	87.0
	Egypt	1	.9	.9	87.8
	Honduras	1	.9	.9	88.7
	Iceland	1	.9	.9	89.6
	Indonesia	1	.9	.9	90.4
	Jordan	1	.9	.9	91.3
	Kuwait	1	.9	.9	92.2
	Mexico	1	.9	.9	93.0
	Nepal	1	.9	.9	93.9
	Nigeria	1	.9	.9	94.8
	Oman	1	.9	.9	95.7
	Singapore	1	.9	.9	96.5
	Sri Lanka	1	.9	.9	97.4
	Turkey	1	.9	.9	98.3
	Vietnam	1	.9	.9	99.1
	Yemen	1	.9	.9	100.0
	Total	115	99.1	100.0	
Missing	System	1	.9		
Total		116	100.0		

31. What is your gender?

Male		Female		Other		Total	
Count	N %	Count	N %	Count	N %	Count	N %
59	50.9%	56	48.3%	1	0.9%	116	100.0%

32. What is the highest educational level obtained by your father?

Primary school		Secondary school/high school		Vocational school/2-yr college		University degree		Post-graduate degree		My father didn't have any formal schooling		Total	
Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
5	4.3%	18	15.5%	9	7.8%	55	47.4%	29	25.0%	0	0.0%	116	100.0%

33. What is the highest educational level obtained by your mother?

My mother didn't have any formal schooling		Primary school		Secondary school/high school		Vocational school/2-yr college		University degree		Post-graduate degree		Total	
Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
1	0.9%	4	3.8%	28	26.4%	8	7.5%	47	44.3%	18	17.0%	106	100.0%