

ASSESSING INSTITUTIONAL EFFORTS TO CULTURALLY INTEGRATE  
INTERNATIONAL UNDERGRADUATE STUDENTS

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The purpose of this research is to find evidence regarding the success of efforts higher education institutions have made to integrate international students generally, and specifically those efforts that foster engagement with domestic students. Institutions were selected for review based on a value-added regression analysis on higher education institutions' average level of perceived campus support among international undergraduate students using as predictors exogenous factors beyond the institution's direct control. A set of 12 outlier institutions (six negative and six positive), were identified based on the difference between predicted and actual values of the Supporting Campus Environment indicator from the National Survey for Student Engagement. A blind assessment of campus web pages was then conducted to assess the robustness of international student support programs. A stronger association was discovered between the value-added measure (regression residual) and the web scan ratings ( $r = .35$ ) than between the predicted level of perceived support and the web scan ratings ( $r = -.11$ ). This analysis demonstrates that the value-added approach for assessing institutional effectiveness provides a somewhat valid measure of effectiveness, although there was sufficient divergence between the value-added measure, and the qualitative assessment of international student services to warrant further research and careful consideration of using this method to assess institutional effectiveness.

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## CHAPTER 1—INTRODUCTION

One of several ways that college student demographics are changing in the United States is the growing presence of international students on college campuses. The overall number of international students enrolled in U.S. higher education institutions grew by 103% between 2000 and 2016, from 514,723 to 1,043,839 (Open Doors, 2016). By 2020, the international student enrollment in the United States is projected to reach two million (Douglass & Edelstein, 2009). In particular, the leading U.S. host institutions have more than doubled their international student enrollment over the past 15 years (Open Doors, 2014). A substantial portion of the recent increase is accounted for by the rise of international students at the undergraduate level (Open Doors, 2016). For the first time in 2011, the number of enrolled undergraduate international students surpassed the number of enrolled international graduate students (Open Doors, 2012). At a time when U.S. public institutions are seeking alternative revenues to compensate for state budget cuts caused by the global recession (Johnson, Oliff, & Williams, 2011), the increasing number of undergraduate international students is helping to fill the funding gap.

### **Problem Statement**

International students who are well integrated into campus culture are more likely to participate in the classroom, thus enriching their own and domestic students' educational experience and advancing international perspectives (Andrade, 2006; Gareis, 2012). Enhancing international student integration also improves student retention (Özturgut, 2013). Encouraging international students to expand their social network beyond students from their countries of origin can also help to limit the negative effects of acculturative stress (Sullivan & Kashubeck-West, 2015; Yan & Berliner, 2011). A number of researchers and practitioners have observed and expressed concern that international students and domestic students appear to be moving in

parallel tracks with limited overlap in curricular and co-curricular activities (Brustein, 2009; Özturgut, 2013; Redden, 2014; Young, Eland, Isensee, Yefanova, & Yu, 2014). Glass and Westmont-Campbell (2013) reported that U.S. students generally view their campus environment as supportive of diversity and internationalism, but they contradictorily rated their actual interaction with peers from different cultural backgrounds as “rare,” and their desire for exposure to students with cultural backgrounds different from their own as “neutral” (Glass, Buus, & Braskamp, 2013). Such phenomenon illustrate that the image of internationalized campuses portrayed on college websites is often inconsistent with the reality of the domestic and international student experience.

Numerous reports and studies have noted that many international students do not integrate well into American campuses. Gareis (2012) found that 40% of the international students surveyed reported having no close American friends. Zhao, Kuh, and Carini (2005) reported that both first-year and senior international students at a national level are less socially engaged on campus and are less satisfied with their overall college experience than their peers born and raised in the United States. In prestigious flagship public universities (Association of American Universities [AAU] members), international students are reported to be less satisfied with their overall social experience, less sure about the value of their U.S. education, and less likely to choose the same university if given the chance again compared to their domestic peers (Zhao & Douglass, 2012). If this gap continues to persist, U.S. institutions will likely suffer losses in international student enrollments and in the benefits that accrue from international student participation in U.S. institutions (Choudaha & Schulmann, 2014).

The losses could be in direct tangible ways or in ways that are indirect and less tangible. The direct tangible benefit loss includes income and graduation rates (Johnson et al., 2011).

International students have been reported to inflate graduation rates in countries with a high proportion of international students, such as Australia, New Zealand, and the UK (University World News, 2013). The experience of international students today may have a significant effect on the attractiveness of the institution for top student talent and tuition income tomorrow, both internationally and domestically (Zhao & Douglass, 2012). Indirectly, U.S. institutions would lose opportunities for expanded cultural enrichment. American students, faculty members, and administrators would miss out on the opportunity to take advantage of the different cultural backgrounds, perspectives, and values that international students bring to campus to expand domestic students' understanding of who they are and how they think of and relate to others (Redden, 2013).

### **The Integration Experience of International Students**

University administrators, faculty, and staff do not always recognize the unique needs of international students. International students have been traditionally a small population (about 5% of total national enrollment; Open Doors, 2016) compared to American underserved groups, which usually garner more attention related to needed academic and social supports (Mamiseishvili, 2012). In addition, international students' average grades and graduation rates have been generally higher compared to domestic students (University World News, 2013). As a result, enhancing practices that promote intentional campus experiences and developmental programs has been a low priority (Lee & Rice, 2007).

Historically, international students' cultural and pre-departure backgrounds were less of a concern to U.S. college administrators than their academic performance and involvement in college during the first year, especially for international students. Students have been treated as recipients of campus culture rather than active learning agents who interact with the institution

(Stage & Hossler, 2000). A gap exists between administrators' perceptions of international student departure and the reasons reported by students who have transferred away from their first enrollment institution (Choudaha & Schumann, 2014).

Resources and services provided for international integration have also been described as inadequate to the task of serving them. International student services staff are generally considered to be specialized in international student development. Unfortunately, they are often overwhelmed with immigration issues, visa procedures, and tracking student legal visa status to the detriment of the service aspect of improving the international student college experience (Andrade, 2006; Di Maria, 2012; Redden, 2013). Although interested, general student affairs staff are not as involved in supporting international students as are their colleagues in international student services, and they have less specialized training in this area (Di Maria, 2012).

Because of these deficiencies, policies and practices related to integrating and supporting international students on U.S. campuses are worth increased attention from senior leaders at U.S. universities and from higher education research scholars. This is especially important as U.S. institutions increasingly rely on international enrollments to meet budget targets, particularly at public institutions where tuition is typically three times higher for international students than for in-state resident students (Redden, 2013; Slaughter & Rhoades, 2004). With global competition for international students ever increasing (Organisation for Economic Co-operation and Development [OECD], 2014) and students becoming more sophisticated in choosing their destinations, it is urgent that U.S. university leadership examine and improve the international student experience to sustain enrollments, improve international student persistence, and promote authentic global engagement for all students (Lee & Rice, 2007).



## **Purpose**

The purpose of this study is to advance our understanding of what distinguishes universities that have the best results in terms of integration from institutions with poorer results related to the organizational arrangements and programmatic strategies for international student integration within their mission-related contexts. The next section will briefly summarize the research literature regarding related studies and theoretical and conceptual frameworks that serve to inform the current study.

## CHAPTER 2—LITERATURE REVIEW

The purpose of the study is to investigate the characteristics of institutions at which international students have the highest levels of integration and what initiatives and services those universities offer to support international student integration. The following section provides a brief history of the research literature on international student integration, identifies trends in the research, and reviews the current state of knowledge on this topic. This is followed by a discussion of the limited literature on existing university practices. The final section of this review presents salient theoretical frameworks that have been utilized in this literature, culminating with a presentation of the theoretical framework that underlies the current study.

### **International Student Adjustment**

International students began attending U.S. postsecondary institutions in significant number in the late 19th century. However, rigorous research about this phenomenon started about 50 years later—after World War II—when international exchange programs gained momentum in the 1950s. Notably, Gukich (1948) conducted a study of the personal adjustment of 13 graduate international students who were enrolled in the School of Education at Ohio State University. She informally interviewed these 13 graduate students and learned that most of their adjustment problems were associated with language difficulties, cultural adjustment, and the inability or unwillingness of U.S. students to relate to them. She recommended improving the institution's orientation program and establishing more relevant sociocultural relationships between domestic and international students.

MacKay (1954) studied Indiana University's role in intercultural education through historical narrative. She noted that the institution needed to improve counseling and increase the opportunity for non-English speaking international students to learn English and the U.S. culture

by selective placement in academic and living arrangements, as well as establish a more relevant orientation program for newly enrolled international students.

Arjona (1956) compared the adjustment problems of international graduate students with those of domestic students who were enrolled during the 1954-1955 academic year at Indiana University. The adjustment problems were analyzed from four perspectives: personal, emotional, social, and academic. The study revealed that the 50 randomly selected non-English speaking international students were experiencing considerably more problems than their U.S. peers. The author recommended providing organized orientation programs for international students, more opportunities for interaction between domestic and international students, and improved information regarding available campus services and facilities for international students.

Early research on this topic often focused merely on the description and analysis of the students' psychological experiences (Pyle, 1986; Ward et al., 2008). A substantial focus of these studies was on adjustment issues (Church, 1982), such as mastery of language (Hagey & Hagey, 1972), health concerns (Miller & Harwell, 1983), and support for academic and social needs (Hamilton, 1979; Wan, Chapman, & Biggs, 1992). Although Church's (1982) aim was to summarize predictors of international student adjustment, he noticed that flaws existed as to the utilized methods, specifically that the underpinning concepts and theories were underdeveloped, and that existing studies lack longitudinal design and inadequate use of control groups.

Starting in the 1980s, research began to shift toward a social adjustment perspective, examining issues such as acculturative associated stress and the coping strategies used by international students (Berry, 1980; Furnham & Bochner, 1986). Therefore, researchers' perspective changed from a clinical view (psychological adjustment) to a developmental perspective (social adjustment). With a minor change, the research on international students in

the U.S. through the turn of the 21st century focused on the challenges these students faced in their adjustment to foreign universities and culture (Barratt & Huba, 1994; Chen, 1993; Chiu, 1995; Kaczmarek et al., 1994; Kagan & Cohen, 1990; Poyrazli et al., 2001; Rajapaska & Dundes, 2003), their coping styles and strategies (Cross, 1995; Hayes & Lin, 1994; Mallinckrodt & Leong, 1992; Misra et al., 2003), and how to reduce adjustment related stress and enhance the positive aspects of the international experience (Ward et al., 2008).

Between 1982 and 2010, the growing literature on international student adjustment predictors remained unsynthesized and unintegrated (Church, 1982). Studies conducted by Zhang and Goodson (2010) and De Araujo (2011) filled this gap. Zhang and Goodson (2010) conducted a systematic review of 64 peer-reviewed journal articles between 1990 and 2009. De Araujo (2011) conducted a systematic review of 11 peer-reviewed journal articles. Through systematically examining predictors of psychosocial adjustment of international undergraduate and graduate students in the United States, the two studies suggested that the following four categories of factors are the most frequently reported stressors and most significant predictors: (a) student preparation (English language proficiency, length of residence in the United States); (b) psychological factors (stress, self-efficacy, personality, homesickness); (c) socialization factors (acculturation, interactions with Americans, perceived discrimination or prejudice); and (d) demographics (gender, country of origin).

### **Shifting the Focus to the International Student College Experience**

One of the many major shifts in U.S. higher education in the 21st century was the increased demand for accountability and evidence of learning outcomes. Institutions faced these demands while also facing cuts in state financial support (Mallory & Clemont, 2009). As institutions increased their recruitment of international undergraduate students, issues arose

related to their persistence to stay in college. There has been limited research on international student persistence (Andrade, 2009; Andrade & Evans, 2009; Kwai, 2010; Mamiseishvili, 2012), especially on their perception of the services offered to retain them (Hanover Research, 2013). In addition, there is limited national data on international student retention rates for researchers to analyze (Evans, Carlin, & Potts, 2009), and the only data pertain to institutional-level enrollments and graduation rates, but not at the degree program (major) level. This, in turn, provides limited insights on the factors that most influence international student persistence, and that subsequently leads to limited guidance for policymaking<sup>1</sup>.

Researchers have observed the emergence of neo-racism (a form of discrimination based on cultural differences or national origins regardless of race; Lee, 2015) among domestic students, which could lead to cultural clashes (Fischer, 2011, 2012b; Glass et al., 2013; Harrison, 2012; Lee & Opio, 2011; Lee & Rice, 2007). Not only are international students often friendless (Gareis, 2012; Glass, 2012), numerous derogatory incidents have appeared on campuses, such as Kansas State University (Fischer, 2012b), University of Nebraska-Lincoln (Redden, 2012), Ohio State University (Tilsley, 2012), Michigan State University (Moran, 2012), and the University of Iowa (Drash, 2015; Lee, 2013). Derogatory words toward international students were published in various formats, such as a university newspaper, off-site university social media, and spray-painting on a student car, including phrases like "Go back home" and "Enemy." Concurrently, the research focus has shifted from retaining students to integrating and interacting students

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<sup>1</sup>IPEDS graduation rates are reported by Race/Ethnicity, and the Non-Resident Alien ethnic group is where all temporary international students appear (i.e., those who are not permanent residents or have become U.S. citizens).

interculturally (Fischer, 2012a).

Several researchers have called for studies examining the student's college experience from an institutional perspective (Douglass & Edelstein, 2009; Harper & Quaye, 2009; Kuh et al., 2007; Pascarella & Terenzini, 2005; Zhao et al., 2005). This has resulted in an emerging area of research that views international integration within the context of specific institutions (Glass et al., 2013). Institutions are increasingly viewed as holding the responsibility to design, create, and arrange campus environments to foster campus diversity and internationalization (Strange & Banning, 2001). As such, researchers and higher education leaders are calling for more research on how to create a campus environment that prepares domestic students for their new classmates (Fischer, 2012a; Glass & Westmont-Campbell, 2014) and supports the integration of international students and domestic students (Bevis & Lucas, 2007; Edelstein, 2009; Zhao et al., 2005), which also requires a greater effort and not just an increase in diversity (Fischer, 2012a). The International Student Barometer as an instrument is designed for such purpose and 1,400 institutions have used it in the United States and 31 other countries, with feedback from over 2.9 million students worldwide (I-Graduate International Insight, 2017).

It appears that frequency of intercultural interaction on and off campus is low unless intentionally fostered (Redden, 2014). It has been reported that U.S. students and international students, in general, lack interest in cross-cultural engagement (Glass et al., 2013; Yan & Berliner, 2011). In a study conducted by Glass et al. (2013) on U.S. college students' global perspective, most domestic students reported that their interactions with international students are anxiety causing. Factors such as language barriers, disinterest in other cultures, and fear of causing offense lead U.S. students to consciously or subconsciously avoid interaction with international students (Harrison, 2012).

Not only do U.S. students show hesitation and disinterest, the same holds true for international students. International students' lack of understanding, heavy reliance on co-national peers, and failure to attempt to understand the campus from a cultural perspective makes it extremely difficult to establish feelings of belonging and inclusion. Most international students need support or encouragement to better adapt to the environment (Andrade, 2009; Yan & Berliner, 2011).

Still, a vast majority of international students ultimately want to be integrated into their campus and form friendships outside their nationalities. Abe, Talbot, and Geelhoed (1998) found that talking and interacting with host students was highly correlated with international students' perceptions of their adjustment to American life and that spending more leisure time with Americans was significantly correlated with the adaptation of international students. Many friendships on U.S. campuses are observed forming between students who are living together or participating in the same activities. As such, encouraging the full integration and participation of international students on campus is important for the success of all students.

It has been argued that individual students should not be blamed for poor intercultural interaction behavior. Kwai (2010) pointed out that no matter how prepared international students are academically, how proficient they are in English, or how familiar they are with U.S. cultural norms, they still face unique challenges to succeed in a foreign environment away from friends, family, and familiar surroundings. Hence, as a significant number of studies have suggested, international student integration requires institutional effort to create an engaging environment that is easier for both international and U.S. students to adapt (Andrade, 2006; Choudaha & Schumann, 2014; Di Maria, 2012; Gareis, 2012; Glass et al., 2013; Kwai, 2010; Lee & Opio, 2011; Mamiseishvili, 2012).

In sum, the international student integration research was first approached in the literature by examining psychological adjustment symptoms and then progressed to reducing stress and developing coping strategies for social adjustment. Later, the focus switched to recruiting and retention efforts, and more recently, to international student integration as an institutional responsibility to create an environment conducive to student integration. One particular shortcoming of the literature is the insufficient number of college impact studies conducted to inform policies and practices. Although researchers have been able to identify the acculturative stressors, a substantial number of studies provide only abstract concepts rather than concrete suggestions to help practitioners support international students with their transitions (Choudaha & Schumann, 2014; Di Maria, 2012). Another critique is that the models used for studying international students have only been tested on migrant and refugee populations, which arguably mischaracterize the acculturation experience of international students (Kwai, 2010). The current study adds to the body of literature on international student integration and engagement by addressing institutional practices that foster a culturally engaging campus environment for domestic and international students.

In the following sections, the limited body of evidence that sheds lights on understanding international student experience from a reciprocal institution-student perspective is discussed. First, the empirical studies that inform what we know about international student engagement, integration and involvement are explored. Then, the existing programs and practices that have been labeled “best practices” through various studies done by institutions, government entities, and research organizations are reviewed. Finally, the most commonly used theoretical frameworks in this field of research are discussed and the theoretical framework for the proposed study is explained.



## **International Student Engagement**

There are a limited number of studies about the impact of college on international student engagement; however, interest in international student engagement has become more popular as have the interests in student engagement for all students. The review in this section reflects how terms like integration, involvement, and engagement have been used both precisely and also somewhat loosely and interchangeably over time. Although used somewhat loosely at this point, more precise distinctions are drawn later in the chapter.

One of the most highly cited studies on international student engagement was conducted by Zhao et al. (2005). The researchers used data from a large national survey to examine the extent of international student engagement compared with American peers. Areas of comparison included student learning, personal development, and satisfaction with college. The study used data collected through the National Survey of Student Engagement (NSSE, 2017), which has been used by over 1,600 institutions since 2000. The study employed NSSE data gathered in 2001 from 317 four-year institutions, with a total of 175,000 randomly selected first-year and senior students combined. Zhao et al. (2005) found that both first-year and senior international students were less satisfied with their overall college experience compared to their domestic peers. In particular, engagement levels were observed to be different among racial groups within international students. Asian international students overall were less engaged and less satisfied with the quality of the campus environment compared to international students who are White and Black. Yet, Asian international students are the majority population among international students.

Andrade (2006) aimed to understand the relationship between international student experience and persistence and academic achievement at one private, religiously affiliated

university. The author conducted ethnographic interviews and focus groups with 17 senior status international students from Asia and the South Pacific enrolled in a Mormon university. Andrade (2006) found the key factors contributing to international students' academic success and persistence were not only related to the students' activities and efforts, but also to institutional efforts reported by international students as contributing to their ability to persist. Institutional engagement efforts included involvement in spiritual life, engagement in courses, and involvement in extracurricular activities.

Otsu (2008) conducted a study that established a positive correlation between undergraduate and graduate international students' overall satisfaction with the campus and their satisfaction with various aspects of campus support and interpersonal relationships. She found that international undergraduates were more involved in their academic experiences than international graduates. International undergraduates also had a greater amount of campus involvement and more interpersonal relationships on campus and were more satisfied with their campus experience than international graduates.

Kwai (2010) examined factors influencing international student retention from Fall 2006 to Fall 2007. In this quantitative study, the author surveyed 454 international undergraduate students at two public 4-year university systems. The study was guided by a combination of retention models developed by Tinto (1975) and Astin (1970), with revisions made by Tierney (1992) and Pascarella and Terenzini (1980). The findings of this study suggest that there was no single factor or model to predict the persistence of international undergraduate students in the United States; however, spring semester GPA, credit hours attempted, and on-campus employment all had a positive effect on retention into the second year of international undergraduates, as they did for domestic students.

In a doctoral dissertation study, Phillips (2013) examined international student engagement and success by race using the 2007 NSSE data. This study further supported Zhao et al.'s (2005) finding that international student engagement varied not only by race, but also by gender and institutional type. According to Phillips (2013), Black and Latino international students exhibited a higher level of engagement compared to Asian international students. Male international students engaged in enriching educational experiences at a higher level compared to female international students.

Based on a nationwide survey completed by 454 international students, Gareis (2012) examined how host region affected international students' friendship experiences in New York City, non-metropolitan parts of the Northeast, and non-metropolitan parts of the South. She found that students were more pleased with the number and quality of their friendships with Americans in the South than the Northeast and more satisfied in non-metropolitan smaller college towns than in metropolitan environments. She concluded that the regional differences might be attributed to Southern hospitality. It also could be that international students at those institutions have fewer on- and off-campus networks of people from their own country or region to turn to, and thus are more likely to make American friends (Gareis, 2012).

Glass, Gómez, and Urzúa (2014) uncovered differences by region of origin in international student recreation participation, intercultural friendship, and adaptation to U.S. colleges. Using measures from the Ethnicity and Public Recreation Participation (EPRP) model and the Student Adaptation to College Questionnaire (SACQ), the authors analyzed data from a national sample of 298 respondents. In particular, their findings showed that non-European international students participated less in recreation and leisure activities compared to European students, with Eastern and Southeastern Asian in particular showing the lowest levels of

participation among non-European students. In addition, non-European international students tended to form friendships with their co-national peers and establish fewer friends among domestic peers. On the basis of these findings, the authors made several recommendations to enhance international students' social and academic adaptation to college, including (a) institutional researchers should add a country of origin item to existing campus climate instruments such as the Diverse Learning Environments survey (Higher Education Research Institute [HERI], 2012); (b) faculty, administrators, and student leaders should consider whether closing the host national-international student friendship gap is a necessity, luxury, or an ideal; and (c) faculty and administrators should redesign curricular and recreational opportunities to enrich the quality of the academic environment for all students—both host national and international students—and help international students to better adapt to their host institutions.

Zhao and Douglass (2012) examined international student engagement across the highly selective AAU institutions, an association of 62 leading research-intensive universities in the United States and Canada. The authors used data from the 2010 Student Experience in the Research University (SERU) survey. This survey was administered at 15 of the 62 AAU member campuses, including nine University of California campuses and six other public research universities: Rutgers University, the University of Pittsburgh, the University of Michigan, the University of Minnesota, the University of Oregon, and the University of Texas. The authors included international student “density” in their study, which is the proportion of international undergraduate students on each of the campuses. They found that an increasing density had a positive impact on academic aspects of the educational experience for both U.S. and international students. A higher density of international students was also associated with a greater sense of belonging (but still lower than domestic students), increased engagement in their

studies, better use of time, and a more positive overall experience. However, international student density was negatively associated with international students' overall social experience and their perceptions of the value of their U.S. education. The respondents enrolling in higher density institutions were also less likely to indicate that they would re-choose the current university if they had the chance to decide again.

Melnick, Kaur, and Yu (2011) investigated the relationship between international student social integration and their academic outcomes. The researchers administered a survey regarding the factors affecting social integration to 84 students in two cohorts within a graduate degree-seeking program. The authors suggested that social adjustment eventually affects academic outcomes. In particular, students' prior exposure to international living and/or schooling is an important predictor of student well-being and academic performance in an international program. Those who previously faced social and cultural challenges appeared to adapt better in the study program. In addition, those who improved their English communication through participating in structured team projects and social events reported a greater perception of social integration. The authors suggested that international student developmental programs could be structured to facilitate both social integration and academic achievement, such as social events within academic programs. By doing so, students feel less isolated and able to improve their English at the same time.

### **Campus Climate for International Students**

Glass (2012) examined the extent to which 12 specific educational experiences were associated with international undergraduates' perception of campus climate, learning, and development. Guided by a self-authorship framework of intercultural maturity (King & Baxter-Magolda, 2005) and using multiple regression analysis, the study analyzed 437 international

student respondents to the Global Perspective Inventory (GPI), which assesses global and holistic student learning and development, as well as student experiences and perceptions of their campus environment (Braskamp, Braskamp, & Engberg, 2013). The results suggested that international students who participate in leadership programs, interact with others from their own culture, and take courses where professors facilitate intergroup dialogue reported more positive perceptions of campus climate. The study was limited by a small sample size. In addition, since respondents were selected randomly across the nation, the study did not examine the impact of institutional characteristics, such as size, setting, control, and density on participants' perceptions.

Based on an analysis of a representative sample of 36,973 U.S. and international students from 135 U.S. colleges and universities using the GPI, Glass et al. (2013) confirmed many disturbing trends reported in higher education news resources (e.g., *Inside Higher Ed*, *The Chronicle of Higher Education*) and research studies published in the top peer-reviewed higher education research journals. These disturbing trends include: (a) a lack of community, (b) low-quality faculty-student interactions, and (c) uneven global perspective taking (i.e., disposition and the capacity of an individual to think in complex terms). The authors further emphasized that supportive campus environments play an important role in student development, influencing students' social and psychological adjustment to campus life.

Choudaha and Schulmann (2014) examined the gap between higher education administrators' beliefs about why undergraduate international students persist or withdraw from a particular campus and the actual reasons provided by the students themselves. The study's aim was to increase conversations about issues related to internationalization in higher education. The authors used mixed methods, including quantitative analysis of survey data and focus

groups, in this national study involving 517 international students and 510 international education professionals from 83 institutions. They found that international students and international education professionals provided notably different explanations for why students might leave their institution of first enrollment. In particular, the top reasons for leaving identified by administrators were: transfer to a “better fit institution” (67%), financial reasons (64%), academic difficulties (62%), and inadequate English language skills (40%). In contrast, the top reasons reported by students for transferring are: access to jobs or internships (37%), affordability (36%), and availability of scholarships (34%). Academic preparedness reasons were not among the top five for students. The authors suggested that this perception gap reveals both the urgent need for an evidence-based approach to higher education decision-making and the enormous challenges for identifying and applying evidence within the dynamic higher education environment. As a result of their findings, the authors suggested that institutions: (a) understand the diverse needs and expectations of international students, (b) collaborate on internationalization efforts across departments, and (c) invest in campus programs and services that improve student experiences.

A dissertation study by Di Maria (2012) examined the factors affecting student affairs administrators’ views of campus services for international students. In particular, the author asked three research questions: (a) How are campus services provided to international students? (b) How should campus services be provided to international students? and (c) What factors affect student affairs administrators’ views of campus services for international students? Through a mixed methods study using an Internet-based survey and interviews, Di Maria found that over 97% of the student affairs administrators view the responsibility to serve international students as a shared responsibility. However, 70 to 90% of the participants identified one or

more of the following challenges as support providers: (a) they are largely excluded as stakeholders, (b) they are challenged by communication barriers associated with culture and language, and (c) they lack training opportunities at their institutions. Specifically, respondents expressed concern over the administration and the intentionality of internationalizing student support efforts at their institution. However, a substantial number also expressed a desire to learn about internationalization strategies, to improve services for international students, and to become more involved in internationalization efforts. The author concluded that persistence of international students should not be viewed as the responsibility of only international student advisors on campus. Instead, it should become a joint responsibility of the broader campus community, including faculty, academic advisors, English language program staff, and student affairs professionals.

In summary, a review of the literature indicates that the issue of intercultural integration engages a wide range of institutional stakeholders (Agnew, 2012; Australian Education International, 2010; British Council, 2014; Di Maria, 2012; Singapore Ministry of Education, 2010; Spencer-Oatey, Dauber, & Williams, 2014), such as faculty and staff at all levels and within both academic and student support areas. A multi-pronged environmental approach is generally recommended, as student integration should not solely be the responsibility of international student support staff, counselors, and it definitely should not rely on international students and domestic students alone. Current consistent findings include the identified stressors of adjustment and the existence of a perception gap in the reasons for international student attrition between higher education staff and students. It has also become clear that engagement and adaptation patterns differ by student origin, culture, and institutional type. Scholars have called for more studies on institutional efforts to guide the practice of integrating international



students and domestic students.

### **Literature on Best Practices**

In this section, the studies currently available on institutional practices and efforts conducted by institutions, government entities, and research agencies that aim to find out what practices are being employed by institutions in the United States and worldwide are discussed.

#### **Best Practices in the United States**

The current U.S. research literature about best practices heavily emphasizes student coping strategies, but not institutional coping strategies. Most of the recommended practices are aimed at helping international students cope with campus culture and meet the university's expectations. Very few studies investigate how institutions prepare U.S. students for their new classmates and how institutions can internationalize their environments to adapt to the growing international population that they intentionally seek. More research is needed to explore how universities can create environments that accommodate and reflect the diverse cultures of their students and how institutions can facilitate meaningful communication between international students and domestic students, especially those who show disinterest in each other.

Glass, Wongtrirat, and Buus (2015) aimed to help institutions realize their existing strengths and capacities to guide the development of inclusive campus climates for international students. Based on interviews with international students and higher education leaders, the authors selected six U.S. colleges and universities with different institutional characteristics (e.g., community colleges, liberal arts colleges, and research universities) and discussed the strategies and actions to create campus environments for the academic and social integration of international students on each campus. Some of the practices they examined include: (a) a graduation requirement for all undergraduates of a minimum of two classes that are infused with

global learning outcomes; (b) creating proactive, data-driven, evidence-based case management and tracking system to enhance international student success; (c) forging strong connections between the global community and the local public through housing and residence life; and (d) making support for international students and their families a strategic priority by creating a coordinated service model to implement curricular and co-curricular programs that develop culturally competent students. One limitation of this work is that the authors only suggested what institutions should try to achieve, but they did not examine the impact of the recommended initiatives on student integration, nor did they actually review, critique, or otherwise provide guidance on how to put the suggestions into action.

Hanover Research (2011) sought to identify the best practices in international student recruitment and retention among Anglophone countries. Their report provided several commonly agreed upon strategies for international student retention and services. Institutions can use programs (e.g., orientations, bridge programs, mentorships, and English language institutes) and initiatives that create a welcoming culture on campus to support international students. The report indicated that, although higher education institutions are not commercial enterprises, service quality for international students and scholars should be considered a first priority. Although the report did not include recommendations for specific process or structures of implementation, it did provide five main customer service quality dimensions for measuring international student services (SERVQUAL), including tangibles (appearance of service employees and physical factors such as equipment and facilities), reliability (the ability to perform the service in an accurate and dependable manner), assurance (delivering services with respectful, polite, and effective communication), responsiveness (the readiness and willingness to assist its customers in providing them with a good, quality, and fast service), and empathy

(caring and individualized attention; Parasuraman, Berry, & Zeithaml, 1991; Parasuraman, Zeithaml, & Berry, 1985, 1988).

Young et al. (2014) explored best practices in international student integration among U.S. institutions through extensive online research, reviewing articles and national award-winning campuses, and seeking recommendations from several international education leaders. The authors compiled a list of 16 best practices from 10 institutions, one professional association, and one statewide coalition. They further described four common themes among these best practices, including partnerships, community building, active student learner/leader, and committed intentionality. This study did not claim to actually determine the effectiveness of these practices, but was simply identifying practices that could be adapted at the University of Minnesota Twin Cities (UMTC). The practices cited by Young et al. (2014) and being adopted at UMTC are not compared in terms of their effectiveness, as some of the practices are still in the pilot stage. However, the paper is one of the few studies that focused on institutional practices on international student integration.

### **Best Practices Worldwide**

The U.S.'s global competitors for a market share of international students—Singapore, Australia, and the UK—all have government-led efforts to improve integration among international students as part of their national strategies. Earlier in the 21st century, these countries switched philosophy from care for international students to integration. One major trend among these countries is in adopting a collective and collaborative approach to creating a campus culture. One critique of these attempts is that they lack a concrete process to select or evaluate processes and programs to determine if they achieve the stated objectives of the central authority, rather they appear to be more aspirational. There is no evidence that their goal is being

achieved or that there are programs in place to attempt to do so.

The UK Council for International Student Affairs commissioned authors Spencer-Oatey et al. (2014) to report on the state of knowledge as to what has worked in terms of international student integration in postsecondary education systems in the UK. The deeper goal of this effort was to establish communities of practice that will work toward increasing integration and improving the experience of all students. The authors first introduced the theoretical integration models for different institutional contexts through a review of 30 years of literature. In doing so, they pointed out that the existing integration interventions are largely assumption-based rather than evidence-based. Second, the authors illustrated the current levels of integration between international and domestic students in the UK through an analysis of the latest International Student Barometer (ISB) data, an international student satisfaction survey intended to aid policy decision-making. Third, the authors used case studies to provide examples of internationalization strategies and activities that have proven effective in student integration. Among the major strategies they discovered were efforts to create a platform for home and international students to collaborate around a common goal, to encourage them to learn from each other, and to intentionally seek to improve the international culture on campus. A few examples of implementing these strategies include: (a) encouraging students to participate in music ensembles that reflect diverse musical and cultural backgrounds; (b) encouraging students to explore the literature of different countries with the aim of building an awareness of the cultural values of other people; (c) engaging students to participate in multicultural group work by establishing a context via a confidential online messaging system; and (d) soliciting students' personal reactions to a story about a dysfunctional student team, such as participating unequally in group work.

The Australian government started a community of practice in relation to international student integration. The Australian Department of Education, Employment, and Workplace Relations (DEEWR, 2008) reported examples of good practice in assisting international students to integrate with Australian students and the wider community. This paper sought to open up opportunities to share good practice across the sector and to learn from others' experience. The authors divided practices into four types: (a) collaborative international/domestic student learning programs, (b) promoting engagement with the wider community, (c) orientation and information services for international students, and (d) staff/student social and cultural exchange activities. Like many other cited studies, this one did not include empirical support for the effectiveness of these programs, but simply described what were perceived to be effective practices. One of the major themes of this analysis is promoting a change of philosophy. For example, one of the participating programs reported that their philosophy has evolved from having an objective of delivering practical support to recognizing the reciprocal relationships that develop between domestic volunteering students and international students and the considerable learning that takes place for all participants. Reflecting this shift in philosophy is a change in the program name from "International Student Care Program" to "Community Connections." Other salient practices include project-based learning, community services, and formal evaluation and feedback systems. It is worth noting that the Australian study did not provide a conclusion. However, the exemplary programs reviewed in this study share three commonalities: (a) single initiatives rather than a collective and campuswide approach, (b) a lack of benchmarking to show if the value is added by the institution, and (c) a lack of evaluating the process for the fidelity of implementation.

The Singapore government is taking a comprehensive approach to the internationalization

of their education system from the K-12 through college levels. The Singapore Ministry of Education (2010) put together a best practices package aimed at helping schools consider how to help young domestic students develop a strong sense of their own national identity while enabling them to cultivate a global orientation and the intercultural skills they will need to thrive in an interconnected world. The ideal outcome is for all students to become seamlessly integrated into their student body and the wider Singapore community. As part of this approach, the government developed a three-tier system for integrating Singaporean and international students. The tiers include functional integration, developing social networks, and promoting mutual trust and understanding. The first tier focuses on efforts to help meet newcomers' physical needs, such as settling down and adjusting to studying and living in Singapore, forming support systems, and learning about local norms. The second tier seeks to create opportunities for local students and newcomers to form friendships based on shared interests and to begin to understand and appreciate cultural differences and diversity. The third tier attempts to foster mutual trust, understanding, and acceptance among all students in Singapore through shared experiences, social ties, and common values. A comprehensive suite of programs across all three tiers of integration are intended to be consistently implemented, sustained, and refined over time. However, there is no proof of structure and process of assessment to demonstrate the fidelity of the programs.

### **Theoretical Frameworks**

The theoretical underpinnings of this study trace back to a line of theories related to U.S. domestic student integration, involvement, and engagement. This includes Tinto's (1975, 1987, 1993) theories of student integration, Astin's (1970, 1984, 1987, 1993) theory of student involvement, Kuh's concept of student engagement (Kuh, Schuh, Whitt, & Associates, 1991;

Kuh, Kinzie, Schuh, Whitt, & Associates, 2005), and most recently, Museus' (2014) culturally engaging campus environment (CECE) model.

### **Tinto's Student Integration Theory**

Tinto's (1975, 1987, 1993) theory of student integration was originally proposed for the purpose of explaining why students leave or stay in college. Tinto proposed that student departure from an institution can be predicted by students' level of integration academically (sharing academic values) and socially (developing student, staff and faculty friendships), and that integration is facilitated by successful separation from family and high school (see Figure 1). Tinto's theory is rooted in several sociological theories, namely Emile Durkheim's (1897/1951) theory of anomie (as applied to the conceptualization of student dropout from college by Spady, 1971) and Van Gennep's (1960) rites of passage theory (subsequently refined by Tinto, 1993). Durkheim (1897/1951) referred to anomie as a state of disconnection from societal norms and values resulting from decreasing amounts of interaction among various groups due to rapid population growth (Allan, 2005). In studying the suicide rate differences among European Protestants and Catholics in German-speaking countries, Durkheim argued that Catholics had lower suicide rates than the Protestants because Catholics had higher levels of integration—more connections between individuals (group attachment) and higher levels of regulations of behavior (norms and morale). Durkheim further argued that suicide at a macro level is caused by lack of moral (value) integration and insufficient collective affiliation (Tinto, 1973) rather than of their integration, both academically (formal learning) and socially (informal learning). Tinto (1993) later borrowed from Van Gennep's (1960) rites of passage theory and extended his own theory by noting that college is an initiation to adulthood, and only when students separate from their own cultures to adapt to a new culture will they benefit from the full rewards of membership in

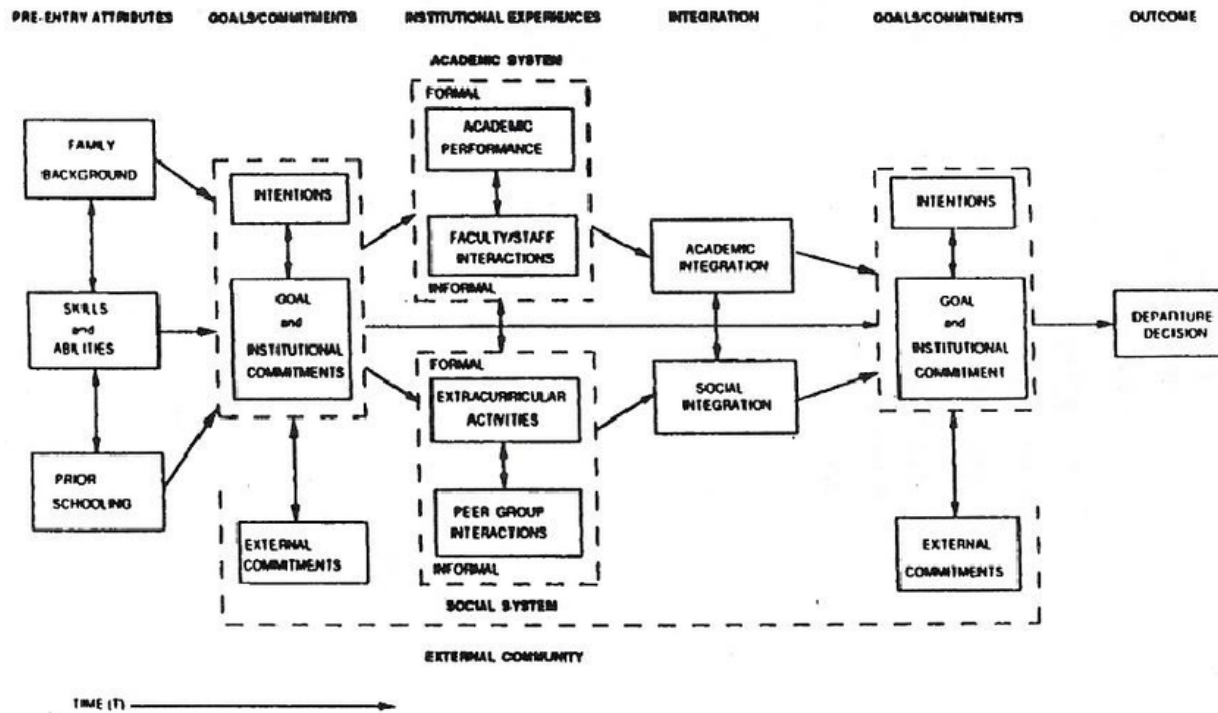


Figure 1. Tinto's theory of student integration. Taken from "Leaving College: Rethinking the Causes and Cures of Student Attrition," by Vincent Tinto, 1993, p. 114. Copyright 1993 by the University of Chicago Press.

the college community; otherwise, they are at risk of departure. Tinto (1993) expanded the debate on the causes of student departure to institutional factors that affect retention, viewing academic and social integration as availing institutional influences to reducing dropout rates (Voigt & Hundrieser, 2008). Many researchers have used Tinto's (1993) theory as a point of departure for their investigations of student persistence (Andrade, 2006).

**Definition of integration.** There are a variety of notions regarding integration. For example, authors from the UK, Spencer-Oatey et al (2014) analyzed the literature and found that integration takes place at three different levels: community (social integration; Berry, 2005), individual (personal integration; Bennett, 1986), and institutional (structural integration; Allport, 1954). In a U.S. historic and cultural context, integration is often associated with the domestic Civil Rights Movement as people of different racial and ethnic backgrounds started living, working and attending school together. In addition to equal rights, the term integration has been



used in higher education context to characterize the relationship between a student and the college they attend. Integration also refers to the “coordination of mental processes with the environment,” in addition to “the practice of uniting people from different races in an attempt to give people equal rights” (Merriam-Webster, 2017).

Tinto’s (1975) student integration model has been very influential within higher education research and practice and so has it shaped the use of the term integration accordingly. The impetus for this model was to explain student attrition. The model’s original focus was on how the student is integrated into the social and academic milieu of the university. Tinto (1997) revised the theory from focusing on social and academic integration happening as concurrent processes to a more longitudinal process of development, where social integration was more critical at the early stages and academic integration at the later stages (McCubbin, 2003). However, the term integration in Tinto’s (1975) model still retains the connotation of “assimilation” and “acculturation,” which infer detaching from one’s home culture to join another culture. Critics of this notion suggest that the level of incongruence between racial and ethnic minority students’ respective home cultures and the cultures found on their campuses is positively related to cultural dissonance or tension due to the incongruence between students’ cultural meaning-making systems and the new cultural knowledge they encounter, and such dissonance is inversely related to the likelihood of success (Museus & Quaye, 2009).

Museus, Lam, Huang, Kem, and Tan’s (2011) proposed concept—*cultural integration*—is more relevant to the intent of the research for capitalizing on students’ cultural contributions to their educational environments. The concept of cultural integration refers to the integration of students’ cultural backgrounds and identities with the academic and social domains of students’ lives—and the role of such integration in validating students’ cultural backgrounds and

identities. Such use of the term cultural integration differs from Tinto's (1987, 1993, 1997) concepts of academic and social integration in fundamental ways.

First, the concept of cultural integration emphasizes the validation and inclusion of students' cultural backgrounds and identities rather than detaching them in order to succeed in the academic environment. Second, cultural integration refers to the extent to which students view the academic environment (e.g., space, courses, projects, or a set of activities) as reflecting the academic, social, and cultural components of their lives, rather than focusing on the extent to which students assimilate into the academic and social subsystems of their respective campuses. Third, the cultural engagement concept focuses at the institutional level (e.g., educational environment and activities) rather than at a student level, emphasizing the primary responsibility on the part of faculty, administrators, and staff as they are the major forces that design and structure most learning environments (Museus et al., 2011).

Thus, the definition of integration for the purpose of this research is adapted from the concept of cultural integration:

An integrated campus environment reflects the interaction, self-identification, and acceptance of all students' cultural backgrounds and identities among students, faculty members, executive administrators, and staff through institutional efforts to enhance the academic environment, such as its spaces, curricula, and activities.

### **Astin's Student Involvement Theory**

Astin's (1984) student involvement theory also emphasizes the mutual relationship between institution and student rather than placing full responsibility on the student to "fit in." In 1966, Astin developed what is now one of the nation's largest continuously administered national surveys of the college student experience—the Cooperative Institutional Research

Program (CIRP) surveys. Based on the results from the CIRP Freshman Survey, Astin developed student involvement theory. Astin (1985) proposed that students learn through being involved. The greater the amount of physical and psychological energy a student puts into their academic and social experiences in college, the more successful they will be. In other words, students who are active in their learning are more successful than students who are less active (Astin, 1985, 1993, 2003; Pascarella & Terenzini, 2005; Wolf-Wendel, Ward, & Kinzie, 2009).

Astin (1984) chose the term *involvement* over the psychological construct *motivation* to focus on more directly observed and measured behaviors. Thus, involvement related to observed behaviors rather than unobserved attitudes or perceptions, but it implies aspects of motivation (Astin, 1984). Hence, it is easier for educational practitioners to answer the question, “How do you get your students involved?” than “How do you motivate your students?” In this way, institutions can focus time, attention, and resources on ways to stimulate and support student involvement.

To measure involvement, Astin (1984) particularly emphasized time: “A highly involved student is one who devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (p. 31). Astin claimed “time” as the most precious resource, as the more time and effort students devote to designed activities, the more likely they are to achieve the developmental goals the institution has set for them. Thus, if the goal is to have international students and domestic students integrate well, and to increase their knowledge and understanding of different cultures, the institutions should create opportunities for domestic and international students to interact, have hands-on experiences together, and discuss issues with one another (Burkhardt & Bennett, 2015).

Although the theory of involvement is widely cited, a majority of the research using this theory has been focused on involvement in extracurricular activities (Pascarella & Terenzini, 1991, 2005). The focus has also been on the relationship between student characteristics and level of involvement, without much attention to the influence of institutional characteristics. Astin and Tinto both suggest that student's social integration with the institution is a critical component to their persistence. Astin's (1984) involvement theory focused on more than drop out or persistence; instead, it focused on behaviors that promote persistence (Voigt & Hundrieser, 2008). Tinto's (1993) theory of integration accommodates the institutional responsibility by including the impact of organizational characteristics on student persistence (Berger & Braxton, 1998), emphasizing the role the organization plays in student social integration.

### **Kuh's Student Engagement Concept**

Kuh's concept of student engagement is aimed at identifying best practices in undergraduate education (Kuh, 2001, 2003; Kuh et al., 2005; Wolf-Wendel et al., 2009). The student engagement concept was originally influenced by three constructs: (a) the quality of student effort (Pace, 1980), (b) the amount of time for involvement (Astin, 1985), and (c) "good practices" in undergraduate education (Chickering & Gamson, 1987). As Pascarella and Terenzini (1991) indicated, one of the most inevitable and undeniable conclusions from 20 years of research in higher education is that the impact of college is largely determined by the individual's quality of effort and level of involvement in both academic and non-academic activities. The concept of student engagement encompasses two key components. The first is the amount of time and quality of effort students put into their educational activities. The second is how institutional resources are allocated and how learning opportunities and services are

organized to foster student participation in meaningful educational activities (Kuh, 2001, 2003; Wolf-Wendel et al., 2009). Wolf-Wendel et al. (2009) further stated that the theory of engagement informs institutional improvement by identifying specific activities institutions could implement to directly and indirectly impact student outcomes. As noted in the earlier review of empirical literature, for international students, increased educational engagement has a positive correlation with their grades and persistence (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008)

In summary, integration and involvement are broader concepts than engagement as they relate to curricular, co-curricular, and extracurricular activities. Integration arises from sociological roots and looks at student success at a macro level, while involvement entails a more behavioral perspective. One could say that, for students to be successful in college, they need to be integrated. To be integrated, they need to first be involved. To be involved, they need to be engaged. Engagement is thus the first step for student involvement from an institutional perspective. The institution serves as an active agent in creating a supportive, engaging, and involving environment. Specifically, engaging students requires involving students in educationally purposive activities, a key type of involvement that promotes academic integration.

### **Shortcomings of the Three Theories**

Although these three theories have advanced levels of understanding of how institutional environments can impact student success, they share one common shortcoming. They have been criticized as racially and culturally biased (Tanaka, 2002) because the research supporting the development and testing of these theories generally does not include a sufficient consideration of the racial and cultural context in their explanations of student success (Dowd, Sawatzky, & Korn, 2011). These theories were created based on measuring common behaviors among

primarily White students and are only accurate in capturing White undergraduates' experiences and not those of minority students (Hurtado & Carter, 1997). A de-racialized and acultural perspective of student success is problematic, because it can lead to inaccurate predictions of student outcomes for underserved student populations and the perpetuation of structuring environments based on the behaviors of European American populations. Moreover, it can send inaccurate unspoken messages that racial and cultural bias does not exist in shaping institutional environments, programs, and practices, or that it does not ultimately impact the experiences and outcomes of racially diverse populations (Museus, 2014).

### **Museus' Culturally Engaging Campus Environment Model**

Museus' (2014) CECE model adapts the basic tenets of the prior theories and applies them to issues of campus cultural climate. The CECE model encompasses the prior perspectives of college student success, which were based primarily on studies of White students, and the CECE model integrates elements of self-determination theory (Ryan & Deci, 2000) and addresses the shortcomings of the traditional models informed by substantial literature on diverse college student populations. The CECE model suggests that students' access to culturally engaging campus environments is both directly and indirectly correlated to an increased probability of persistence to graduation.

The CECE model functions by examining the impact of campus environment on the experiences of diverse student populations. The CECE model describes nine characteristics to reflect campus environments that are relevant to the cultural backgrounds and communities of diverse college students and that respond to the norms and needs of diverse students. These indicators are Cultural Familiarity, Culturally Relevant Knowledge, Cultural Community Service, Meaningful Cross-Cultural Engagement, Culturally Validating Environments,

Collectivist Cultural Orientations, Humanized Educational Environments, Practice Philosophies, and Holistic Support.

These nine indicators can be used as benchmarks for universities and colleges to measure how culturally engaging campus environments are, to pinpoint what can be improved and to develop strategies to optimize success among minority students on campuses (Museus, 2014). If an institution commits to these nine areas to foster a culturally engaging environment, then diverse student populations on campus are more likely to be successful (Museus, 2014).

### **Applying CECE to the International Student Experience**

The CECE model emphasizes culture and race, which is congruent with the focus of this study on international students. Evidence has demonstrated that how institutions structure campus environments and how educators conduct their work play a significant role in influencing the level of student success at the undergraduate level (Bensimon, 2007; Guiffrida, 2003; Jayakumar & Museus, 2012; Museus, 2011; Museus & Neville, 2012; Museus & Ravello, 2010; Rendón, Jalomo, & Nora, 2000). The CECE model was created to foster an environment for minority students to thrive.

The constructs in the CECE model are quantifiable and testable. Since many of the indicators are measurable, the model makes it possible to gather quantitative data to compare outcome differences among institutional practices. Although the CECE model was originally developed based on studies of U.S. students, it can be readily applied to international students. The model is a student success model to engage campus culture and students from all race and cultures of origin (Museus, 2014), and international students fit into the purpose of the model as they come from racially and culturally diverse backgrounds and different nationalities.

## Summary

The reviewed literature focused on three areas: (a) the empirical literature related to international student retention, engagement, and integration (b) the practical literature related to approaches that are considered to exemplify best practices (albeit lacking evidence to support those claims) and (c) salient theoretical frameworks that can inform the study of effective approaches to integrating international students into U.S. campus environments. Several gaps were identified in all three of these domains.

First, the scope of the current research literature about supporting international students focuses mainly on student-level concerns, with less attention to institutional-level concerns. Research is largely related to students' psychosocial adjustment. This is reflected in several systematic research literature reviews and meta-analyses that identify adjustment-related stressors for international students (De Araujo, 2011; Zhang & Goodson, 2011). The identified stressors have remained relatively consistent over 50 years and the practices and interventions to help students to cope with the stress, such as orientation programs and buddy pairing, are generally the same as when the stressors were first discovered.

Second, the current research literature about best practices heavily emphasizes student coping strategies, but not institutional coping strategies. Most of the recommended practices are aimed at helping international students cope with campus culture and meet the university's expectations. Very few studies were found to investigate how institutions prepare U.S. students for their new classmates and how institutions can internationalize their environments to adapt to the growing international population that they intentionally seek. More research is needed to explore how universities can create environments that accommodate and reflect the diverse cultures of their students and how institutions can facilitate meaningful communication between



international students and domestic students, especially those who show disinterest in each other.

Third, although literature on best practices suggests that most of the focus is on campuswide efforts, international student integration initiatives are mainly carried out by international student services offices. Other offices, such as student affairs offices, are often excluded as stakeholders and challenged by communication barriers associated with culture and language (Di Maria, 2012).

Fourth, the current research is not grounded in conceptual models that form a basis for operationalizing practice. Studies only consider relatively abstract concepts rather than more elaborate conceptual schemes to provide a rich basis for operationalizing support for international student integration and, just as importantly, for evaluating support efficacy.

Fifth, the current research literature is largely assumption-based and not evidence-based. Studies generally fail to describe systematic implementation and evaluation methods to create theory-guided protocols for best practices that can then be implemented and evaluated as to their fidelity. A systematic approach is needed to design promising practices and to determine what actually works.

Sixth, the number of available national data sources is limited and outdated. For instance, the NSSE data sets used in the majority of the studies on student engagement were already more than four years old at the time those studies were conducted. The enrollment of international students across the country has increased dramatically since when those studies were published using already outdated data, and now, an increasing number of institutions are paying different levels and kinds of attention to international student enrollment due to increasing numbers. The rapid change in numbers of international students makes it difficult to generalize to current or future conditions.

Finally, the current research lacks a theoretical model directly relevant to international student integration. Commonly used theories were based upon the study of White U.S. students, which is inappropriate for supporting students from different cultures, races, social classes, and countries of origin, all of which can misinform and misdirect administrative decision making.

### **Research Purpose and Research Questions**

The issues and concerns raised in this chapter point to an environmental and college impact study that entails systematic design and an evaluation of best practices for international student integration. The purpose of this study is to advance our understanding of what distinguishes universities that have the best results in terms of integration from institutions with poorer results related to how they organize themselves for international student integration within their contextualized characteristics. The identification of high-performing institutions is based on a value-added approach. The research questions are:

1. Can we empirically distinguish among levels of institutional performance in integrating international students, taking into account institution contexts (inputs and mission characteristics) by using an institution-level value-added regression model?
2. Can we observe notable differences between high- and low-performing institutions in terms of the types of programs and services or broader environmental support characteristics they offer as identified online?

## CHAPTER 3—METHOD

A two-stage method is employed in this study. In the first stage, target institutions are identified using a value-added regression model. The criterion for determining international student engagement is the Supportive Environment indicator as answered only by international students responding to the NSSE. In the second stage, a web scan is used to explore a set of institutions in which international students average “better than expected” and “below expected” on this engagement indicator.

The expected performance is determined through an institution-level regression model based on a point-in-time analysis. This model predicts international student perceptions of the campus environment, taking into account given characteristics within which the institution operates that are part of its core mission and context, but also impact prospects for student engagement (e.g., institution size and setting). In the second stage, a web-based document analysis is conducted (Merriam, 2002), using Museus’ (2014) CECE model as a framework for collecting and assessing through available documentation, policies, programs, and practices (Kuh et al., 2005) that promote international student cultural integration at the selected institutions.

### **Stage 1: Value-Added Regression Approach**

A regression-based, value-added approach is proposed to estimate international student engagement effectiveness. The impetus for this approach derives from Astin (1977, 1993) and his colleagues’ use of such a model to account for differences in institutional mission and context when comparing institutional graduation rates. Kuh, Kinzie, Schuh, and Whitt (2005, 2010) also used this approach to identify institutions that were notably effective in engaging students. Dadashova, Ziskin, and Hossler (2010) also used a similar approach to examine institutional efforts around student retention across multiple institution types. For the following application, I

specifically assess institutional levels of engagement for international students.

Astin's (1977, 1993) original use was based on the evidence that better academically-prepared students are more likely to graduate, and therefore, more selective institutions will, on the basis of student input alone, have higher graduation rates. By controlling for institutional selectivity using a regression model that predicts institutional graduation rates, the institution's actual performance can then be compared against its predicted performance (the regression residual) as opposed to directly comparing institutions to each other.

Graduation rates and other such measures reflect to a large extent the kinds of students that enroll; they do not describe the value an institution adds to student success given the types of students that enroll. Colleges and universities with better reputations have the ability to spend more money to attract well-prepared and well-motivated students. Institutions that are "less competitive" or more "open access" are disadvantaged even though they may contribute significantly to student success by their unique missions and targeted student populations. Employing a value-added method, the institutions are considered against their prospects for performance within the contexts that they operate (selectivity, resources, and fixed environmental characteristics; Kuh et al., 2005). Thus, the purpose of the proposed analysis is to measure how well institutions utilize their resources to add value to student engagement with the campus environment. This value-added method is controversial in some ways, especially when used at the student level to assess learning gains, but is arguably "one step forward" from other assessment methods in estimating university-level performance (Kelchen & Harris, 2012).

The value-added approach used in this study is a multiple regression analysis. I first predicted the campus environment engagement score for international students at each institution based on the institutions' given circumstances and characteristics (i.e., holding constant the

factors that are either not within the control of the institution or that reflect important aspects of the institutional mission). Examples of such factors include admission selectivity, residential setting, aggregate student characteristics (student affluence and service to underrepresented minorities), urban v. rural location, and program mix.

After developing and assessing the reliability of the regression model, I used a sampling strategy to select institutions that perform at “above expected” and “below expected” levels from two points along the continuum of predicted performance. The residual score from the regression analysis (actual minus predicted average score among international students on the NSSE Supportive Environment indicator) is used to distinguish levels of performance. Institutions that have the highest standardized residual values, likely over 1.5 standard error units above the mean residual (0) is considered as “above expected” candidates. Conversely, institutions with the lowest standardized residual values, likely less than -1.5 standard error units below the mean residual, is the “below expected” candidate institutions.

Only first-year students are included in the current study for two reasons. First, the freshman year is the time students face the greatest challenges to adjust to a new environment. Those who are not able to adapt to the environment are likely to depart (Tinto, 2007). Although seniors have had a wider range of experiences during college, they are arguably the more engaged ones compared to those who departed prior to reaching senior level. By the end of their first year, freshman students can provide informed reports about their experiences in a variety of college activities. Second, the experiences of first-year students and seniors differ substantially in terms of curriculum (coursework for first-year students emphasizes general education, while seniors are concentrated in the major) and out-of-class experiences (first-year students spend more time on formal extracurricular activities, while seniors may have studied abroad,

participated in internships, and so on; Pascarella & Terenzini, 1991).

### **Instrumentation**

A large number of surveys have been developed over the years for the purpose of measuring student experience in the United States. Borden and Kernel (2010) identified over 120 survey instruments that specifically target the undergraduate student population. They also suggest three criteria for selecting an appropriate instrument for institutional assessment purposes: (a) the appropriateness of the tool for the specific job at hand; (b) the skills and experiences of users; and (c) the availability of sufficient financial, personal, and material resources. Based on these criteria, the NSSE survey was selected for use in this study. The NSSE survey is a comprehensive survey of engagement (as its name implies), and with the revisions made in 2014, contains questions that allow the researcher to identify international students and their country of origin. NSSE is the only survey that represents the multidimensional nature of student engagement.

### **Engagement Indicators**

There are 10 NSSE engagement indicators organized within four themes. The four themes are Academic Challenge, Learning With Peers, Experiences With Faculty, and Campus Environment. Since the intention of the study is assessing cultural integration efforts at the institution level, the theme of Campus Environment was selected. Specifically, the campus environment indicator of Supportive Environment was used. The items comprising the SE indicator are listed in Table 1. This indicator measures student perceptions of the levels of institutional commitment in the following ways: (a) utilization of learning support services; (b) encouragement of contact among students from different backgrounds; (c) opportunities provided for students to be involved socially; (d) support provided for students' overall well-

Table 1

*NSSE Supportive Campus Environment Indicator*

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How much does your institution emphasize the following individual items on a 4-point Likert scale? (Never = 0; Sometimes = 1; Often = 2; Very often = 3, with the total scale converted to a 60-point range).

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1. Providing support to help students succeed academically
2. Using learning support services (e.g., tutoring services, writing center)
3. Encouraging contact among students from different backgrounds (e.g., social, racial/ethnic, religious)
4. Providing opportunities to be involved socially
5. Providing support for your overall well-being (e.g., recreation, health care, counseling)
6. Helping you manage your non-academic responsibilities (e.g., work, family)
7. Attending campus activities and events (e.g., performing arts, athletic events)
8. Attending events that address important social, economic, or political issues

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being; (e) help received by students to manage their non-academic responsibilities; and (f) opportunities for students to participate in campus activities and events, in particular, those events that address important social, economic, or political issues. These items map closely to the targeted performance outcomes of this study: international student adjustment to and engagement within their campus environments.

**Predictor Variables**

The factors selected to predict “expected” levels of performance were derived from the empirical literature that has been based on the same engagement and integration theoretical frameworks. Several studies have shown that international students behave differently under different conditions, such as host region, control, size, and setting (Glass, 2013; Korobova, 2012; Kuh et al., 2005; Phillips, 2013; Zhao & Douglas, 2012). A total of eight variables regarding institutional characteristics have been used, as available from the Fall 2015-2016 U.S.

Department of Education’s Integrated Postsecondary Education Data System (IPEDS) data and the categories of the Carnegie Classification of Institutions of Higher Education. The eight variables are: Carnegie Basic Type, size (undergraduate enrollment), geographic region,

“urbanicity,” proportion of international students, program mix (specifically the proportion of degrees conferred in STEM), international student density, and residential setting characteristics (primarily non-residential, primarily residential, and highly residential). In the following section, a detailed explanation is provided to discuss the selection of exogenous, predictor variables.

**Carnegie basic type, size, setting, and selectivity.** No institution is uniformly high or low across all measures of engagement (Kuh & Pike, 2005). Thus, it is necessary to look at student integration across different institution types. The Carnegie basic type, size, and setting were derived from the Carnegie Classification of Institutions of Higher Education (2010). Specifically, the size and setting classification provides broad groups for both size and residential housing characteristics. Finally, the undergraduate profile Carnegie classification includes characteristics of selectivity.

**Region and urbanicity.** University location is a significant factor influencing the number of domestic friends that international students make and their satisfaction with these friendships. Gareis (2012) found that international students were more pleased with the number and quality of their friendships with Americans in the South than the Northeast. The author speculated that the regional differences might be attributed to Southern hospitality. In addition, international students were more satisfied in smaller non-metropolitan college towns than in metropolitan environments. The author explained that international students at those institutions might have fewer on- and off-campus networks of people from their own country or region to turn to, and thus are more likely to make American friends. It is worth noting that region may have an interaction effect on the proportion of minority students. Although a more diverse student body leads to greater chances for inter-cultural interaction and a more positive impact on students across student and institutional characteristics (Hu & Kuh, 2003), regions of the country with



substantial minority populations are likely to have higher proportions of minority students (Hurtado, Dey, Gurin, & Gurin, 2003). Thus, because the region is being considered, the proportion of minority student is not selected as an additional predictor variable to avoid interaction effects.

**Density of international students (non-resident alien).** Although international students and domestic students will have more experience with diversity as the proportion of international students on campus increases, the experience is not always a positive one. Zhao et al. (2005) revealed that international students perceive their campus to be less supportive as their proportion increases. Explaining from the concept of negative amplification (Weick, 1979), as the proportion of international students increases, it is more likely international students will make friends with those who share similar cultural background and interests. International students can encounter more barriers in college than domestic students, such as registration, parking tickets, and unfriendliness of individuals (especially staff and faculty members). Such disappointments and frustrations are more likely to be expressed out of proportion, which in turn, is likely to amplify the listener's interpretation of the campus environment as negative.

**Program mix.** Academic major was an important and critical variable when examining student engagement. Kuh (2003) suggested that major field-specific outcomes could and should be looked at as they link with student engagement, as an academic major has an effect on student engagement. In addition, Harper, Carini, Bridges, and Hayek (2004) proposed that major selection and the development of career aspirations also have an effect on engagement. International students need different sets of skills and they behave differently depending on their major; consequently, their student engagement might differ as well. Academic major was an important and critical variable when examining student engagement and, as such, is one of the

variables in the survey. The undergraduate and graduate program instructional program profiles of the Carnegie Classifications distinguish among institutions according to their program mix. The undergraduate profile focuses exclusively on the presence of arts and sciences versus professions (dominated by one, the other, or mixed). Because international students are encouraged or required in some cases to pursue degrees in STEM fields (science, technology, engineering or mathematics), I explored expanding the categories of the Carnegie Undergraduate Instructional Profile classification to include STEM fields as a separate focus, more like the Graduate Instructional Program Classification. Specifically, the analysis included the proportion of undergraduate degrees conferred in STEM fields.

**Residential setting (proportion of students living on/off campus).** Pascarella and Terenzini (1991) concluded that living on campus was the strongest determinant of engagement and involvement. Numerous NSSE reports have consistently illustrated that on-campus residents (versus off-campus living and commuting) were more likely to bond with other students, engage in campus events and other educationally purposeful activities, and experience greater gains in learning and development. In particular, both first-year students and seniors living on campus spent about twice as much time in co-curricular activities. Thus, campuses with larger on-campus student populations have more opportunities for engagement. The categories of the size and setting classification were used to reflect the residential setting of campuses.

### **Multiple Ordinary Linear Squares Regression Model**

Multiple ordinary linear squares (OLS) regression is a generalized linear modeling technique that may be used to model multiple explanatory (predictor) variables and also categorical explanatory variables (Hutcheson, 2011). A multiple OLS regression model is used in this analysis to predict the level of campus environment engagement for international students

(Y), given the explanatory variables ( $X_1$  = Carnegie Basic Classification Type,  $X_2$  = Size,  $X_3$  = Residential setting,  $X_4$  = Selectivity,  $X_5$  = Urbanicity,  $X_6$  = Region,  $X_7$  = Program Mix,  $X_8$  = International student proportion). The relationship between variables Y and X is calculated as follows:

$$\begin{aligned} \text{Supportive Campus Environment} = & \alpha + \beta_1 (\text{Carnegie type}) + \beta_2 (\text{size}) + \beta_3 (\text{setting}) \\ & + \beta_4 (\text{selectivity}) + \beta_5 (\text{urbanicity}) + \beta_6 (\text{region}) + \beta_7 (\text{program mix}) \\ & + \beta_8 (\% \text{ international students}) + \varepsilon \end{aligned}$$

In this equation, “ $\alpha$ ” (also known as the intercept) indicates the value of Y when all values of the predictor variables are zero. Each “ $\beta$ ” parameter (also known as the regression coefficient) indicates the average change in Y that is associated with a unit change in one predictor variable (X), while controlling for the other predictor variables in the model. The model was used to calculate a predicted campus environment engagement score for each institution.

The equation is provided for illustrative purposes. In the actual implementation of the model, several of the factors are represented by multiple variables. Specifically, the categorical variables, like control and setting, are reflected in dummy variables. Since Carnegie type is a binary indicator (baccalaureate/all other), a single variable in the regression equation can be used. Setting, however, is a multinomial variable, that is, a categorical variable with more than two levels (non-residential, primarily residential, and highly residential). As a result, two dummy variables are used to include this factor in the analysis. Table 2 shows the operational measure (variable) and specific regression variables used to represent each of the factors described above.

### **Stage 2: A Single-Blind Web Scan Analysis**

In the second stage, a web content analysis of selected universities’ websites was performed. Content analysis is a research method for making replicable and valid inferences

from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action (Krippendorff, 1980, as cited in Elo & Kyngäs, 2008). The method has been primarily used in the field of traditional communication (Al-Olyayan & Karande, 2000, as cited in Kim & Kuljis, 2010) and nursing (Elo & Kyngäs, 2008).

The expansion of the Internet has resulted in a large amount of user-generated content on social media, blogs, YouTube, wikis, and so on. Such user-generated content has attracted researchers to access and analyze the data available on the Internet. Web content analysis allows researchers to collect data without investing a significant amount of time and energy on collecting data, such as through interviews, surveys, and focus groups. The use of content analysis has been extended to the discipline of social sciences and human-computer interaction (Kim & Kuljis, 2010).

Because of its importance to adjustment, many institutions focus supports on first-year students and make that information increasingly available through their websites, both in terms of the processes that culminated in developing those services and the descriptions of the types of services available. In addition, because of increasing branding efforts for becoming a global leader in higher education, institutions portray these efforts of internationalization through the electronic media. The web scan method is suitable for this context. Another advantage of the web scan content analysis is that it is very useful to test an earlier theory (the CECE model) in a different situation, in this case, a different student population—international students (Elo & Kyngäs, 2008).

The web scan analysis for this study consists of two steps: data collection and sorting. For the data collection step, a search was performed within each of the institution's respective

Table 2

*Description of Predictors Included in Value-Added Regression Model*

<b>General Predictors</b>	<b>Variable Type</b>	<b>Source and Coding</b>
Carnegie Basic Type Classification	1 Dummy Variable	<i>Carnegie Basic Type Classification</i> Arts & Science Focus (1, 0); Reference group is All Others
Residential Setting	2 Dummy Variables	<i>Carnegie Size and Setting Classification</i> Primarily residential (1, 0); Highly residential (1, 0); Reference group is Non-Residential
Size	Categorized	<i>IPEDS</i> Fall 2015, total headcount enrollment
Selectivity	Categorized	<i>IPEDS</i> Average SAT or converted ACT of entering first-time student (IPEDS does not include average SAT or ACT scores. This is based on averaging the 25 <sup>th</sup> and 75 <sup>th</sup> percentiles.)
Urbanicity	3 Dummy Variables	<i>IPEDS</i> Urban locale recoded (collapsed) 3 variables City (1, 0); Suburb (1, 0); Town (1, 0); Reference group is Rural
Region	3-7 Dummy Variables	<i>IPEDS</i> Combination of IPEDS Geographic Region codes (8 regions) Collapsed depending on sample
Program Mix	Categorized	<i>IPEDS</i> % Baccalaureate Degrees in STEM
International Student Density	Continuous (Percentage)	<i>IPEDS</i> Non-Residential Alien as a % of total Undergraduates degree-seeking headcount

websites. The search has two objectives: (a) to identify institutional practices and visions related to fostering a culturally engaging environment for international students, as evident through programs and activities that are mentioned online; and (b) to distinguish the scope of the efforts regarding their scope within specific units or campuswide. For the data sorting strategy, the search results were sorted into categories based on the CECE model. The CECE model was used as a framework to sort the data in a consistent and systematic manner in order to make the

data from each institution's website comparable.

As noted above, institutions were selected according to whether the engagement levels of international students are, on average, "below expected" or "above expected" levels. In addition, these institutions were selected from various points in the predicted performance continuum. To eliminate researcher bias, the web-scanned institutions were selected by a person other than the researcher, so that the researcher does not know which institutions are in which category.

### **Data Collection Strategy**

A within-institution website scan was conducted for each selected institution. Institution web pages were searched to identify documents, programs, and activities that pertain to enriching the campus cultural environment for international students. The documented programs and activities were those intentionally involving international students for the purpose of their integration, engagement, and retention. Specifically, the following web page were scanned as available on each site:

- Current student web page
- Prospective student web page
- Administrative division focusing on international students or affairs
- Administrative division focusing on student life or student affairs
- Any other offices that appear, nominally, to be related to intercultural activities or objectives
- Orientation-related programs and offices
- Student clubs/cultural centers/pages
- Event schedules to scan for programs related to international or intercultural programs and activities

To maintain consistency, any items related to opportunities for international student integration, engagement, and retention found within five clicks from a beginning web page were recorded in a database. These items were subsequently reviewed in more depth as discussed below. In addition, the following documents were scanned, focusing on activities and programs:

- Most recent annual reports from administrative offices (those related to international, student, and intercultural affairs)
- The 2015 Chief Executive Officer's (typically the President or Chancellor) state of campus address (visions or achievements, if any)
- 2015 orientation schedule (length, including domestic students)
- Any specific planning document related to internationalization
- Overall institution strategic plan

Through the exploration process, the researcher is likely to discover other types of administrative units, documents, and activities that relate to international student engagement. Therefore, the researcher conducted a secondary review of the websites, especially focusing on the ones that were scanned earliest in the process, to search for items later discovered as possibly related to the practices and efforts of each institution for rating.

### **Key Term Search**

Several broad but explicit key terms were employed in a general search of each institution website. These include *international students*, *international student integration*, *international student engagement*, *international student retention*, *international student development*, *international student success*, and *domestic students* and *international students*. Each term was searched separately. Researcher's discretion was used to decide whether the returned items appear to be related to the search objectives.

## **Data Sorting Strategy**

Once documents and information were collected, the content was analyzed and then categorized according to a chart (see Table 1) that corresponds to the markers for culturally engaging environments according to Museus' (2014) CECE model. The CECE model describes nine characteristics reflective of a culturally engaging campus environment that are relevant to the cultural backgrounds and communities of diverse college students and that respond to the expectations and needs of diverse students. These indicators are Cultural Familiarity, Culturally Relevant Knowledge, Cultural Community Service, Meaningful Cross-Cultural Engagement, Culturally Validating Environment, Collectivist Cultural Orientations, Humanized Educational Environments, Practice Philosophies, and Holistic Support.

To better understand what data could be captured within the indicators of the framework, a pilot study was conducted prior to the scan of selected institutions to explore what types of information would be found. Several random non-selected universities were examined without the CECE framework. Once the searchable results were collected, they were put into some of the categories that are relevant to the CECE framework. Such evidence included but was not limited to the following seven categories:

1. Any evidence of opportunities for community service related to cultural or immersive experiences and any other sources that provide a record of community services that intentionally involve international students;
2. Evidence of opportunities that intentionally involve international students to learn more about international and domestic culture and different communities of origin, which create intensive dialog among students with different backgrounds and beliefs (e.g., cultural centers, lectures, and other co-curricular activities);



3. Evidence of opportunities to engage international students, domestic students, and the local community in positive and purposeful interactions;
4. Visions and their achievement, as illustrated through an internationalization plan or campus strategic plan;
5. Evidence of social media, especially platforms popular among international students, to introduce opportunities and services and to extend invitations to international students; and
6. An “other” category is created to document the unique or unanticipated opportunities and support for international student engagement.

### **Institutional Comparison**

Upon reviewing the evidence, the researcher sorted the institutions according to the comprehensiveness of evidence revealed through the web scan. This was first done without regard to which category the institution was in based on the regression analysis. The sorted results were then divided according to the level of predicted performance. Within each of these groups, the sorted results were then compared to the regression-produced categories to assess the degree of concordance between the regression findings and the web scan findings.

## CHAPTER 4—FINDINGS

The purpose of this research was to find evidence related to the efforts institutions have made to integrate international students, and specifically those efforts that foster engagement with domestic students. Based on having a sufficient number of international student respondents, 103 institutions were selected from among those participating in the NSSE survey. Using a value-added multiple regression analysis, 12 universities with especially positive (six) and negative (six) international student perceptions of the supportiveness of the campus environment were selected for further review. The websites of these universities were examined using a web scan analysis. Finally, staff within the international student services offices of each institution were contacted for the purpose of establishing trustworthiness. This chapter describes the findings (i.e., results of the analyses), the adjustments made to the web scan method, and the degree of concordance between the regression findings and the web scan findings.

### **Overall Sample of Institutions**

The institutional sample was generated from institutions that participated in the 2014 and 2015 NSSE survey. Specifically, an initial analysis was conducted to determine how many institutions included responses from at least 20 international students. These criteria produced a total of 3,808 international students' responses from 103 different institutions. The final data extract included, for these students, the item responses and total calculated scale scores for the Supportive Environment (SE) indicator. The data extract from NSSE also included several categorical characteristics of the 103 institutions: Carnegie Classification Basic Type, enrollment (size) category, percentage of international students (density), percentage of STEM programs, average SAT or ACT equivalent score, region, locale, and residential character. Due to requirements to retain student and institution anonymity, the researcher was provided with a

range of scores and coded institution identifiers rather than raw scores and actual institution identifiers. A list of institutional identifiers was provided to the research advisor for the purpose of identifying the institutions that would be included in the web scan portion of the research so that the researcher was unaware of which represented a positive or negative outlier.

### **Sample Characteristics**

The characteristics of the 103 institutions in the original sample are described in Table 3. This table also depicts how the distribution of the sample institutions and respondents differed from the distribution of all U.S. bachelor's degree-granting 4-year colleges and universities (the population from which NSSE was drawn). The sample institutions are slightly skewed toward doctoral institutions in distribution for the characteristic of Carnegie Classification type. Half (50%) of the institutions were from research/doctoral universities as categorized by the Carnegie Classification of Institutions of Higher Education, with most being "very high" research universities (colloquially referred to as "R1" universities). Most of the remaining doctoral universities fell into the second (high research) category, with just a few in the third doctoral level. Just over 25% of participating universities were in the Master's Colleges and Universities categories and a little less than 15% of the institutions were in the Baccalaureate categories. The remaining few institutions are categorized predominantly as Special Focus institutions. The sample institutions are relatively even in distribution among the other characteristics of size (i.e., enrollment, skewed slightly toward larger institutions); percentage of international students (skewed slightly toward the low end); percentage of STEM degrees (uniform); overall average SAT or ACT equivalent (normally distributed); locale (skewed slightly toward urban institutions); and residential character (skewed toward highly residential).

In comparison to the overall population of 4-year, degree-granting institutions in the

Table 3

*Frequency Distribution on Original Variables: Sample Characteristics vs. 4-Year Degree-Granting Institutions in the United States<sup>a</sup>*

	Institutions		International Students	
	Sample ( <i>n</i> = 103)	Population ( <i>N</i> = 2,433)	Sample Respondents ( <i>n</i> = 3,808)	Population Enrollment ( <i>N</i> = 12,245,717)
Total Institutional Sample	100	100	100	100
Carnegie Basic Type				
Research, Very High	25	4	39	22
Research, High	18	4	13	14
Doctoral/Research	7	3	6	10
Master's Colls & Univs	27	27	21	37
Baccalaureate Colleges	14	31	10	11
All Other	10	31	11	5
Enrollment (Size)				
Fewer than 1,500	6	49	4	6
1,500 to 2,499	12	13	8	6
2,500 to 4,999	14	15	11	11
5,000 to 9,999	16	10	14	15
10,000 to 19,999	22	7	30	22
20,000 or more	31	6	33	40
% International Students				
Less than 4%	27	65	23	59
4 to less than 6%	22	13	19	17
6 to less than 10%	20	11	17	12
10 to less than 15%	19	6	29	8
15% or more	11	5	12	5
% STEM Degrees Group				
Less than 10%	23	53	21	31
10 to less than 15%	17	18	17	24
15 to less than 20%	24	11	19	18
20 to less than 30%	22	10	30	18
30% or more	23	9	13	9
Average SAT/ACT				
Less than 1000	16	67	13	57
1000 to less than 1100	25	20	22	27
1100 to less than 1200	23	7	25	10
1200 to less than 1300	22	3	20	3
1300 or more	14	3	20	3
Region				
New England	11	8	17	6
Mideast	20	19	22	18
Great Lakes	14	15	15	16
Plains	7	11	5	9

	Institutions		International Students	
	Sample ( <i>n</i> = 103)	Population ( <i>N</i> = 2,433)	Sample Respondents ( <i>n</i> = 3,808)	Population Enrollment ( <i>N</i> = 12,245,717)
Southeast	22	23	21	23
Southwest	11	8	7	12
Rocky Mt & Far West	16	17	13	16
Locale type				
City: Large	37	27	40	32
City: Midsize	13	12	12	16
City: Small	17	13	17	16
Suburb: Large, Mid, Sm	21	24	21	18
Town: Fringe, Distant, & Remote	13	24	11	19
Residential Character				
Highly Residential	33	35	36	48
Primarily Residential	29	28	29	33
Commuter	29	36	25	18

<sup>a</sup>Population refers to all 4-year degree-seeking institutions (excluding primarily Associate's degree institutions) included in the 2010 Carnegie Classification. Carnegie Classification data supplemented with IPEDS data for same institutions.

United States, the sample included an overrepresentation of doctoral institutions (50% of the sampled institutions were doctoral), whereas 11% of 4-year, degree-granting institutions in the United States were doctoral; at the other end of the spectrum, baccalaureate colleges were underrepresented (14% of the sample institutions were baccalaureate), whereas 31% of 4-year, degree-granting institutions in the United States were in the Baccalaureate categories. For size, small institutions were underrepresented (6% sample vs. 49% population) and large institutions were overrepresented (53% vs. 13%); for international student density, institutions with less than 4% proportion of international students were underrepresented (27% vs. 65%) and those with 10% or more were overrepresented (30% vs. 11%); institutions with less than 10% STEM group were underrepresented (23% vs. 53%) and those with 15% or more were overrepresented (69% vs. 30%); institutions with inclusive admissions were underrepresented (23% vs. 53%) and those with 1100 or more SAT/ACT cut off scores were overrepresented (59% vs. 13%); region, locale, and residential character distribution were congruent with each population distributed

accordingly. These differences are clearly related to the propensity for international students to enroll at large, doctorate-granting universities relative to other types of institutions.

At the student level, the comparison between sample respondents and the international student population distribution was relatively more consistent with the overall population. Students enrolled in doctoral institutions were equally represented in the sample (58% of the respondents were from doctoral institutions), and 46% of the total population was from doctoral institutions; students enrolled in baccalaureate colleges were also equally represented in the sample (10% vs. 11%). For enrollment, all categories were equally represented; for international student density, institutions with less than 4% proportion of international students were underrepresented (23% vs. 59%), whereas institutions with 10 or more were overrepresented (41% vs. 13%); for percentage of STEM, all categories of institutions are relatively equal, except those with 20% or more were over represented (43% vs. 27%); for selectivity, institutions with inclusive admissions were underrepresented (13% vs. 57%) and those with 1100 or more SAT/ACT cut off scores were over represented (65% vs. 16%); region, locale, and distribution were congruent with each population distributed accordingly; for residential character, special focus institutions were over represented (10% vs. 1%).

### **Target Outcome Measure**

The outcome measure for determining the quality of international student experience on each campus was the percentage of international students on each campus who had a score above the top third of scale scores of all international respondents in the sample for the Supportive Environment (SE) indicator. Examining the distribution of this scale across all institutions and respondents in the sample revealed that the cutoff for the top one-third of the distribution was 42.5 on a 60-point scale. The percentage of international students on each campus that had a

scale score above this cutoff point ranged from a low of 7% to a high of 69% (mean = 35%, median = 33%, and standard deviation = 12.2%).

Table 4 shows the average of this outcome score (percentage of international students with SE scale scores higher than 42.5), according to the institutional characteristics described in Table 3. These means were used to determine how to collapse the original institutional characteristic variables into dummy variables for the regression analysis to predict institutional scores. These choices were made based on visual inspection of the means. For ordinal variables, only consecutive categories were grouped, but for nominal variables, any groups could be collapsed together. The goal of this step was to reduce the variables in preparation for maximizing their predictive value. The shaded rows in Table 4 indicate which values were assigned the value of 1; the non-shaded rows were assigned values of 0.

Table 5 is a summary of the collapsed dummy variables used in the institution-level regression analysis ( $n = 103$ ) to predict the top third outcome, the frequency count and percentage of each dummy variable, and the mean and standard deviation of the top third outcome score. Again, the shaded rows in Table 5 represent the values that were set to “1” for each dummy variable with the non-shaded rows serving as the reference group.

### **Refining the Regression Model**

Initially, a regression analysis was performed using all these predictors. The overall  $F$  value for this analysis was 4.862 ( $df = 10$ , and the  $R^2$  was 0.346., Table 6 shows the coefficients for this initial model.

During the pruning process, the six variables with non-significant regression coefficients (STEM group, SAT\_Hi, density, locale, size, residential) were removed. After seeing no loss in predictivity, four variables (Carnegie Basic type, SAT\_Mid, and region\_45, region\_136) were

Table 4

*Average Percentage of International Students in Top Third of Supporting Environment Score*

	Mean	Std Dev
Total Institutional Sample	.35	.122
Carnegie Basic Type		
Research, Very High	.33	.107
Research, High	.34	.103
Doctoral/Research	.32	.116
Master's Colleges & Univs	.32	.127
Baccalaureate Colleges	.47	.118
All Other	.33	.109
Enrollment (size)		
Fewer than 1,500	.37	.156
1,500 to 2,499	.42	.155
2,500 to 4,999	.36	.123
5,000 to 9,999	.31	.115
10,000 to 19,999	.35	.110
20,000 or more	.33	.112
Percentage of International Students		
Less than 4%	.36	.156
4 to less than 6%	.32	.155
6 to less than 10%	.38	.123
10 to less than 15%	.33	.115
15% or more	.35	.121
Percentage of STEM Group		
Less than 10%	.34	.119
10 to less than 15%	.32	.105
15 to less than 20%	.33	.122
20 to less than 30%	.38	.160
30% or more	.37	.068
Average SAT/ACT		
Less than 1000	.37	.103
1000 to less than 1100	.31	.121
1100 to less than 1200	.31	.141
1200 to less than 1300	.37	.084
1300 or more	.43	.122
Region of Country		
New England	.36	.091
Midwest	.31	.094
Great Lakes	.34	.101
Plains	.39	.164
Southeast	.40	.128
Southwest	.36	.132
Rocky Mountains & Far West	.29	.137
Locale of City		
City: Large	.34	.123
City: Midsize	.35	.122



Total Institutional Sample	Mean	Std Dev
		.35
City: Small	.34	.126
Suburb: Large, Midsize, & Small	.36	.118
Town: Fringe, Distant, & Remote	.38	.135
Residential		
Residential Highly	.38	.125
Residential Primarily	.34	.108
Commuter Primarily	.33	.134
Special focus	.32	.112

Table 5

*Final Variables Used in Regression to Predict Top Third Outcome*

	Frequencies		Mean Top 3rd	
	N	%	Mean	Std Dev
Carnegie Basic Type				
Baccalaureate Colleges	89	86.4	0.33	0.111
All Other	14	13.6	0.47	0.113
Enrollment (size)				
Less than 5,000	71	68.9	0.33	0.110
5,000 or more	32	31.1	0.38	0.138
Percentage of International Students				
Less than 10%	72	67.7	0.35	0.113
10% or more	31	32.3	0.34	0.139
Percentage of STEM Group				
Less than 10%	66	61.2%	0.33	0.115
10% or more	37	38.8%	0.37	0.129
SAT/ACT (Two Dummies)				
Less than 1000	16	17.9%	0.37	0.100
1000 to less than 1200	50	44.6%	0.31	0.129
1200 or more	37	37.5%	0.39	0.102
Region of Country				
Mideast, Rocky Mountains & Far West	37	32.7%	0.30	0.113
New England, Great Lakes, Southwest Plains, Southeast	36	41.3%	0.35	0.104
	30	26.0%	0.40	0.132
Locale (City vs. Not City)				
City	68	65.7%	0.34	0.121
No City	35	34.3%	0.37	0.121
Residential				
All Other	69	66.3%	0.33	0.118
Residential High	34	33.7%	0.38	0.123

Table 6

*Regression Coefficients for Initial, Full Variable Prediction Model*

Coefficients <sup>a</sup> Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.34	0.032		10.661	<.001
	basic_bacc	0.16	0.041	0.451	3.914	<.001
	enr_size	-0.029	0.03	-0.11	-0.956	0.341
	NRA_grp	-0.018	0.025	-0.066	-0.713	0.478
	Stem_Grp	-0.004	0.025	-0.017	-0.174	0.862
	SAT_Mid	-0.079	0.031	-0.323	-2.554	0.012
	SAT_Hi	-0.007	0.037	-0.027	-0.183	0.855
	Region_45	0.1	0.026	0.373	3.818	<.001
	Region_136	0.064	0.026	0.252	2.515	0.014
	Locale_notcity	-0.013	0.025	-0.049	-0.512	0.61
	Res_Hi	-0.017	0.03	-0.065	-0.559	0.577

<sup>a</sup> Dependent Variable: SETOP3rd\_mean

maintained in the final prediction model (see Table 7). The  $R^2$  for the final model was reduced from 0.346 to 0.323, which shows a relatively small loss in predictivity for the much more parsimonious model; the  $F$  value for the final model increased to 11.707 ( $df = 4$ ).

### Selecting Outlier Universities

Examining the institutional-level residuals (predicted values minus the actual values), six positive and six negative outliers were selected from across the spectrum of predicted values. Figure 2 illustrates which institutions were selected on this basis (indicated by the triangle marker). The research advisor, who had the information required to identify institutions, provided the researcher with the names of the 12 institutions without indicating which institutions were negative or positive outliers or providing any information on where each institution was on the predicted value spectrum. The research advisor and researcher did not share any information about institutions again until the web scan was completed.

Table 7

Coefficient Table for Final Model

Coefficients <sup>a</sup> Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.31	0.021		14.895	<.001
	basic_bacc	0.121	0.031	0.341	3.905	<.001
	SAT_Mid	-0.06	0.021	-0.247	-2.833	0.006
	Region_45	0.1	0.025	0.374	3.946	<.001
	Region_136	0.059	0.024	0.231	2.436	0.017

<sup>a</sup>Dependent Variable: SETOP3rd\_mean

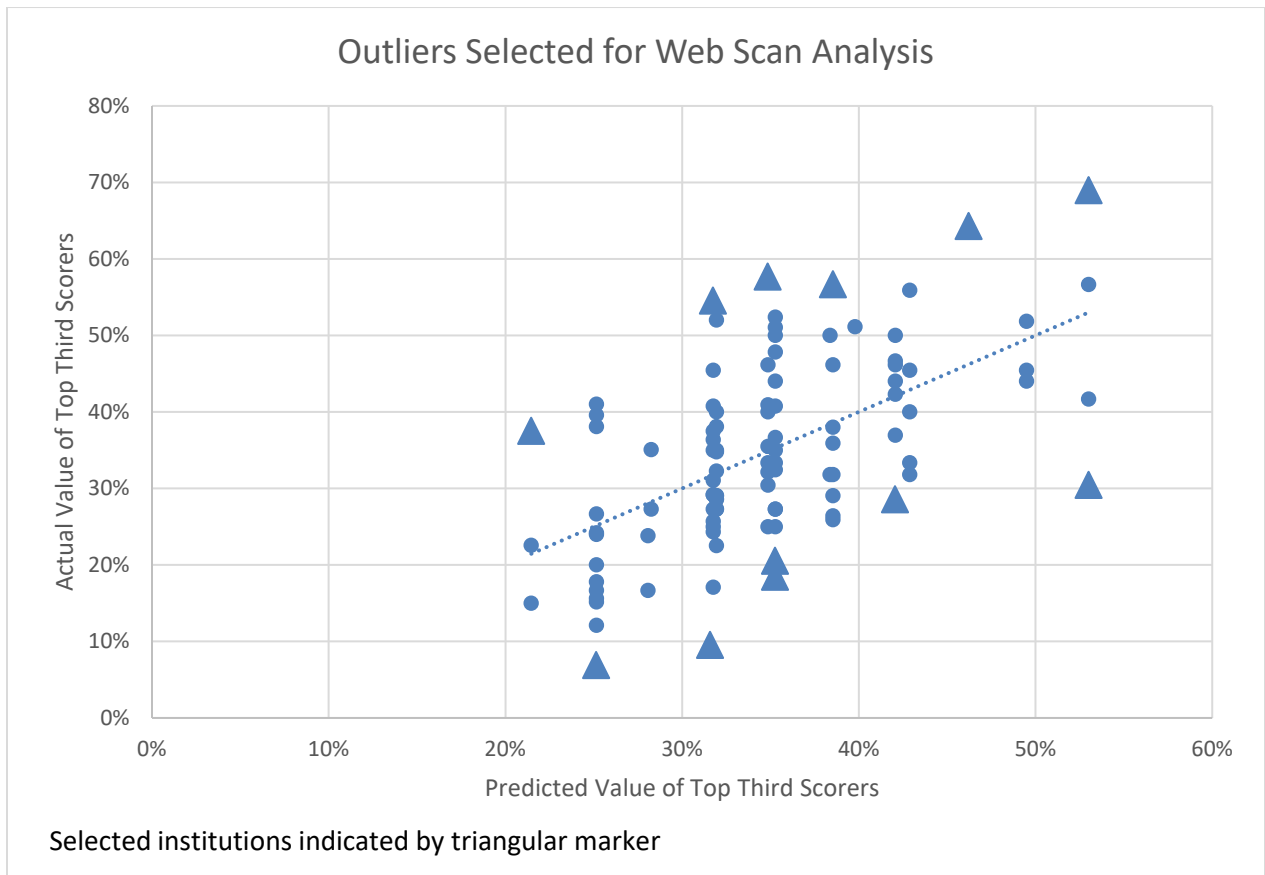


Figure 2. Graphical depiction of outlier selection.

## **Profile of the 12 Institutions**

As shown in Table 8, the 12 selected institutions were distributed across a wide range of the provided characteristics. Based on Carnegie Classification (2010), the distribution was nearly uniform across categories. For size, the resulting institutions were evenly distributed across categories. For international student density, half of the selected institutions had enrollment that contained 10-15% of international students. From program mix (percentage of STEM programs), over 40% of the sample had less than 10% STEM programs, and over 40% of the sample had between 20-30%. For selectivity (SAT/ACT), over 80% were below 1200 cut off scores. For region, no institutions were from Mideast and Great Lakes regions. For locale, over 66% of the sample was located in cities, none were located in suburbs, and 33% were located in towns. For residential character, over 40% were highly residential. Appendix D describes the profile of each institution in detail, including institutional characteristics and international enrollment trends.

## **Web Scan Method**

This section describes the evolution of the web scan method, the web scan framework, and the web scan rubric through seven stages of development. Relevant materials identified through web scan were initially extracted and analyzed without consideration of the CECE model. Emergent themes were then matched, combined, and collapsed into eight of the nine CECE indicator categories.

### **Step 1: Searching With One Generic Key Word**

To capture relevant web pages and documents, the keyword *international students* was used as the search term on each of the 12 institutional websites. The information was written down in a spreadsheet after being read by the researcher. The note taking simply described the information seen on the websites with no personal opinion. About half of the samples (Institution

Table 8

*The 12 Selected Outliers Characteristics Distribution*

	Frequency	Percentage
Total Institutional Sample	12	100
Carnegie Basic Type		
Research, Very High	1	8
Research, High	2	17
Doctoral/Research	1	8
Master's Colleges & Universities	3	25
Baccalaureate Colleges	3	25
All Other	2	17
Enrollment (size)		
Fewer than 1,500	3	25
1,500 to 2,499	2	17
2,500 to 4,999	1	8
5,000 to 9,999	3	25
10,000 to 19,999	1	8
20,000 or more	2	17
Percentage of International Students		
Less than 4%	2	17
4 to less than 6%	2	17
6 to less than 10%	1	8
10 to less than 15%	6	50
15% or more	1	8
Percentage of STEM Group		
Less than 10%	5	42
10 to less than 15%	0	0
15 to less than 20%	2	17
20 to less than 30%	5	42
30% or more	0	0
Average SAT/ACT		
Less than 1000	3	25
1000 to less than 1100	3	25
1100 to less than 1200	4	33
1200 to less than 1300	1	8
1300 or more	1	8
Region of Country		
New England	1	8
Mideast	0	0
Great Lakes	0	0
Plains	3	25
Southeast	4	33
Southwest	2	17
Rocky Mtns & Far West	2	17

Table 8 (continued)

	Frequency	Percentage
Locale of City		
City: Large	4	33
City: Midsize	1	8
City: Small	3	25
Suburb: Large, Mid, & Small	0	0
Town: Fringe, Distant, & Remote	4	33
Residential		
Residential Highly	5	42
Residential Primarily	3	25
Commuter Primarily	2	17
Special focus	2	17

A, B, D, I, and L) yielded sufficient information on their websites to demonstrate efforts taken to promote international student integration. The other seven institutions did not yield sufficient information to demonstrate such efforts. Thus, a different set of key words was used as search terms in the following round.

### **Step 2: Searching With a Different Set of Key Words**

Another set of keywords was used to capture more relevant information, especially focusing on the seven sites that did not yield sufficient results. These keywords included *international student integration*, *international student engagement*, *international student involvement*, and *international student retention*.

### **Step 3: Refining the Web Scan Framework**

Based on the initial two rounds of the web scan with multiple sets of key words, 12 themes were identified: (a) staffing pattern/professional readiness, (b) department/organization dedicated to international student support, (c) cultural celebration/demonstration/education, (d) leadership and volunteer opportunities, (e) meaningful interaction, (f) strategic priority, (g) assessment component, (h) campuswide collaboration, (i) faculty and student relationships, (j) timely updated information, (k) user-friendly web interface, and (l) orientation best practices. Comparing these themes with the corresponding CECE indicators, all 12 can be related to eight

out of nine CECE indicators, although in some cases, assumptions are being made by the researcher about the intended or likely outcomes of institutional practices.

There was no practical way to gather information at the student level consistent with the Holistic Support indicator from the CECE model, such that the students know a person on campus who they can trust to give them particular support, to help them solve particular problem, or to give them the information they need. Thus, the Holistic Support indicator was left out from the final framework. This is a limitation of the study and an area of potential future research.

Table 9 was developed to describe the similarity between the CECE model and the nine emergent themes. Eight indicators from the CECE model are used as the final framework for data analysis.

#### **Step 4: Refining Rating Categories**

A detailed rubric was finalized (see Appendix B). The eight CECE indicators are used as dimensions, the CECE survey question mappings are used as reference to categorize the specific output (efforts/practices) for rating, and emergent themes are used to sort data extracted through the web scan.

#### **Step 5: Defining a Rating Scale**

A rubric was created to depict the standards for web scan ratings for the intensity of each dimension. For each dimension of the rubric, a 3-point scale was used for differentiating the levels of intensity: 1 = below average, 2 = average, and 3 = intensive (see Table 10).

A rating score of 3 (intensive) in each dimension is assigned for strong evidence of effort (two or more practices) as put forth by the institution listed in the practice/effort section of the rubric. A rating score of 2 (average) is assigned for some evidence of effort (at least one

Table 9

*CECE Indicators and Emerged Web Scan Themes*

<b>CECE Model</b>	<b>Emerged Themes Through Web Scan</b>
1. Cultural Familiarity	a) Peers, faculty, and staff background/ experiences/expertise (staffing pattern and professional readiness) b) department/organization dedicated to international student support
2. Culturally Relevant Knowledge	c) Cultural celebration/demonstration/education
3. Cultural Community Service	d) Leadership and volunteer opportunities
4. Meaningful Cross-Cultural Engagement	e) Meaningful interaction between domestic and international students
5. Cultural Validation	f) Strategic priority g) Assessment component
6. Collectivist Cultural Orientations	h) Campuswide collaboration
7. Humanized Educational Environments	i) Relationship with faculty and staff
8. Proactive Philosophies	j) Timely updated information k) User-friendly web interface l) Orientation best practices

Table 10

*Rating Scale*

<b>Score</b>	<b>Level</b>	<b>Description</b>
1	Below average	Limited opportunities (no evidence, no practices present)
2	Average	Somewhat limited opportunities (some evidence, at least one practice)
3	Intensive	Sufficient opportunities (strong evidence, two or more practices)

practice). Finally, a rating score of 1 (below average) is assigned when no evidence (no practices present) is found to satisfy the criteria listed in the rubric.

The scoring scheme (1-3) is created based on the number of sets of practices the institutions have put forth to provide a culturally engaging and supportive environment for international students. This scale has a number of limitations.

First, the web scan method through key words search is only able to detect an institution’s stated practices or aspirations. It is impossible to assess how well the programs described in documents are actually implemented.



Second, a more granular scale could potentially lead to more distinctive comparisons of the intensity of each dimension, such as the performance of institutions with more than three sets of practices in one particular dimension compared to institutions with two sets of practices. Due to the limited number of institutions studied, and the limits of using a web scan to identify practices, few institutions demonstrated more than two practices in each dimension. These are areas of potential future research, particularly with a larger sample size and a more comprehensive scan through web, document analysis, and perhaps site visits.

### **Step 6: Calling Institutions**

Because the information on institutional efforts presented from websites and documents is limited, some CECE indicators might not have emerged through the web scan. However, information being not available on the institution's website does not automatically indicate that the efforts do not exist. Thus, each institution was contacted to verify the data collected from the web scan. To establish contact with personnel from each institution and to receive timely responses, two types of administrators were originally contacted for each institution. These two types included: (a) the person who oversees the area responsible for integrating international students from a broader/strategic view (e.g., Vice President/Associate Vice President/Assistant Vice President/Dean for International Education or Student Affairs, Director of Institutional Research); and (b) the person who specifically oversees work with international students (e.g., Director or Assistant Director of International Center).

Among the first eight institutions (Institutions A, B, C, D, E, F, H, and I) that were contacted, only half of the VPs/AVPs were able to speak in person (from Institutions B, F, H, and I), only one of them provided constructive information (Institution B). All of the VPs/AVPs/Deans that were reached suggested contacting the Director of International Services.

Thus, for the remaining four colleges (Institutions G, J, K, and L), only the mid-level administrators (e.g., Director of International Services) were contacted.

Through phone calls, new information was gained. Specifically, no information was received for Institution H from the web scan; however, as a result of the phone call, the Director of International Services provided information that placed the institution as one of the top six performers. Contacting other institutions led to similar upgrades in their overall scores. Finally, the personnel from the 12 institutions all made themselves available for phone verification. Contacting the institutions helped ensure that each sample received a fair opportunity to demonstrate their efforts toward international student integration.

### **Step 7: Rating and Comparing Institutional/Dimensional Results**

The finalized ratings were recorded in a spreadsheet of tables. Based on the rating scale, the total score for each institution (for the purpose of institutional performance comparison) and the total score of each dimension (for the purpose of dimensional comparison) were calculated.

#### **Overall Result**

Table 11 shows how the institutions scored for each dimension and overall. Among the total scores of each dimension, Cultural Familiarity scored the highest overall rating (34 points), followed by Proactive Philosophies (32 points); on the other end of the spectrum, Humanistic Educational Environments scored the lowest overall rating (21 points), followed by Cultural Validation (26 points).

#### **What Did They All Do?**

Among the total ratings of each dimension, Cultural Familiarity scored the highest rating (33 points), followed by Proactive Philosophies (31 points), indicating that a majority of institution-focused resources and activities as related to the Cultural Familiarity and Proactive

Table 11

*Institutional Scores for Each Dimension and Overall Scores*

	<b>Dimensions</b>								<b>Total</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	
<b>Institution</b>	<b>Cultural Familiarity</b>	<b>Culturally Relevant Knowledge</b>	<b>Cultural Community Service</b>	<b>Meaningful Cross-Cultural Engagement</b>	<b>Cultural Validation</b>	<b>Collectivist Cultural Orientations</b>	<b>Humanized Educational Environments</b>	<b>Proactive Philosophies</b>	
<b>A</b>	3	2	2	3	3	3	1	3	20
<b>B</b>	3	3	3	3	3	3	3	3	24
<b>C</b>	2	2	1	1	1	1	1	2	11
<b>D</b>	3	3	3	3	3	3	3	3	24
<b>E</b>	2	1	2	2	1	2	1	2	13
<b>F</b>	3	3	2	2	1	3	1	2	17
<b>G</b>	3	2	2	2	3	3	3	3	21
<b>H</b>	3	2	3	2	3	3	3	3	22
<b>I</b>	3	2	2	2	2	2	1	3	17
<b>J</b>	3	3	2	2	2	1	1	3	17
<b>K</b>	3	3	3	1	2	2	1	2	17
<b>L</b>	3	3	3	3	3	3	2	3	23
<b>Total</b>	<b>34</b>	<b>29</b>	<b>28</b>	<b>26</b>	<b>27</b>	<b>29</b>	<b>21</b>	<b>32</b>	

Philosophies dimensions. Specifically, most institutions scored a rating of 3 (intensive) on Cultural Familiarity, indicating that there was strong evidence on most of the campuses that spaces and opportunities are available for students to connect with faculty, staff, and peers who understand their cultural backgrounds, identities, and experiences. This can be inferred from departments/organizations dedication to international student support through peer supports, student organizations and centers, and staffing patterns through staff background and professional readiness. Such practices can make it easier for international students to find people on campus with a similar background—people who understand them and their struggles. They also have the opportunity to interact frequently with people who share similar backgrounds and

who have access to sufficient spaces to connect with people from their native communities.

### **What Did They All Not Do?**

On the other end, Humanistic Educational Environments scored the lowest rating (21 points), followed by Cultural Validation (26 points), indicating that a majority of institutions have not focused sufficiently on Humanistic Educational Environments and Cultural Validation. Specifically, most institutions scored 1 (below average) on Humanistic Educational Environments, indicating that there was no evidence found on most of the campuses that sufficient curricular or co-curricular opportunities are provided for international students to develop meaningful relationships with faculty and staff members who care about them and who are committed to their success. This can be inferred through institutional efforts in a variety of opportunities to engage faculty and staff with international students, to foster mutual understanding, and to improve the relationship between international students and faculty and staff. Little evidence was found demonstrating the extent to which educators care about international students, are committed to their success, or pay attention to feedback from international students. There was also little evidence found showing international students had a view of educators on their campus as caring human beings.

### **Other Findings**

It is worth mentioning that international student offices nest across four different types of departments: international affairs, student affairs, academic affairs, and enrollment. The rigors of the programs divide almost evenly (see Table 12 and Figure 3). This does not align with Di Maria's (2012) prior research, such that having international student services under a student affairs office did not contribute to greater engagement.

Table 12

*International Student Services Unit Distribution*

Division	Top Six	Low Six	Total
International affairs	L (1)	I (1)	2
Student affairs/life	A, D, G, H (4)	C, F, K (3)	7
Academic affairs	B (1)	J (1)	2
Enrollment		E (1)	1

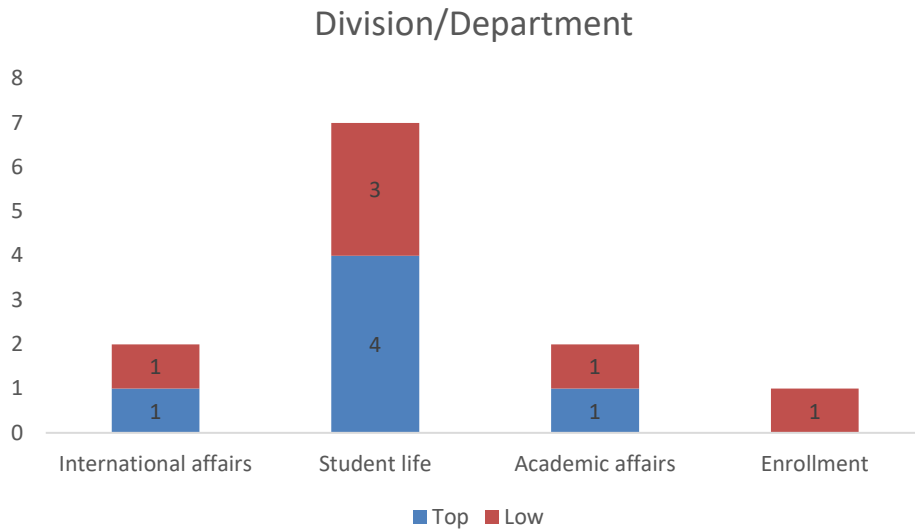


Figure 3. International student services unit comparison.

**Concordance: Regression Findings vs. the Web Scan Findings**

Eight out of 12 institutions had congruence between the web scan and the residual results. Specifically four out of the six highest institutions from the web scan (Institutions A, G, D, and B) were positive residual outliers. Incongruently, two institutions that had relatively positive web scan results were two of the negative outliers from the residual model (Institutions H and L). Similarly, four out of six institutions (Institutions C, E, I, and J) rated relatively low in the web scan, were congruently from the negative outlier residual group. However, low web scan-rated Institutions K and F were positive regression outliers (as shown in Table 13). The mixed level of concordance between the web scan and residual analysis is also indicated by a modest correlation

Table 13

*Regression and Web Scan Results Comparison*

<b>Institution</b>	<b>Web Scan</b>	<b>Residual</b>	<b>Predicted</b>
B	24	Positive	High
D	24	Positive	High
L	23	Negative	Low
H	22	Negative	Low
G	21	Positive	Low
A	20	Positive	Low
F	17	Positive	Low
K	17	Positive	High
I	17	Negative	High
J	17	Negative	Low
E	13	Negative	High
C	11	Negative	High

(0.35) between the residual rating (the difference between predicted and actual score) and the web scan rubric rating. Although only modestly correlated, the outlier analysis was more successful in differentiating high from low web scan-rated institutions compared to the regression predicted score, which was correlated at -0.11 with the web scan ratings.

## CHAPTER 5—DISCUSSION AND IMPLICATIONS

The purpose of this research was to find evidence regarding the success of the efforts U.S. higher education institutions have made to integrate international students generally, and specifically, those efforts that foster engagement with domestic students. Based on a value-added regression analysis on each campus' average level of perceived campus support among international undergraduate students using exogenous factors beyond the institution's direct control as predictors, a set of 12 outlier institutions (six negative and six positive) were selected for further review. A blind assessment of campus web pages was then conducted to assess the robustness of international student support programs on each campus. The results demonstrated that the value-added approach for assessing institutional effectiveness provides a somewhat valid measure of effectiveness, although there was sufficient divergence between the value-added measure and the qualitative assessment of international student services to warrant further research and careful consideration of using this method to assess institutional effectiveness. This chapter discusses the findings from the web scan and value-added analysis. First, the researcher reviews the interpretation of the results, the institutional efforts identified through the web scan, and the contribution to the literature based on these efforts. Second, the researcher presents speculation regarding the mixed findings on the congruency between the web scan and the residual analysis results. Third, the researcher discusses limitations of the current research and suggestions for future research.

### **Interpretation of Overall Results**

According to the web scan results, six institutions were characterized as high performing, and six as low performing. The two highest rated institutions had the top rating (3) on all eight dimensions. In contrast, the lowest rated institution scored the lowest rating (1) on five of the

eight dimensions and a moderate rating (2) on the other three dimensions. The group differences among highest and lowest rated performance indicate that high-performing institutions put efforts toward more areas than low-performing institutions.

As seen in Table 14, only the highest and lowest rated institutions have clear patterns of being rated high and low from the web scan. These clear patterns match the residual analysis, identifying two highest and two lowest outliers. As the ratings get mixed, the concordance is less clear. This indicates that the web scan ratings, based on one person's informed judgment, are perhaps less reliable than desired, and further research might be warranted to develop more rigorous and reliable ratings for such an analysis. However, it is also possible that the value-added regression model was not sufficiently rigorous to identify outliers reliably.

### **Group Performance by Dimension**

**Dimension 1: Cultural Familiarity.** All institutions in the high group scored a rating of 3, all but two institutions in the low group scored a rating of 3, and only the two lowest overall rated institutions scored a lower rating of 2. Thus, there was not sufficient variation on this dimension that could be detected through the web scan, although the fact that the two lowest institutions were rated low on this dimension indicates that further consideration and better documentation might be able to reveal larger differences. The result on this dimension indicates that a majority of the institutions, across the high and low groups, have put effort toward making spaces and opportunities available for students to connect with faculty, staff, and peers who understand their cultural backgrounds, identities, and experiences. This can be inferred from departmental/organizational dedication to international student support through student originations and centers, as well as staffing pattern through staff background and professional readiness.



Table 14

*Ratings of the 12 Outlier Institutions Across the Web Scan Dimensions of Performance*

Group		Dimensions									Total
		Cultural Familiarity	Culturally Relevant Knowledge	Cultural Community Service	Meaningful Cross-Cultural	Cultural Validation	Collectivist Cultural Orientations	Humanized Educational Environments	Proactive Philosophies		
High	B	3	3	3	3	3	3	3	3	3	24
	D	3	3	3	3	3	3	3	3	3	24
	L	3	3	3	3	3	3	2	3	3	23
	H	3	2	3	2	3	3	3	3	3	22
	G	3	2	2	2	3	3	3	3	3	21
	A	3	2	2	3	3	3	1	3	3	20
Low	F	3	3	2	2	1	3	1	2	2	17
	I	3	2	2	2	2	2	1	3	3	17
	J	3	3	2	2	2	1	1	3	3	17
	K	3	3	3	1	2	2	1	2	2	17
	E	2	1	2	2	1	2	1	2	2	13
	C	2	2	1	1	1	1	1	1	2	11

**Examples.** One of the institutions with a rating of 3 placed professionals with proper training in the Registrar’s Office, the Assignment Office, and Career Services to assist with international student issues. Another campus connects new international students with their co-national peers or clubs right after their arrival.

According to Museus (2014), such practices make it easier for international students to find people on campus with a similar background—people who understand them and their struggles—and to have the opportunity to interact with people who share a similar background frequently, as well as those who have access to sufficient space to connect them with people from their community.

**Dimension 2: Culturally Relevant Knowledge.** Half of the institutions in each group

scored a rating of 3, and the other half of the high group scored a lower rating of 2, whereas two institutions in the low group scored a rating of 2 and one scored a rating of 1. This indicates less sufficient variation detected through the web scan on this dimension, although the fact that the institutions in the high group rated relatively low, and the two lowest institutions were also rated low, indicates that further consideration on the correlation between the specific dimensional performance and the overall performance is needed. The result on this dimension indicates that half of each group provided opportunities for students to learn about their own cultural communities through culturally relevant curricular and co-curricular opportunities.

*Examples.* Many institutions include a practice typically known as Coffee Hours. The International Center on one of the campuses selects an area of the globe as a special focus for the entire campus to be exposed to each semester. The Director of the Center intentionally arranges campuswide events related to the area of focus, including special lectures and forums, cultural events (such as dance and music performances), Fulbright Scholar events, and religious ceremonies. In addition, intercultural communication and global perspectives are also built into the curriculum for all students as a graduation requirement. Another example is an event geared toward children ages 4 to 10 so they have the opportunity to travel the world by pairing with college buddies and visiting country stations set up by students. At each station, the children are able to experience a culture hands-on as they read stories, make crafts, play games, or learn dances from countries around the globe.

According to Museus (2014), such practices demonstrate institutional effort in providing opportunities for international students to learn about the culture and important issues within the culture and to gain knowledge about their own cultural community.

**Dimension 3: Cultural Community Service.** All but two institutions in the high group

scored a rating of 3, and the rest scored a rating of 2. In the low group, only one institution scored a rating of 3, and the rest scored a lower rating of 2, except the lowest overall rated institutions that scored a rating of 1. This indicates somewhat sufficient variations on this dimension that could be detected through the web scan. The results indicate that high group campuses from the web scan tended to provide a greater variety of opportunities for students to give back to and positively transform their home communities. Several examples can show how this dimension was put into practice.

*Examples.* Typically, such practices are known as “peer mentor programs” or as international-themed student organizations. On one of the campuses studied, a mentor program selects students returning to the United States from study abroad and international students to serve as mentors to incoming international students and domestic participants. Their job is to help international students feel comfortable on campus and answer their questions about policies and procedures related to life in the residence halls, campus facilities, registration, and academic procedures, as well as questions about U.S. culture and off-campus opportunities in the local community. On another campus studied, the purpose of an international student club is to bring together all international students and all other members of the campus community who are interested in fostering the studying of and sharing the cultures of many lands, starting on their own campus. An international student advisory board on another campus advises about services and programs, such as the peer mentor program, writing labs, field trips and recreational programs, and the overall international student experience on campus. One of the campuses used the student run advisory board as the vehicle to provide feedback for the university to improve services for international students. These opportunities are volunteer-based or awarded with a stipend and are coordinated by international and domestic students.

According to Museus (2014), a more culturally engaging campus offers leadership, research, or volunteer opportunities for students to help improve the lives of people, to give back, and to positively impact the international cultural community.

**Dimension 4: Meaningful Cross-Cultural Engagement.** All but two institutions in the high group scored a rating of 3, and the rest scored a lower rating of 2. In the low group, none of the institutions scored a rating of 3. Four of them scored a lower rating of 2, and two scored the lowest rating of 1. This depicts that the high group campuses put more efforts toward offering programs and practices that facilitate educationally meaningful cross-cultural interactions among their students that focus on solving real social and political problems. This can be inferred through the existence of programs and events that lead to deeper dialogue and meaningful interaction beyond social events that are dedicated to the interaction between domestic and international students. A few examples can show how this dimension was put into practice.

*Examples.* Typically, this dimension is carried out by a culture integration class of both international and domestic students. One of the campuses offered such a class for two hours per week. International students are provided with grade incentives to speak to domestic students other than their roommates to ask pre-designed questions for generating meaningful interaction, such as student's perspective of the presidential election. In addition, international students are spread out in different class sessions without being clustered with co-nationals and other international students through intentional social engineering and a small classroom ratio.

According to Museus (2014), such practices show that the institution provides sufficient opportunities to discuss important social, political, and diversity-related issues with people from different cultural backgrounds.

**Dimension 5: Cultural Validation.** All institutions in the high group scored a rating of

3, whereas none of the institutions in the low group scored a rating of 3. In fact, half the low group scored a lower rating of 2, and the other half scored the lowest rating of 1. This depicts that the culture of the high group campuses was characterized by putting more effort into validating the cultural backgrounds, knowledge, and identities of international students. This can be inferred through the campuses that prioritize international student integration, involvement, and inclusion, as mentioned in the strategic plan or recognized as a necessity for intervention to integrate international students into campus life. The highly rated campuses also had an assessment component that demonstrates that the data has been collected with a detailed plan to implement improvements into practice.

*Examples.* One of the high-performing institutions in this dimension had a strategic plan from the highest administrative level down to the unit level. The strategic plan of the campus indicates that the leadership should reinforce the institution's distinctive excellence in internationalism and, more broadly, should encourage every department and program in the college to seize and develop opportunities to be distinctive in additional ways that serve students well. The Division of Student Affairs has made internationalism a core value alongside academic excellence, civic engagement, and multiculturalism. The Office of International Student Services made a goal of successfully re-integrating and applying the education in home countries and cultures, or applying and further adapting this education in the United States. Moreover, the institution has its own detailed assessment plan for international student programs, which collects data and then implements the data into practice.

According to Museus (2014), such practices demonstrate the extent to which staff on the high group campuses value international cultural community and the knowledge and experiences of people in the international community.

**Dimension 6: Collectivist Cultural Orientations.** All high group institutions scored the highest rating of 3, whereas only one low group campus scored the rating of 3; three of the remaining institutions scored a lower rating of 2 and two scored the lowest rating of 1. A sufficient variation on this dimension was detected through the web scan. This demonstrates that staff on the high group campuses put more effort toward cultivating cultures that emphasize teamwork and the pursuit of mutual success. This can be inferred through the collaboration of international student services with other offices, such as orientation and multicultural centers.

*Examples.* One of the high-performing institutions in this dimension balances the number of international students for each major and geographical representation in each classroom. The Director of the Office of International Education works closely with other faculty members, the Registrar's Office, the Housing Office, and the Admission's Office to assign students with a domestic roommate and to enroll them into class sessions and majors with less co-national international students. According to Museus (2014), such practices demonstrate that people on high group campuses tend to help each other succeed, support each other, and work together toward common goals.

**Dimension 7: Humanized Educational Environments.** All but two institutions from the high group of the web scan scored the highest rating score of 3, the rest scored 2 and 1, respectively. The low group yielded one high rating score (3), two scored a lower rating score (2), and one scored the lowest rating score (1). A somewhat sufficient variation is observed between the high and low performance group, although it is not completely consistent with the overall high/low distinctions among campuses. The results indicate that a majority of campuses from the high group put more effort than those in the low group toward providing opportunities for international students to develop meaningful relationships with faculty and staff members.

Their effort can be inferred through their practices in providing opportunities to engage faculty and staff with international students, to foster understanding, and to improve the relationship between international students and faculty and staff.

*Examples.* An example can show how this dimension was put into practice. On one of the high-performing campuses, the Office of International Student Services facilitates a weekly gathering for international students to talk with a special guest from the campus community on a trendy topic. Past guests have included faculty members and senior level staff members, such as the Director or Associate Director of the Multicultural Center, Housing, Health and Wellness, the Senior Career Services Specialist, the Dean or Associate Dean of Students (Disability Services), the Vice President for Student Affairs, the Provost, and the University President.

On another high-performing campus in this dimension, the Director of International Student Services is a tenured faculty member whose tenure status gives them camaraderie working with other faculty, which makes communication easier, especially in encouraging faculty to include an international perspective in their courses. A similar weekly program also invites faculty and senior level staff, such as Vice Presidents, to talk with students. The International Student Services staff also collaborates with faculty to bring special guests with an international perspective to campus and into the classroom. In addition, the President also leads a jogging program to jog with students daily. Another campus' Career Center hosts weekly events for professional preparedness with an international focus. The program invites recent alumni who have an international career to share the wisdom of self-branding.

According to Museus (2014), such practices can demonstrate the extent to which educators in general care about international students on this campus and are committed to international student success; feedback demonstrates that international students view these

educators as caring human beings.

**Dimension 8: Proactive Philosophies.** All institutions in the high group from the web scan scored the highest rating of 3. Two institutions in the low group scored the highest rating and the rest of the institutions scored a lower rating of 2; none scored the lowest rating. Like Cultural Familiarity (Dimension 1), the scores on this dimension did not vary as much as desired from a measurement perspective. This indicates that all institutions in the high and low groups share similar practices in regard to adopting philosophies that lead faculty, administrators, and staff to proactively bring important information, opportunities, and support services to students, rather than waiting for students to seek them out or hunt them down on their own. This can be inferred through information sharing, such as the user friendliness of the website interface, the amount of information on the website, the timeliness of updates from social media pages, and best practices for orientation.

*Examples.* The Office of International Student Services and the Career Center on one of the high-performing campuses frequently updates information on the website about summer internship opportunities, tax filing in January, and other topics. All offices on this campus have Facebook pages and update them regularly, and these social media pages share information specifically tailored to the student population they serve. In addition to online information sharing, the Office of International Student Services also utilizes student talent to create visually appealing posters to attract students. During orientation, international students receive eight days of orientation in total on this campus. The first four days of orientation is for international students only, and the second half of the orientation is combined with domestic students.

According to Museus (2014), this indicator demonstrates that people on this campus often send international students important information about new learning opportunities and the



support that is available on campus. Students do not have to seek out new learning opportunities on their own.

### **Summary**

The web scan results indicated that high-performing institutions not only scored more of the highest ratings in areas where low group institutions had relatively high ratings, and they also scored the highest ratings in areas where the majority of the institutions in the low group scored low ratings. Such areas include Cultural Community Service, Meaningful Cross-Cultural Engagement, Cultural Validation, Collectivist Cultural Orientations, and Humanized Educational Environments. Specifically, high group campuses did particularly well in providing more opportunities for students to give back to and positively transform their home communities, offering more programs and practices that facilitate educationally meaningful cross-cultural interactions; making international student integration, involvement, and inclusion a strategic priority; cultivating cultures that emphasize teamwork and the pursuit of mutual success; and finally, providing more opportunities to engage faculty and staff with international students.

The web scan infers that a majority of the selected institutions include the number of international students or their nationalities on the website and promotional materials; few web documents mention any specific strategies for facilitating international cultural integration. Knight (2011) calls it a long-lasting myth that more international students on campus will result in a more internationalized institutional culture. Knight (2011) also warns that the majority of domestic students commonly show no more than neutral attitude about engaging socially with international students. Putnam (2007) suggests that simply putting people in the same location with those who are different can even lead to greater distrust and suspicion. Thus, level of diversity does not in itself ensure that people will interact meaningfully with each other. The

quality of interaction is also a stronger predictor than level of diversity for predicting intercultural relations (Dejaeghere, Hooghe, & Claes, 2012).

Allport's (1954) contact hypothesis elucidates four necessary conditions that are particularly effective in reducing prejudice and improving quality of interaction: (a) equal status, (b) common goals, (c) institutional support, and (d) perception of similarity between the groups. One of the necessary conditions is working toward a common goal. Putnam (2007) used the military as an example where, with the vast number of immigrants in the U.S. Army, American soldiers have more friends from other cultures than the average American because they are working side by side with new immigrants toward a common goal.

Student employment, community service, and outdoor programs might provide some possible platforms and opportunities for students to have positive interactions and a sense of belonging. Astin (1984) viewed on-campus jobs as one of the most interesting environmental factors that affected retention, because part-time employment increases the likelihood the student employee will come into contact with other students, faculty members, and college staff members; also, relying on an on-campus job as a source of income may result in a greater sense of attachment to the university. Other benefits of on-campus employment may be having international and domestic students and supervisors working together toward a common goal.

Glass (2012) used the Global Perspective Inventory to survey 437 international students, and the results revealed that international students who participate in community service along with other programs, such as leadership programs and campus-organized diversity discussions, interact with people from cultural backgrounds other than their own and take courses with materials on race and ethnicity; these students showed higher levels of learning and development and reported better campus climate. Glass (2013) explained that community service, cultural

events, and leadership programs enhance a sense of belonging; a sense of belonging increases cross-cultural interaction between international and domestic students and significantly improves international students' average grades.

Outdoor adventure programs are developed with validated psychology and education pedagogy. Following the spirit of the U.S. frontiersman during the colonial time, outdoor adventure education utilizes camping and other leisure recreation activities as a channel to develop student resilience and coping skills. Fabrizio and Neill (2005) stated that cross-cultural experience and outdoor education literature are positively linked together. In the outdoor programs, participants are constantly challenged to adapt to new environments, social and physical demands, and they must be very intentional about their own behavior (Richards, 1977). With proper guidance from the trip leader, the participants are required to accept a new living situation, learn the culture of the group, develop survival skills, and take on a role that is respected by the group.

In sum, institutions can provide a variety of opportunities for international students and domestic students, staff, or faculty to work side by side toward a common goal, which can promote international student and domestic student social integration.

### **Contribution to the Literature and to Practice**

The present study contributes four general findings to the literature and practice on international student involvement, engagement, and integration. First, in similar studies that seek to identify effective practices, web scan and document gathering are typically used as a preliminary step, followed by a campus visit and interviews. However, none of the previous research described how the preliminary research was conducted. This study used a systematic web scan methodology for conducting an online exploratory study. By using a systematic

method, information can be sorted in a consistent and comprehensive manner, especially for a larger scale multi-campus research project that involves a team of researchers. This method can better prepare researchers for a campus visit. This can be contrasted with a peer review for which the campus prepares a self-study and invites external peers to validate the findings. Although the web scan is not as richly informed as a self-study, neither is it likely to be as self-serving. Moreover, with this method, the researcher selects institutions with an objective method for identifying cases that are interesting to explore based on how they are identified as outliers using the value-added regression analysis.

Second, no previous research has used the CECE model as a framework to examine campus environments for the integration of international students. Through the seven stages of development of the web scan method, the web scan framework, and the web scan rubric, the relevant materials identified were initially extracted and analyzed without consideration of the CECE framework. Emergent themes were found to align with eight of the nine CECE indicator categories, which were then used to sort the extracted data in the third stage of the method.

Third, the web scan results demonstrate that the value-added approach for assessing institutional effectiveness holds some promise for use as a measure of effectiveness, although there was sufficient divergence between the value-added measure and the qualitative web scan analysis of international student services to warrant further research and development of a more powerful regression model based on a broader range of exogenous factors that affect the environment within which campus staff work to engage international students. However, the misaligned findings would in fact equip researchers with targeted consideration prior to a campus visit, and may lead to a clearer understanding given the exogenous and endogenous factors that are within or beyond the institution's control. In the following section, the rationale

for misalignment is discussed with regard to directions for future research.

Fourth, a marketing value for recruiting and branding emerged from this study. As the parents, students, and government agencies around the world are becoming more sophisticated in selecting institutions in which to enroll or with which to collaborate, accessible web documentation provides instant evidence to demonstrate institutional efforts and commitments for student experiences. Recruiting and marketing professionals could benefit from utilizing university websites to exhibit such information to perspective students and their families, government agencies, and global partner universities to attract more committed students and institutional collaborations.

Fifth, the term integration is re-claimed in this study to reflect a multilateral process. As cultural dissonance has a negative impact on student success, Tinto's (1993) use of integration is problematic as it suggests that international students detach from their home cultures and join the predominant on-campus culture. Integration is reconceived here as reflecting reciprocal and inter-influential relationships among the cultural identities of students, faculty, and staff.

### **Rationale for Misalignment**

Although two thirds of the institutions share concordant results between residual ranking and the web scan ranking, one third of the institutions did not. Two out the six institutions that were rated highly using the CECE-inspired framework were from the list of negative outliers. Conversely, two of the six institutions rated low in the web scan were on the list of positive outliers. Two reasons are considered next for this misalignment as related to exogenous (external) and endogenous (internal) factors, respectively.

### **Exogenous Factors**

The values of the exogenous predictors for the four institutions are shown in Table 15.

Institutions F and K were rated in the low web scan group but performed high on the residual ranking. Both institutions are public research universities (R1) located in the Southwest region and have a relatively low proportion of international students. Perhaps, due to the low proportion of international students and the large campus size, students support each other largely within their own national group and view their environment as supportive.

In contrast, institutions H and L placed in the high web scan group, but rated low in the residual ranking. These institutions are markedly different from each other according to the predictor characteristics, except that they both have a relatively high proportion of undergraduate international students.

### **Endogenous Factors**

Table 16 shows that the web scan ratings for Institutions F and K (17 and 17 each) and Institutions H and L (22 and 23, respectively) are in a relatively narrow range of difference compared to other institutions in both groups. Nominally, these institutions appear to have similarly engaging programs according to the CECE criteria. However, it is not possible through the web scan to determine how well the programs described in documents are implemented. An implementation fidelity framework, such as the model proposed by Dane and Schneider (1998), could address this potential gap between what the web scan can identify and what is actually occurring.

**Fidelity.** Dane and Schneider (1998) identify five components of fidelity (a) adherence (b) exposure (c) quality of delivery (d) participant responsiveness, and (e) program differentiation. Adherence refers to program components being delivered as prescribed. Exposure refers to the extent to which the intended participants are actually exposed to the program content. Quality of delivery refers to training and competence of program staff and the

Table 15

*The Values of the Exogenous Predictors for the Four Misaligned Institutions*

	<b>Carnegie Type</b>	<b>Locale</b>	<b>Instructional Program</b>	<b>UG Profile</b>	<b>UG Enroll. Profile</b>	<b>Size</b>	<b>Setting</b>	<b>Region</b>	<b>Proportion (UG, 2014)</b>
F	Doctoral Higher Research Activity	Town: Distant	Professions plus arts and sciences, high graduate coexistence	Full-time, more selective, higher transfer-in	High	Large	Primarily residential	SW (AZ NM OK TX)	3
K	Doctoral Higher Research Activity	City: Large	Professions plus arts and sciences, high graduate coexistence	Medium full-time, inclusive, higher transfer-in	High	Large	Primarily nonresidential	SW (AZ NM OK TX)	5
H	Special Focus: Arts, Music, and Design Schools	City: Small	Professions focus, no graduate coexistence	Full-time, inclusive, lower transfer-in	Exclusive	Small	Highly residential	SE (AL AR FL GA KY LA MS NC SC TN VA WV)	16
L	Doctoral Highest Research Activity	City: Mid	Arts and sciences plus professions, high graduate coexistence	Full-time, more selective, higher transfer-in	High	Large	Primarily nonresidential	Far West (AK CA HI NV OR WA)	13

availability of necessary resources to effectively deploy the program. Participant responsiveness refers to the engagement of the participants in the program. Program differentiation refers to unique features of the intervention being distinguishable from other programs.

The web scan method used in this study does not include a sufficient review of the actual implementation of these programs. To some extent, it can detect the sophistication of the program design, and therefore speaks to some elements of adherence (or at least what the

Table 16

*Web Scan Findings for the Four Misaligned Institutions*

Web Scan Group		Dimensions								Total
		Cultural Familiarity	Culturally Relevant Knowledge	Cultural Community Service	Meaningful Cross-Cultural Engagement	Cultural Validation	Collectivist Cultural Orientations	Humanized Educational Environments	Proactive Philosophies	
High	L	3	3	3	3	3	3	2	3	23
	H	3	2	3	2	3	3	3	3	22
Low	F	3	3	2	2	1	3	1	2	17
	K	3	3	3	1	2	2	1	2	17

programs are intended to adhere to), quality (the intricacy of the design), and differentiation (to the extent that the mechanisms by which the program are intended to work are described). The web scan method is acknowledged to be superficial, identifying “what” is being done but not delving very deeply into “how” (or how well) it is done. Still, even though superficial, the web scan method was able to detect differences that aligned with the regression analysis.

In summary, neither the web scan nor the value-added approach can comprehensively assess an institution’s efforts, since neither can probe into how well programs are executed, such as can be accomplished using an approach like the one prescribed by Dane and Schneider’s (1998) implementation fidelity model, or other such approaches used to assess process effectiveness.

**Limitations and Implications**

As an exploratory study, the follow up related to investigating high- and low-performing institutions are limited in three notable ways: first, by selecting only 12 institutions, and second, by only conducting a web-scan document analysis, and third, the intended use of the framework.



## **Sample Size**

Kuh et al. (2005) conducted a similar type of study—Documenting Effective Educational Practice (DEEP)—in which the everyday workings of a variety of educationally effective colleges and universities were examined to learn what they do to promote student success. The authors noted that the high-performing universities they identified were not necessarily superior to other universities. Still, the selected institutions were the outliers that performed above or below what was expected. Similar to the reasoning drawn from the DEEP study, the researcher reasons that activities and programs at each campus set them apart, which is worth exploring and can hopefully be applied to other campuses.

## **Web Scan Analysis**

**Procedure.** Due to the limited literature regarding the web scan methodology, the procedure used in this study had to be designed without having a well-tested method from which to draw. Similar studies that have sought to identify effective practices using web scan and document gathering as the first step did not describe in sufficient detail how the preliminary research was conducted. This study provides a systematic way to conduct an online exploratory study.

**Scoring scheme.** The scoring scheme (1-3) was created based on the number of sets of practices the institutions have documented through their web sites to provide a culturally engaging and supportive environment for international students. This scale has a number of limitations. First, the web scan method through key words search is only able to detect an institution's reported activities, but not necessarily the quality or levels of participation of those activities. It is impossible to assess how well the programs described in documents are actually implemented. Second, a more granular scale could potentially lead to more distinctive

comparison for intensity of each dimension, such as the performance of institutions with more than three sets of practices in one particular dimension compare to the ones with two sets of practices. Due to the limit number of institutions studied, few institutions demonstrated more than two practices in each dimension. These are areas of potential future research, particularly with a larger sample size.

**Data verification.** Because of the limitation of a web document scan, each institution was contacted to verify the data collected from the web scan. Two types of administrators were originally contacted for each institution, including the person who oversees the area responsible for integrating international students from a broader/strategic view (e.g., Vice President/Associate Vice President/Assistant Vice President/Dean for International Education or Student Affairs, Director of Institutional Research), and the person who specifically oversees work with international students (e.g., Director or Assistant Director of International Center). Although the two types of administrators are directly related to the purpose of integrating international students, programs and practices in other units (e.g., degree programs or classrooms) on each campus remain unknown. These are areas that lead to a deeper study of programs that involve faculty and non-international services units.

**Timing.** The regression analysis used to identify best practice institutions captured a one-point-in-time picture of the international student experience, specifically the second semester during first year of study. A more comprehensive assessment, involving students at multiple points of their academic career, would provide a more reliable and valid assessment of the supportive environment for international students. In addition, the NSSE survey, like most surveys, often has a limited response rate. This study only considered 103 institutions that had a sufficient number of international students who responded to NSSE.

## **Framework**

The CECE model was not designed for the purpose of assessing international student integration, but rather as a basis for assessing the impact of campus climate from student feedback for more general purposes related to cultural inclusiveness. Although reasoned to be sufficient for the purpose and population of this study, more analysis can be done to determine if and how the CECE model can be more rigorously applied as part of a scan of programs and services conducted through a web and document scan or through other methods. If and when more institutions use the CECE survey, it will be possible to explore more closely the relationship between international student engagement and the campus climate as assessed using the CECE survey instrument.

For one of the CECE indicators in particular, Holistic Support, there was no practical way to gather information at the student level consistent with the indicator, as the indicator is about whether the students know a person on campus who they can trust to give them particular support, to help them solve particular problem, or to give them the information they need. Thus, the Holistic Support indicator was left out from the final framework. This is a limitation of the study and an area of potential future research.

## **Conclusion**

International student enrollment in the United States has been increasing at a steady rate, although more recent trends show a possible softening of this trend. Institutions have started paying attention to the importance of international student integration, which will become increasingly important if the trend continues to soften—institutions will be competing for a limited resource. Several research articles (e.g., Gareis, 2012; Glass et al., 2014; Glass & Westmont-Campbell, 2014) have reported that international students and domestic students do

not interact with each other naturally without institutional efforts to serve as a catalyst. This exploratory research utilized a value-added regression model for identifying potentially low- and high-performing institutions and a web scan methodology to investigate how these institutions put forth efforts to facilitate international and domestic student integration. The findings indicate that the level of effort made by the institutions in Cultural Community Service, Meaningful Cross-Cultural Engagement, Cultural Validation, Collectivist Cultural Orientations, and Humanized Educational Environments was modestly associated with the extent to which international students view their institutions as more or less supportive of their integration and engagement. A stronger association was discovered between the value-added measure (regression residual) and the web scan ratings ( $r = .35$ ). This demonstrates that the value-added approach for assessing institutional effectiveness provides a somewhat valid measure of effectiveness, although there was sufficient divergence between the value-added measure and the qualitative assessment of international student services to warrant further research and careful consideration of using this method to assess institutional effectiveness. Finally, the findings of this study demonstrate that the web scan method can serve as a systematic, exploratory approach—although somewhat limited—for measuring institutional efforts. Future research is needed to explore effective practices in depth and how those practices can be implemented effectively.

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## Appendix A

### Original Web Scan Rubric Based on the CECE Model

Data Source	Categories
Annual Report from Office of International Affairs Annual Report from Office of Student Affairs Annual Report from Office of Intercultural Affairs President State of Campus Address (visions, achievements if any) Orientation Schedule (length, including domestic students) President’s State of Campus Address Campus Internationalization Plan Strategic Plan Current Student Web Page Prospective Student Web Page Office of International Affairs Office of Student Affairs Office of Intercultural Affairs Orientation Student Clubs/Cultural Centers (pages show the number of faculty of other nationalities)	Opportunities to learn more about international and domestic culture and different community of origins, which create an intensive dialog among students with different backgrounds and beliefs. A few examples including the number of majors, subcultural groups (e.g., cultural centers, student clubs), lectures, space utilizations, and other co-curricular activities
<b>Key Terms:</b>  International student integration International student engagement International student retention International student development International student success Domestic students and international students	Opportunities for community service related to cultural or immersive experiences as well as any other sources that provide a record of community services that intentionally involve international students
	Engage international students, domestic students, and local community in positive and purposeful interactions
	Visions, achievement, and illustrated through campus and curriculum internationalization plan, campus strategic plan, number of international alumni, and mentions in the president’s state of the campus address
	Evidence of social media channel, and especially those platforms are popular among international students, to introduce opportunities and services, as well as extending invitations to international students
	“Other” unique or unanticipated opportunities and support for international student engagement
	Campuswide vs. departmental vs. both
NSSE	NSSE student-staff interaction score NSSE student-faculty interaction score NSSE student-student interaction score



## Appendix B

### Finalized Web Scan Rubric

Dimension	CECE Survey Question Mapping	Output: Practices for Rating
<p><i>Cultural Familiarity</i></p> <p>Campus spaces for students to connect with faculty, staff, and peers who understand their cultural backgrounds, identities, and experiences.</p>	<p>It is easy to find people on campus</p> <ul style="list-style-type: none"> <li>• with similar backgrounds</li> <li>• to interact frequently from similar backgrounds</li> <li>• who understand international students</li> <li>• who understand their struggles</li> <li>• who are generally willing to take the time to understand their experiences</li> </ul> <p>On campus, there is sufficient space for me to connect with people from my community.</p>	<p><i>Department/organization dedicated to international student support</i></p> <p>Clubs, centers, and organizations</p> <p><i>Staffing pattern / professional readiness</i></p> <p>Staff members with international background or experience, specialized services providers trained for working with international students, etc.</p>
<p><i>Culturally Relevant Knowledge</i></p> <p>Opportunities for students to learn about their own cultural communities via culturally relevant curricular and co-curricular opportunities</p>	<p>On campus, there are enough opportunities to learn about</p> <ul style="list-style-type: none"> <li>• the culture</li> <li>• important issues</li> <li>• knowledge of my own cultural community.</li> </ul>	<p><i>Cultural celebrations/ demonstration/education</i></p> <p>Presentations, coffee hours, festivals, etc.</p>
<p><i>Cultural Community Service</i></p> <p>Opportunities for students to give back to and positively transform their home communities.</p>	<p>At my institution, there are enough opportunities (research, community service projects, etc.) to</p> <ul style="list-style-type: none"> <li>• help improve the lives of people in,</li> <li>• give back to, and</li> <li>• positively impact my cultural community.</li> </ul>	<p><i>Volunteer / leadership opportunities</i></p> <p>Paid or non-paid, peer advising, orientation leader, student government, student organization, resident assistant, etc.</p>

Dimension	CECE Survey Question Mapping	Output: Practices for Rating
<p data-bbox="196 239 456 302"><i>Meaningful Cross-Cultural Engagement</i></p> <p data-bbox="196 344 477 638">Programs and practices that facilitate educationally meaningful cross-cultural interactions among their students that focus on solving real social and political problems.</p>	<p data-bbox="516 239 862 302">On campus, there are enough opportunities to discuss</p> <ul data-bbox="526 344 964 512" style="list-style-type: none"> <li>• important social issues</li> <li>• important political issues</li> <li>• important diversity-related issues with people from different cultural backgrounds.</li> </ul>	<p data-bbox="1003 239 1419 302"><i>Meaningful domestic-international interaction</i></p> <p data-bbox="1003 344 1419 533">Programs and events that lead to deeper dialogue and meaningful interaction beyond social events; buddies programs; learning communities; roommate matching; de-cluster practices, etc.</p>
<p data-bbox="196 659 431 680"><i>Cultural Validation</i></p> <p data-bbox="196 722 451 911">Campus cultures that validate the cultural backgrounds, knowledge, and identities of diverse students.</p>	<p data-bbox="516 659 932 680">In general, people on campus value</p> <ul data-bbox="526 722 964 848" style="list-style-type: none"> <li>• knowledge</li> <li>• my cultural community</li> <li>• the experiences of people from/in my cultural community</li> </ul>	<p data-bbox="1003 659 1208 680"><i>Strategic priority</i></p> <p data-bbox="1003 722 1403 911">Mentioned in the strategic plan, listed as a strategic priority; Recognize the necessity of intervention to integrate international students into campus life, etc.</p> <p data-bbox="1003 953 1273 974"><i>Assessment component</i></p> <p data-bbox="1003 1016 1403 1142">Data collected, and have or have a plan to implemented into practice; survey instrument geared toward international students, etc.</p> <p data-bbox="1003 1184 1386 1205"><i>Good retention rate and strategy</i></p>
<p data-bbox="196 1241 444 1289"><i>Collectivist Cultural Orientations</i></p> <p data-bbox="196 1331 493 1583">Campuses cultures that emphasize a collectivist, rather than individualistic, a cultural orientation that is characterized by teamwork and pursuit of mutual success.</p>	<p data-bbox="516 1241 915 1262">In general, people on this campus</p> <ul data-bbox="526 1304 948 1430" style="list-style-type: none"> <li>• help each other succeed</li> <li>• support each other</li> <li>• work together toward common goals</li> </ul>	<p data-bbox="1003 1241 1321 1262"><i>Campuswide collaboration</i></p> <p data-bbox="1003 1304 1419 1520">International student services is nested under student affairs vs. other department vs. stand alone; has close collaboration with offices of orientation, multicultural centers, career services, registrar's office, admissions, faculty, etc.</p>

Dimension	CECE Survey Question Mapping	Output: Practices for Rating
<p><i>Humanized Educational Environments</i></p> <p>Availability of opportunities for students to develop meaningful relationships with faculty and staff members who care about and are committed to their success.</p>	<p>In general, educators on campus</p> <ul style="list-style-type: none"> <li>• care about students on this campus</li> <li>• are committed to my success</li> </ul> <p>I view educators on this campus as caring human beings.</p>	<p><i>Relationship with faculty and staff</i></p> <p>Faculty-student and/or staff-student social, guest speaker, etc.</p>
<p><i>Proactive Philosophies</i></p> <p>Philosophies that lead faculty, administrators, and staff to proactively bring important information, opportunities, and support services to students, rather than waiting for students to seek them out or hunt them down on their own.</p>	<p>People on this campus often send me important information about</p> <ul style="list-style-type: none"> <li>• new learning opportunities</li> <li>• support that is available on campus</li> </ul> <p>On campus, I feel like I have to seek out new learning opportunities on my own.</p>	<p><i>Timely updated information</i></p> <p>Social media page to update students in a timely manner</p> <p><i>User-friendly interface</i></p> <p>Website with sufficient information and an organized structure for students to navigate</p> <p><i>Orientation best practices</i></p> <p>Extended vs. one-day; international only vs. combined with domestic; pre-arrival vs. on campus only, etc.</p>

## **Appendix C**

### **Description of the Rubric Categories**

#### **Cultural Familiarity**

Spaces and opportunities are available for students to connect with faculty, staff, and peers who understand their cultural backgrounds, identities, and experiences. This can be inferred from departmental/organizational dedication to international student support through student originations and centers, as well as staffing patterns through staff background and professional readiness. Such practices make it easier for international students to find people on campus with a similar background and who understand them and their struggles. It also makes it easier for international students to interact with people with similar backgrounds frequently and have access to sufficient space to connect with people from their community.

#### **Culturally Relevant Knowledge**

There are opportunities for students to learn about their own cultural communities through culturally relevant curricular and co-curricular opportunities. This can be inferred through the variety of the activities provided, such as cultural celebrations, demonstrations, and regular education, as well as generating meaningful conversations. Such practices can demonstrate the extent to which institutional effort provides opportunities for international students to learn about the culture and important issues within and to gain knowledge about their own cultural community.

#### **Cultural Community Service**

There are opportunities for students to give back to and positively transform their home communities. This can be inferred through the extent to which students take on leadership or volunteer opportunities to help improve the lives of international students on campus. Such

practices demonstrate that there are somewhat limited opportunities (e.g., research, community service projects) to help improve the lives of people, to give back, and to positively impact the international cultural community.

### **Meaningful Cross-Cultural Engagement**

The campus offers programs and practices that facilitate educationally meaningful cross-cultural interactions among their students that focus on solving real social and political problems. This can be inferred through the existence of programs and events that lead to deeper dialogue and meaningful interaction beyond social events and are dedicated to the interaction between domestic and international students. Such practices show that the institution provides sufficient opportunities to discuss important social, political, and diversity-related issues with people from different cultural backgrounds.

### **Cultural Validation**

The culture of the campus validates the cultural backgrounds, knowledge, and identities of international students. This can be inferred by international student integration, involvement, and inclusion as a strategic priority mentioned in the strategic plan, by the recognition of the necessity of interventions designed to integrate international students into campus life, and by the assessment component that demonstrates that there is a plan to implement results from the data collected into practice. Such practices demonstrate that, in general, people on campus value more international cultural community and the knowledge and experiences of people in the international cultural community.

### **Collectivist Cultural Orientations**

The campus culture emphasizes a collectivist, rather than individualistic, cultural orientation that is characterized by teamwork and pursuit of mutual success. This can be inferred

through the collaboration of international student services with other offices, such as orientation and multicultural centers. Such practices demonstrate that people on campus help each other succeed, support each other, and work together toward common goals.

### **Humanized Educational Environments**

There are opportunities for international students to develop meaningful relationships with faculty and staff members who care about and are committed to their success. This can be inferred through institutional efforts to engage faculty and staff with international students, to foster understanding, and to improve the relationship between international students, faculty, and staff. Such practices can demonstrate the extent to which educators in general care about international students on this campus and are committed to international student success. These practices are supported by feedback from international students who view educators on campus as caring human beings.

### **Proactive Philosophies**

The campus adopted philosophies that lead faculty, administrators, and staff to proactively bring important information, opportunities, and support services to students, rather than waiting for students to seek them out or hunt them down on their own. This can be inferred through information sharing, such as the user friendliness of the website interface, the amount of information on the website, the timeliness of update from social media pages, and best practices for orientation. Such practices demonstrate that people on this campus often send international students important information about new learning opportunities and important information about the support that is available on campus; therefore, students do not have to seek out new learning opportunities on their own.

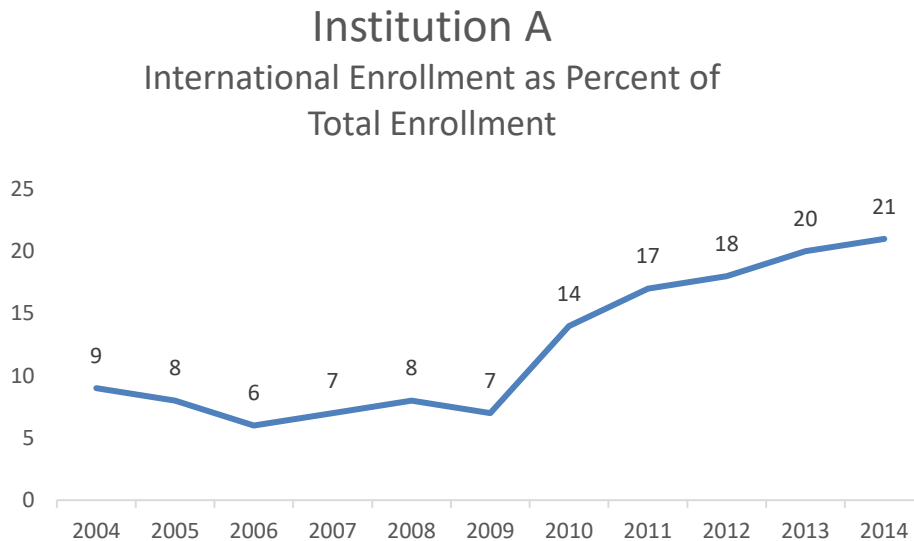
## Appendix D

### Institution Profiles

The profile of each institution is depicted, including Carnegie Basic Type Classification, size, setting, selectivity, urbanicity, region, program mix, and the trend of international enrollment. The rating and practices found via the web scan are then described.

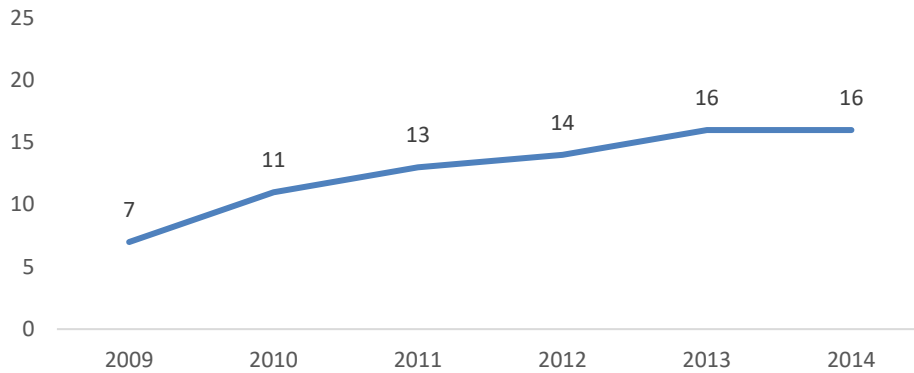
#### Institution A

Institution A is a private, medium in size, more selective institution, located in the New England region. It offers professionally focused majors up to master's degrees. It resides in a small city. At least half of its degree-seeking undergraduates live on campus where at least 80% attend full time. In 2014, 21% of the total enrollment was international students, and 16% of the undergraduate enrollment was international students. Between 2004 and 2014, the percentage of total enrollment of international students increased from 9% to 21%; the percentage of international undergraduate enrollment increased from 7% to 16% (between 2004 and 2014).



### Institution A

#### International Enrollment as Percent of Undergraduate Enrollment

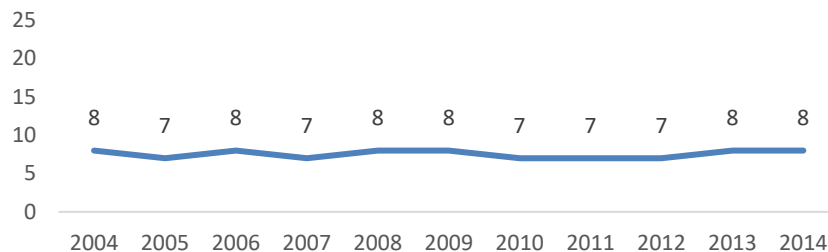


### Institution B

Institution B is a small, private, more selective institution, located in the Southeast region. It offers arts and sciences plus professional degrees exclusively at the undergraduate level. It resides in a distant town, and at least half of its degree-seeking undergraduates live on campus, where at least 80% attend full time. The institution chooses students from all around the world without advertising. Among 3,000 international applicants, 30 are chosen each year. Between 2004 and 2014, the percentage of total enrollment (exclusively undergraduate) that were international students remained steady, between 7% and 8%.

### Institution B

#### International Enrollment as Percent of Total (Undergraduate) Enrollment

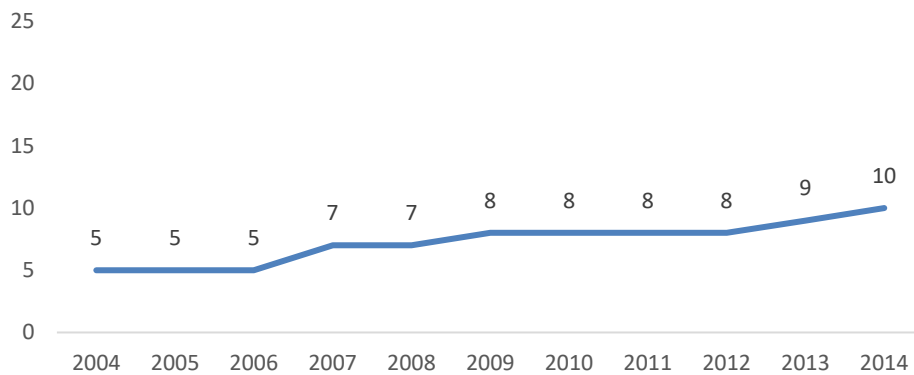




### Institution C

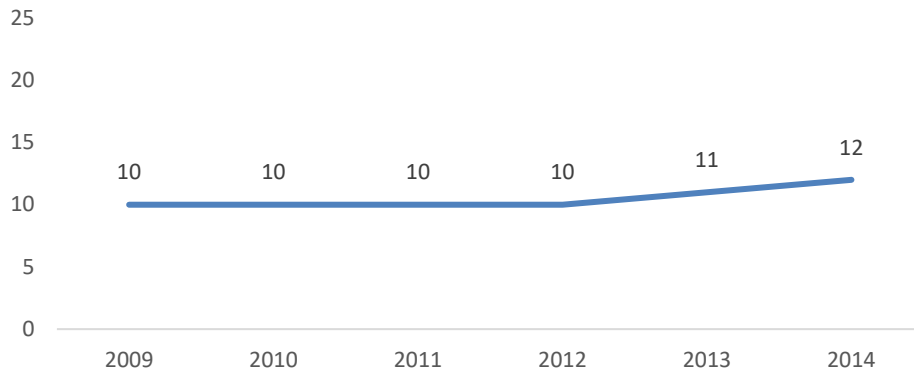
Institution C is a medium size, private, selective institution, located in the Plains region. It offers up to doctoral degrees (with moderate research activity). Academic levels are high in undergraduate, with professional majors plus arts and sciences with some graduate degrees. The campus resides in a small city, and at least half of its degree-seeking undergraduates live on campus, where at least 80% attend full time (i.e., highly residential). Between 2004 and 2014, the percentage of total enrollment (undergraduate and graduate) that were international students was steadily yet slowly growing, from 5% to 10%. The percentage of undergraduate enrollment that was international students remained constant, 10% to 12% between 2009 and 2014.

Institution C  
International Enrollment as Percent of  
Total Enrollment



## Institution C

### International Enrollment as Percent of Undergraduate Enrollment

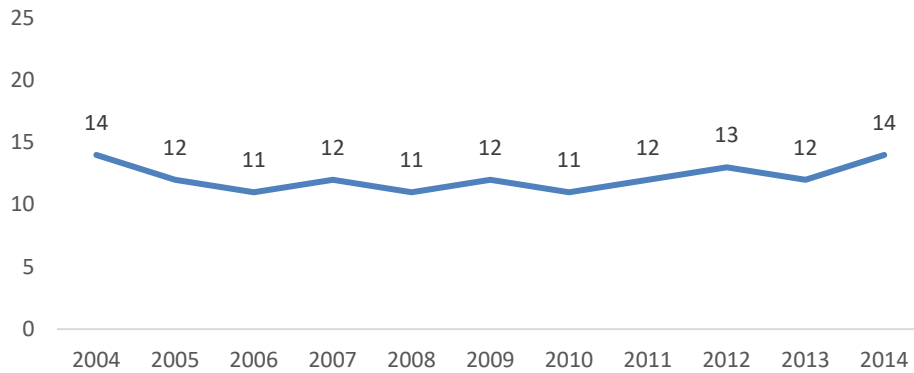


### **Institution D**

Institution D is a small, private, more selective institution located in the Plains region. It exclusively offers undergraduate degrees focused on arts and sciences majors. The institution is located in a large city, and at least half of its degree-seeking undergraduates live on campus, where at least 80% attend full time. Between 2004 and 2014, the percentage of total enrollment of international students remained between 11%-14%. As the institution exclusively offers undergraduate degree courses, the total enrollment is also the undergraduate enrollment.

### Institution D

#### International Enrollment as Percent of Total (Undergraduate) Enrollment

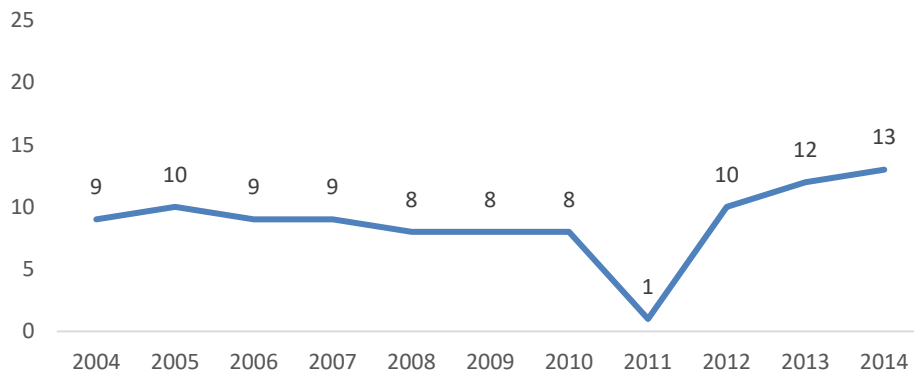


### Institution E

Institution E is a small size, private, inclusive in selection institution located in the Plains region. It offers baccalaureate degrees in diverse majors (professions plus arts and sciences). The institution resides in a remote town, and at least half of its degree-seeking undergraduates live on campus, where at least 80% attend full time. Between 2004 and 2014, the percentage of total enrollment of international students remained steady (around 9%) until 2011, down to 1%. Since 2012, the proportion of international students increased to 13% by 2014.

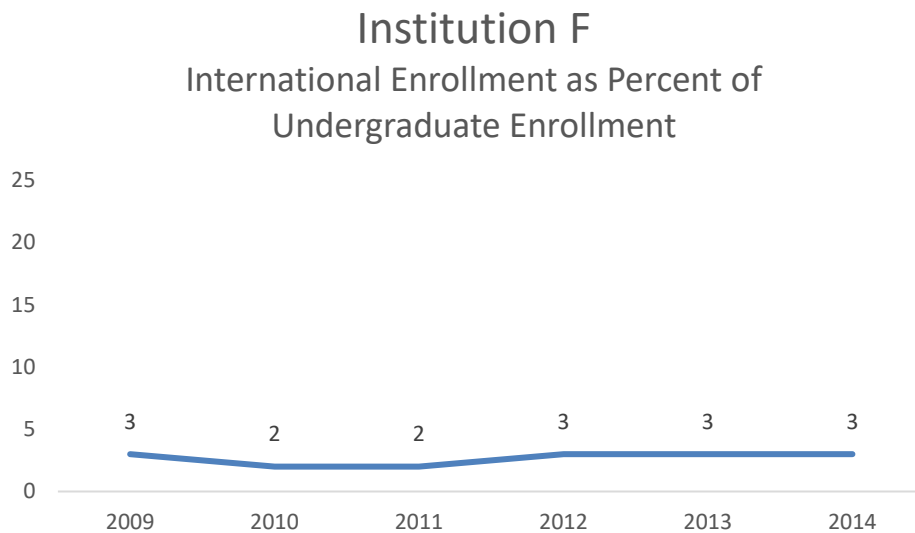
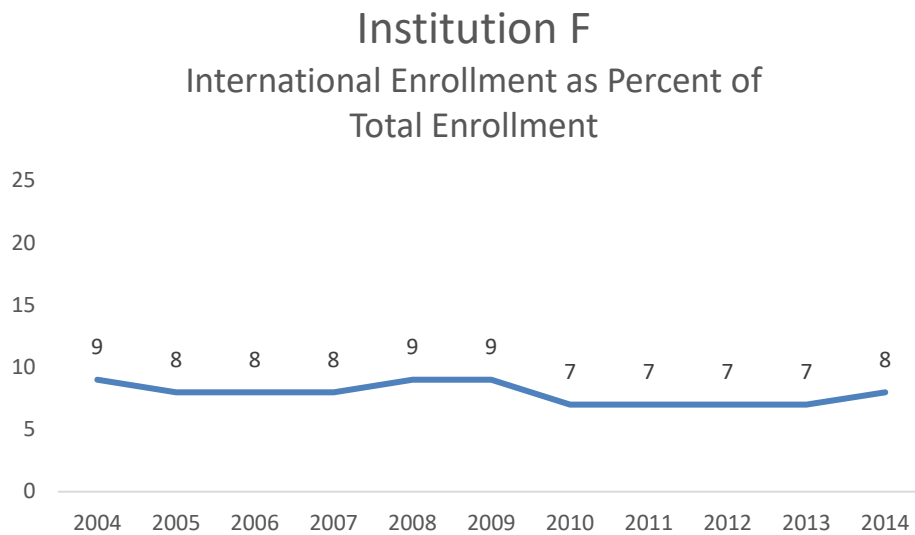
### Institution E

#### International Enrollment as Percent of Total (Undergraduate) Enrollment



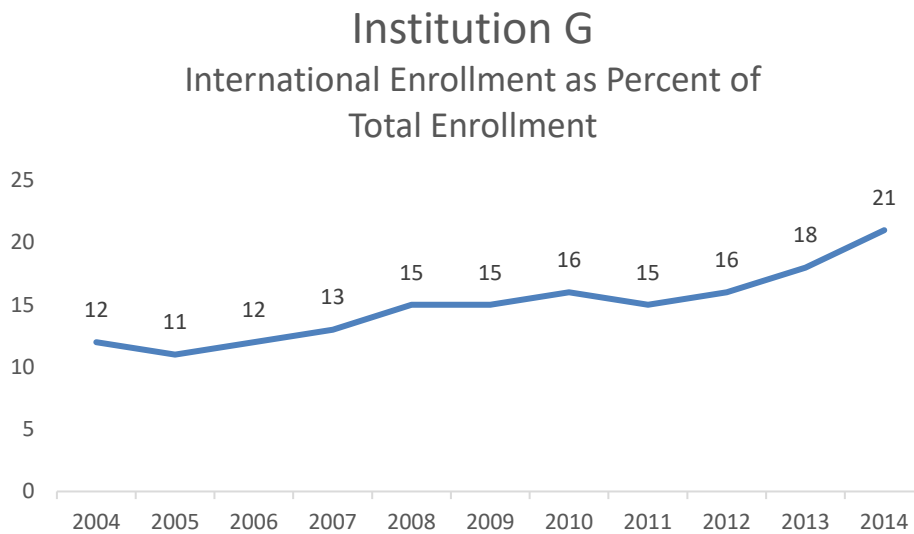
## Institution F

Institution F is a large, public, more selective institution located in the Southwest region. The highest degree the institution offers is the doctoral degree plus arts and sciences fields, with high research activity. A large number of degrees have both graduate and undergraduate degrees. The campus resides in a distant town, with 25%-50% of degree-seeking undergraduates living on campus, and between 50% and 80% who attend full time (primarily residential).



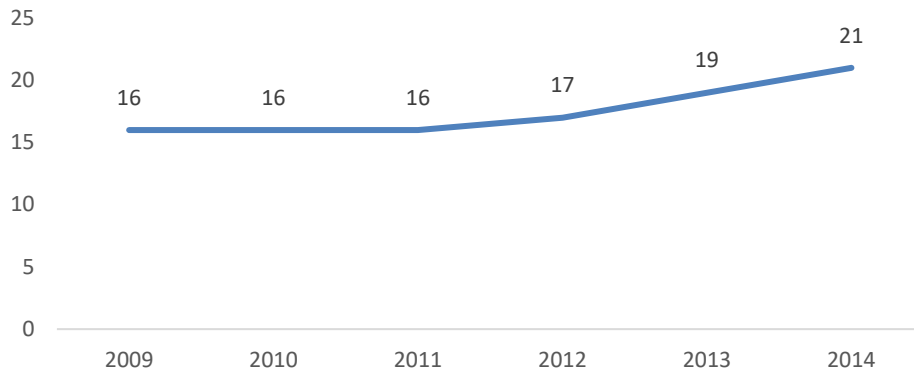
## Institution G

Institution G is a small art institution with a total student body of 1000+, and the international student population is 24% of the total student body, with 83% of international students from Asia. The top four countries of origin are China, Korea, Indonesia, and the Middle East. The department primarily responsible for integrating international students is nested within student services, and the Director reports directly to the Vice President for Student Services and reports weekly to the Provost. The campus resides in a large city, with fewer than 25% of its degree-seeking undergraduates living on campus or fewer than 50% enrolled full time (primarily nonresidential).



### Institution G

#### International Enrollment as Percent of Undergraduate Enrollment

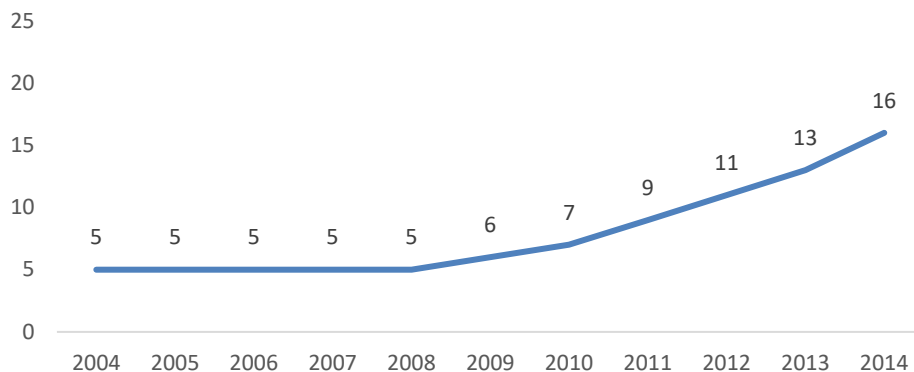


### Institution H

Institution H is a size small, private, inclusive (less selective) institution, located in a small city in the Southeast region. It offers exclusively undergraduate degree with a special focus in arts, music, and design Schools. At least half of its degree-seeking undergraduates live on campus and where at least 80% attend full-time (highly residential).

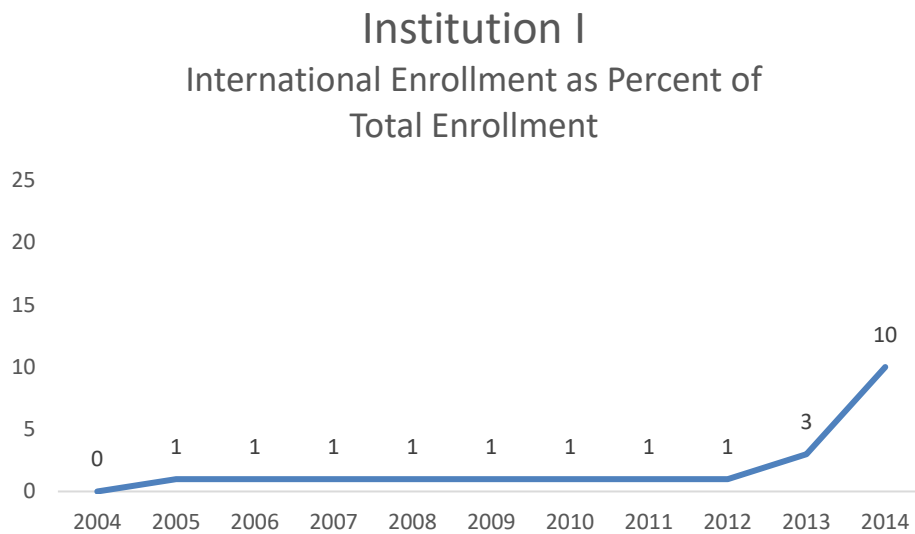
### Institution H

#### International Enrollment as Percent of Total (Undergraduate) Enrollment



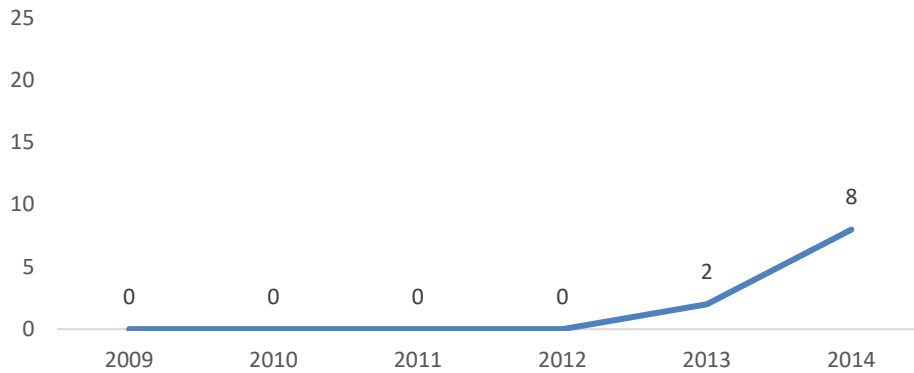
## Institution I

Institution I is a public, inclusive in admission, medium-sized institution, located in the Southeast region. The institution offers up to doctoral degrees (moderate research activity). The institution awards up to doctoral degrees. The enrollment profile is high in undergraduate. For the undergraduate instructional program, 60-79% of bachelor's degree majors were in professional fields, and graduate degrees were observed in up to half of the fields corresponding to undergraduate majors. The campus resides in a large city, with at least half of its degree-seeking undergraduates living on campus and at least 80% attending full time (highly residential).



### Institution I

#### International Enrollment as Percent of Undergraduate Enrollment



### Institution J

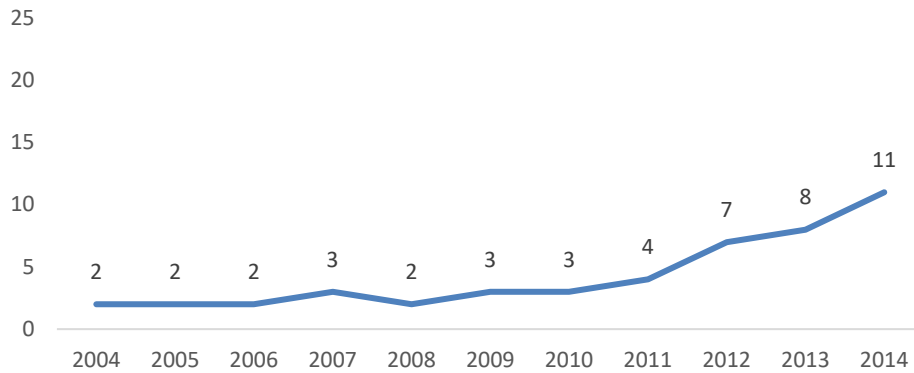
Institution J is a public, large size, selective institution located in the Southeast region. Fall enrollment data indicate at least 80% of undergraduates are enrolled full-time at these bachelor's or higher degree-granting institutions. Test score data for first-year students indicate that these institutions are selective in admissions (40th to 80th percentile of selectivity among all baccalaureate institutions). At least 20% of entering undergraduates are transfer students. Fall enrollment data also shows both very high undergraduate enrollment, and less than 10% of full-time graduate enrollment.

Sixty percent to 79% of bachelor's degree majors were in professional fields, and graduate degrees were observed in up to half of the fields corresponding to undergraduate majors. The campus resides in a remote town, with 25% to 49% of degree-seeking undergraduates living on campus and at least 50% attending full time.



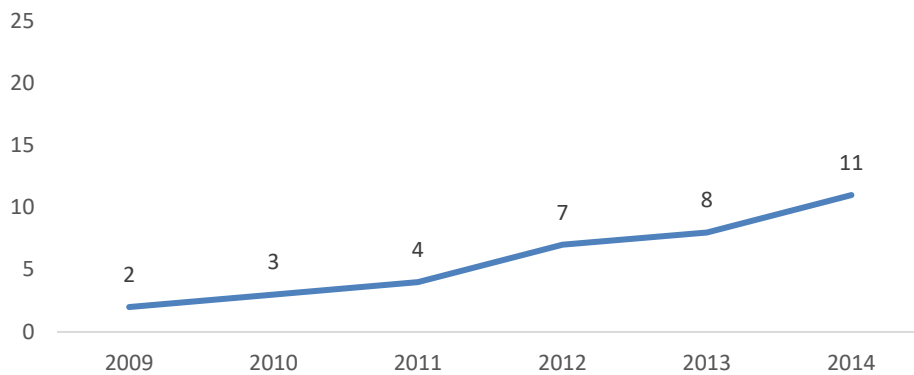
### Institution J

International Enrollment as Percent of Total Enrollment



### Institution J

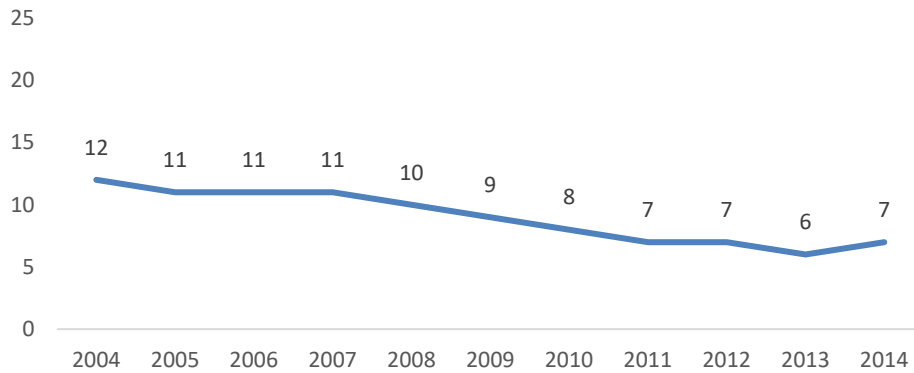
International Enrollment as Percent of Undergraduate Enrollment



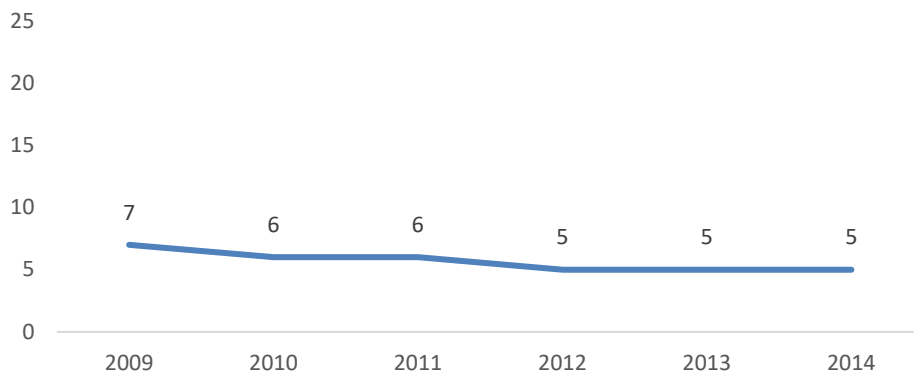
### Institution K

Institution K is a large size, inclusive in admission, public institution located in the Southwest region. It awards up to doctoral degrees (higher research activity). Enrollment profile is high undergraduate with professional majors plus arts and sciences. The campus resides in a large city, with fewer than 25% of degree-seeking undergraduates living on campus and/or fewer than 50% attending full time (this includes exclusively distance education institutions).

### Institution K International Enrollment as Percent of Total Enrollment



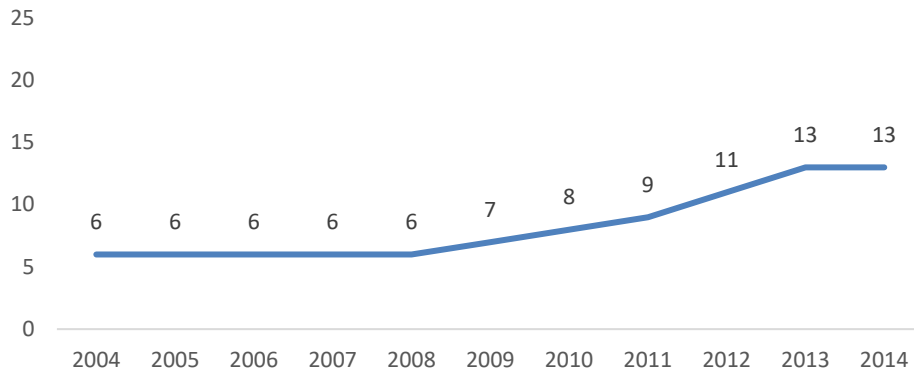
### Institution K International Enrollment as Percent of Undergraduate Enrollment



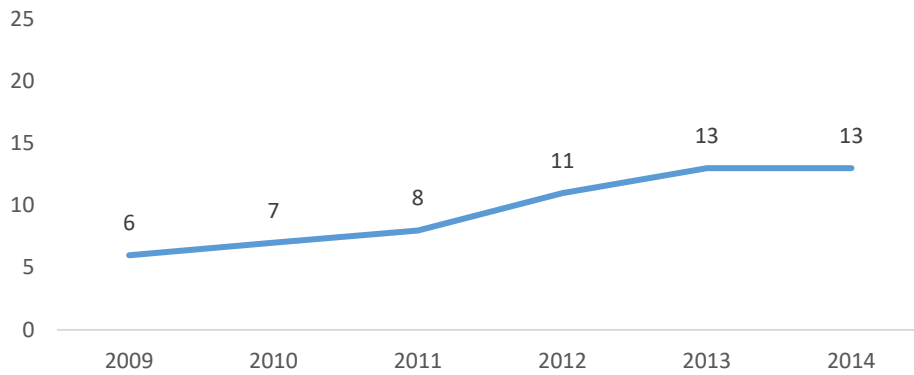
### Institution L

Institution L is a large size, more selective in admission, a public institution, located in the Far West region. The institution awards up to doctoral degrees (highest research activity). The enrollment profile is high undergraduate, majors in arts and sciences plus professions. The campus resides in a midsize city, with fewer than 25% of degree-seeking undergraduates live on campus and/or fewer than 50% attend full time (includes exclusively distance education institutions).

### Institution L International Enrollment as Percent of Total Enrollment



### Institution L International Enrollment as Percent of Undergraduate Enrollment



# Ken Jian Guan

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## EDUCATION

*Doctorate of Education in Higher Education* 2017  
with a Specialization in Human Resources Management and Organizational Behavior  
Indiana University-Bloomington

Dissertation Topic: Assessing Institutional Efforts to Culturally Integrate  
International Undergraduate Students

*Graduate Certificate, Institutional Research* 2017  
Indiana University

*Master of Education, Higher Education and Student Affairs* 2007  
University of Vermont

*Bachelor of Arts, Psychology* 2005  
University of Hawaii at Hilo

## PROFESSIONAL EXPERIENCE

### Indiana University Bloomington (2012-2017)

*Residence Life Coordinator, Residential Programs and Services* July 2017 to Present

- Provide direct supervision and staff development for one full-time office manager and nine undergraduate resident assistants
- Advise student government, community council, community educator, and welcome week leaders
- Support the implementation of a new residential curriculum
- Manage the building budget of \$5,000 for staff programming, community council, and welcome week fund
- Collaborate with campus wide faculty, staff, and units to enhance academic success
- Assess and determine appropriate course of action in student conduct, crises, and conflicts
- Serve on the staff training committee

*Assistant Residence Manager, Residential Programs and Services* July 2016 to June 2017

- Provided direct supervision and staff development for one graduate supervisor and nine undergraduate student staff
- Advised student government, community council, and community educators
- Supported the implementation of a new residential curriculum
- Managed the building budget of \$3,000 for staff programming and community council

- Collaborated with learning community staff to enhance student experience and success
- Assessed and determined appropriate course of action in student conduct, crises, and conflicts
- Served on the staff training committee
- Worked closely with maintenance staff, custodial supervisor, and dining manager to address issues or concerns in the building

*Graduate Assistant, Office of Instructional Consulting*

*July 2014 to June 2016*

- Provided excellent consultation for faculty and staff implementing instructional design and educational technology integration
- Co-managed the general operation of the office, and other three doctoral level consultants
- Participated in high-level strategic planning, systems building, resource allocation, staff hiring, and general decision making within the unit

*Housing Assistant, Residential Programs and Services*

*April 2013 to July 2016*

- Addressed and accommodated resident needs in 400 apartments
- Responded to emergencies and maintenance requests
- Worked closely with physical plant and facility crew
- Secured the building at night, performed building inspections, and facilitated fire drills
- Conducted new resident orientation and programs

*Graduate Assistant, IU-CUNY Guttman Community College*

*September 2012 to June 2014*

- Worked with faculty and developed a website to highlight the Learning Analytics (LA) project and benchmark effective LA practices worldwide, a project funded by the Bill & Melinda Gates Foundation
- Interviewed faculty and practitioners in United States to understand how various types of information can promote constructive behavioral changes better

## **Kansas State University (2010-2012)**

*Student Services & Support Coordinator*

*March 2010 to September 2012*

*English Language Program*

- Advised students on probation, dismissed students, or students on reinstated status and coached them on improving disruptive classroom behaviors
- Developed attendance tracking and performance monitoring systems
- Managed student crisis issues, including mental health, arrests, domestic violence, classroom disruptive behaviors, student bullying, and provided conflict mediation
- Served on the campus Critical Incident Response Team (CIRT)
- Designed and implemented missing students protocol
- Collaborated with campuswide offices in support of student crisis and retention, including international admissions, international services, student life, residence life, health and wellness, recreation center, and academic center
- Contributed to the selection of 13 full-time faculty
- Launched a pilot retention program: Training and Organization in Wellness, Academics, Responsibility, and Discipline (2 credits)

- Created and taught a college-level course for international student success: Culture transition global perspective course: American Culture and Life Style (3 credits, 36 students)
- Co-developed a hybrid online and lecture course: the American Higher Education Orientation (1 credit, 140 students/semester)

### **University of Texas at Austin (2007-2010)**

*Assistant Hall Coordinator, Housing and Food Services*

*August 2008 to March 2010*

- Facilitated annual housing survey
- Conducted research on various topics (e.g., organizational structures, window display policy)
- Operated emergency and information channel
- Operated residence life cinema for 7,000 residents
- Supervised eight student technicians to provide technology support
- Developed content for websites on Organizational Diversity and Professional Development, and off-campus housing

*Hall Coordinator, Housing and Food Services*

*August 2007 to July 2008*

- Supervised 20 student staff across three honors residence halls with 560 residents
- Created staff training module
- Advised hall council
- Managed \$2,000 programming budget
- Facilitated the residential Faculty Fellow Program in collaboration with faculty

### **University of Vermont (2005-2007)**

*Graduate Assistant to the Director, Office of Student Life*

*August 2006 to May 2007*

- Organized the first United Nations Association Film Festival, a week-long event on the University of Vermont (UVM) campus
- Managed a \$2,000 event budget
- Sought support from academic departments to create film festival
- Advised National Scholar Collegiate Society UVM Chapter (150 members)
- Conducted research on UVM Alumni who are in Peace Corps or are Nobel Peace Prize winners
- Tracked all programs in the department

*Coordinator of Civil and Judicial Programs*

*August 2005 to May 2006*

*Graduate Assistantship at the Center for Student Ethics and Standards*

- Conducted judicial meetings and formal hearings
- Selected, trained, and advised University Student Judicial Council members
- Facilitated the award-winning at-risk student retention program titled Project Discovery
- Coordinated the Advocate Program to protect student rights and guide students through the judicial process

## INTERNSHIPS AND PRACTICA

*Institute for Curriculum and Campus Internationalization*  
Indiana University-Bloomington

May 2014

- Assisted in planning and operational logistics, supported speakers, and attended post-institute debriefing and evaluation
- Studied the visions, history, and most current practices in higher education internationalization

*Office of International Education*  
University of Vermont

January 2007 to May 2007

- Created dialogue on global issues by inviting speakers on campus
- Self-initiated to plan and lead excursions for students

*Center for Health and Wellness*  
University of Vermont

August 2006 to December 2006

- Assisted in creating a living and learning community for health and wellness
- Hosted weekly discussion on wellness topics

*Office of Students with Disabilities Services*  
University of Vermont

January 2006 to May 2006

- Assessed student support needs through research and interviews
- Observed counseling sessions, and facilitated student meetings

*Center for Career Services*  
University of Vermont

August 2005 to December 2005

- Promoted career connection by interviewing distinguished alumni
- Created alumni profiles for publication online
- Attended counseling and case analysis meetings

## PUBLICATIONS

Guan, J. (2008). A cultural history of people with disabilities. *The Vermont Connection*, 29, 22-28.

Guan, J. (2008). *An international student's comprehensive learning through his development in the West*. Presented at the Hawaii International Conference on Education, Honolulu, HI.

## PRESENTATIONS

Chang, S., Chung, M., Guan, K., & Li, W. (2017, March). *The importance of representation of East Asians in student affairs*. Presented at the annual meeting of the American College Personnel Association (ACPA), Columbus, OH.

- Borden, V., Guan, K., & Zilvinskis, J. (2014, May). *Learning analytics, IR, and assessment: Living together in the same house*. Presented at the 2014 Forum of the Association for Institutional Research, Orlando, FL.
- Borden, V., & Guan, K. (2013, January). *Learning analytics in practice: Understanding and tailoring to CUNY Guttman Community College*. Presented to Guttman Community College Full Faculty and Staff Team, Manhattan, NY.
- Reppert, K., Williams, J., & Guan, K. (2011). *Social networking around the world: A comparison of international social networking sites*. Presented at the Summer Institute on Distance Learning and Instructional Technology, Overland Park, KS.
- Reppert, K., Stinnett, M., & Guan, K. (2010). *A blended orientation course: Integrating international students into university life*. Presented at the Summer Institute on Distance Learning and Instructional Technology, Overland Park, KS.
- Guan, J. (2008). *An international student's comprehensive learning through his development in the West*. Presented at the Hawaii International Conference on Education, Honolulu, HI.

## **PROFESSIONAL AFFILIATIONS**

*Chair for Best Practices Award* *March 2017 to March 2018*  
International Education Knowledge Community, NASPA

- Chaired a selection committee resulting in the honoring of four universities worldwide with the Best Practices Award in international education
- Publicized best practice award winning programs

*Vice Chair for Convention Programs* *March 2017 to March 2018*  
Commission for Global Dimension of Student Development, ACPA

- Improved and managed one of the oldest and distinguished Commission's presence and activities at the ACPA conventions
- Assisted with Commission meeting space requests and logistics and scheduling associated with the International Colloquium
- Helped publicize Commission-sponsored programs and recruited volunteers to introduce speakers and award certificates of appreciation
- Organized the Commission's efforts at CelebrACPA, including compiling and producing promotional materials, corresponding with CelebrACPA organizers, and recruiting volunteers to represent the Commission during the event
- Initiated and co-drafted the mission statement and the implementation plan for the ACPA Video on Demand Internationalization Channel