How friendly is your campus?: International Student Acculturation at the University of Jyvaskyla

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ABSTRACT

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This study examined the perception of belonging and community integration of international students. The study used the International Friendly Campus Scale to examine various aspects of community integration by international students and used University of Jyväskylä as a case study. The data is drawn from students had had been living in Jyväskylä for at least one year.

This study looks at how campus discrimination, international office services, social engagement, and academic services at the University of Jyvaskyla impact how well international students identify with the institution. The degree to which students identify with the institution was then used to interpret international student acculturation at the university.

The results of the factor analysis show a transfer of the scale from the original context to Jyvaskyla is appropriate. A regression analysis comprised of the survey categories and two of the student descriptive variables show the contributions made by the survey categories are significant contributions to student identification and acculturation.

The implications of this study impact international student acculturation and the confirmation that the International Friendly Campus Scale can be transferrable with a fairly high degree of accuracy between contexts as different as the Midwestern United States and Finland. Use of this scale would be of benefit for universities either with large international student populations or courting international students.

Keywords: international students, acculturation, wellbeing, integration, regression analysis,

CONTENTS

1 INTRODUCTION

International students have become a significant population on university campuses across the world. These students, drawn by opportunities to travel and experience the novel, carry with them the forces of economics, diversity, and prestige universities desire. Educational institutions (referred to simply as 'universities' in this paper) across the world actively promote themselves to obtain the best and brightest students by promoting factors such as peace and cultural exchange, the value attached to their diplomas, and significantly the diversity of their campuses (Triana, 2015, p. 384). However, these international students often have different needs and problems from their domestic counterparts which universities must confront if they are to retain the valuable resources international students represent.

This research is about how the institutional setting can influence international student acculturation. Institutions, however, have different rules, norms, and cultures. Therefore, a tool created in the context of one institution cannot be uniformly transferred to another institution without some margin of error. Thus, a secondary aspect of this study is to determine if the survey tool used can be transferred to this context.

In addition to the prestige factor hosting a large cohort of international students brings to a university, international students also contribute significantly to the fiscal resources of both the university and the local community. Forbes-Mewett & Nyland identify the heavy reliance Australian universities have for international student fees, hosting in 2010 470,000 students (2013, p. 181), though the numbers for the 2014 academic year having reduced to 269,752 (Institute of International Education, 2016). The numbers for the United States for the 2014/15 academic year show 974,926 international students studying at American schools and contributing tuition fees, housing and board fees, buying books, and overall contributing to the local economies of their host communities (Institute of International Education, 2016). In the 2012/13 academic year, international students contributed an estimated $24 billion to the United States

(Institute of International Education, 2016). Even Finland, which previously did not charge a tuition fee for students no matter their country of origin, is beginning to institute tuition fees for international students originating outside of the European Union ("Studyinfinland.fi", 2016), attempting to take advantage of the thousands of international students studying at Finnish institutions of higher education (Institute of International Education, 2016).

In reverse, international students have many factors to contemplate when determining where they will study abroad. Some factors include programs available such as Erasmus or other student exchange programs, how accommodating a university's program is to the student's needs, various socioeconomic factors affecting the country (cost of living, tuition, etc.), and the reputation the school has in the world at large.

The process of adjusting to and at least partially adopting a new culture, known as acculturation (Chavajay, 2013, p. 667), can result in a wide variety of stresses for international students. These stresses need outlets and a means for students to manage. The process of managing acculturative stresses, coupled with the difficulties that comes with moving to a foreign country and studying in a foreign land.

Many students need help in managing the transition between their native culture and the host culture. In order to help facilitate the process many universities have dedicated resources to help international students manage acculturative stress. Universities often have services to help both domestic as well as international students, such as liaisons, tutor/mentor programs, and other institutional structures for both groups. However, international students experience more difficulties than their domestic counterparts (Andrade, 2006, p. 143), mostly because they need to adjust to the academic life and culture, as well as the new host country's culture (Triana, 2015, p. 385).

Given the value international students bring to universities and the overall climate campus, maintaining a position and reputation of openness and friendliness towards international students must be an imperative for any institution seeking a positive reputation. This thesis describes the use of a measurement

tool, the "International Friendly Campus Scale", as outlined by Wang et al., which aims at determining how " friendly and accepting a campus is to international students in terms of the students' wellbeing (Wang et al., 2014).

2   LITERTURE REVIEW

There are many barriers to the successful acculturation of international students into a host culture. These barriers range from linguistic to cultural, from academic to social, and are a major cause of acculturative stress amongst international students. Many factors can contribute to how an international student experiences stress and therefore their wellbeing. Factors can include friendships with co-culturals (other international students from the same country/culture) and domestic residents, a student's gender, the country of origin, year in studies, and the country an international student is studying in all play a role in affecting student adjustment and their wellbeing (Andrade, 2006, p. 143). This section will discuss acculturation and the themes that play a major role in international student acculturation, such as institutional services, social engagement, campus climate, and the issue of language.

2.1   Acculturation

The concept of acculturation can be defined as "the process of adapting to a new social and cultural setting" (Myers-Wells, 2011, p. 456). Yoon et al. describes acculturation by quoting from Redfield, Linton, & Herskovits (1936) defining the concept as when "groups of individuals sharing different cultures come into continuous first-hand contact" (2012, p. 16). This definition is then given more precise dimensions by Yoon et al. by comparing acculturation against enculturation. In their 2012 paper, Yoon et al. describe acculturation as minority groups' cultural socialization into a mainstream culture, and enculturation as "the cultural socialization into one's culture of origin" (p. 16). In short, acculturation is where minority ethnic groups (such as international stu-

dents) socializes or enters into a majority culture (such as that of the local or host community) whereas enculturation is when a minority group interacts with their home culture from abroad.

The concept of acculturation used here relies on, amongst others, the theory and work generated by John Berry. This work, as summarized by Yoon et al., differentiates those undergoing acculturation into two distinct acculturation groups (ibid, p. 16). These are mobility, people who move to new locations, and permanence, people who have the new culture brought to them (ibid). These two categories are further modified by the idea of voluntariness, which differentiates those seeking out the new culture (such as immigrants) from those who do not seek out the new culture but come into contact with it nonetheless (such as refugees and indigenous populations) (ibid).

For groups undergoing voluntary mobility, such as international students, integration into a host culture is an important goal of studying abroad. A major factor in the decision to move abroad is the opportunity to study and live in a different culture. However, this novel atmosphere can prove a hostile environment to students which they must overcome. Many factors pose as barriers to acculturation. In overcoming these barriers, those undergoing acculturation experience acculturative stress, which is distinct from culture shock. Berry defines acculturative stress as "a range of affect experienced during acculturation" which can have both positive and negative connotations (2005, p. 708). This is different from culture shock because "the notion of shock carries only negative connotations" (ibid). Misra, Crist, & Burant second Berry's notion of "stress" being both positive and negative in their exploration of the topic. They cite Thoits when describing stress as being "any environmental, social, or internal demands that cause an individual to adjust his or her behavior" (2003, p. 138).

Acculturative stress can be induced by many events. These include general issues like "language, academic, psychosocial and cultural, financial, and political" factors (Vergara, Smith, & Keele ,2010, p. 1499); explicit issues such as adapting to a new learning environment or learning method, adapting to campus life, and negotiating new customs and traditions (Korobova and Starobin,

2015, p.74; Myers-Wells et al., 2011, pp. 456-57); "emotional pain, such as, feelings of powerlessness, marginality, inferiority, loneliness, and perceived alienation and discrimination" (Yeh & Inose, 2003, p. 17), among many others. Misra, Crist, & Burant describe the problems faced specifically by international students (and as opposed to domestic students) as "uprooting disorder", which they describe as "separation from home environment that disturbs their wellbeing" (2003, p. 138).

One factor impacting an international student's ability to integrate into the host culture is the student's willingness to integrate. M.S. Kim defines acculturation as "a multifaceted process that refers to individual changes over time in identification, attitudes, values, and behavioral norms through contact with different cultures" (2002, p. 142). This definition takes into account a person's identity and core beliefs, things that people may find difficult or uncomfortable to change. Assuming an international student fits into Berry's category of a voluntary mobility is not always correct. Students may be resistant to entering into the host environment for a variety of reasons. Chavajay notes in his study that international students, especially when first arriving in a foreign country, tend to become attached to other international students (2013, p. 673) and form cliques comprised solely of international students. These groups hinder social interactions between international and domestic students and contribute to a perceived lack of socio-emotional support between student groups (Chavajay, 2013; Myers-Wells et al., 2011; Terrazas-Carrillo, Hong, & Pace, 2014).

Yeh and Inose also describe how international students, deprived of the same type and depth of relationships they had had back in their native countries, often experience challenges in attempting to establish similar relationships with domestic students (or nationals) causing feelings of disorientation, resentment, alienation, or social depravation (2003, pp. 16-17). This thread was also noted by Terrazas-Carrillo, Hong, & Pace (2014, p. 701) in their study and elaborated that participants who articulated few close social relationships with domestic students contributed to feelings of isolation from the local community which had an overall negative impact on her experiences and wellbeing. How-

ever, it should be noted that feelings of isolation do correlate with reduced participation on university campuses yet higher than average grade point averages (Korobova, & Starobin, 2015, p. 75).

In addition, when trying to establish new relationships with domestic students or nationals, international students have to mind the intricacies interactions between differing cultures can propagate. There is a link between international student's social support networks and the levels of acculturative stress these students are facing (Yeh & Inose, 2003, p. 17).

To summarize, acculturation is when students adapt to a new setting and make psycho-social adjustments, such as establishing support networks, negotiating their identity to accommodate the new experiences, and adjusting to their new situation in the host culture. International students voluntarily move abroad to experience a new culture. During this time, these students experience acculturative stress, which can be both positive and negative. Many factors can contribute to acculturative stress. Many of these factors have their roots in feelings of isolation. Therefore, as noted above, many researchers indicate the importance of social connectedness with both international students as well as domestic students to the acculturation process and overall wellbeing.

2.2   Campus Climate

As stated above, social connectedness is important to the acculturation process. Acculturation and societal interactions do not "depend solely on the individual, but also the environment students are in" (Wang et al., 2014, 119). Instead, Wang et al. suggest interpreting social interactions between international students and the host community through Bronfenbrenner's ecological framework because it emphasizes interactions between humans and the environment, which through the lens of social connectedness means the social environment (2014, p. 119). Social engagement and connectedness can only happen if the student and the social environment are both receptive to mutual interaction.

2.2.1   Social Connectedness

Connecting to the host culture and its society is important for international students. Fer notes "individuals begin to adapt only as they communicate with others in their new environment (2016, p. 23). One factor in this is the sense of belongingness, which "can be seen as positive indicators of a friendly campus environment" (Wang et al., 2014, p. 120). Sense of belongingness; engendered by students having interactions and relationships with diverse populations of students, faculty, and staff; helps facilitate a friendly campus climate (Glass et al., 2015, p. 355; Menzies, Baron, & Zutshi, 2015, p. 3; Moores, & Popadiuk, 2011, p. 291; Wang et al., 2014, p. 120).

Another factor is a student's social connection on campus, which is "considered an important aspect that impacts the establishment of international friendly campus climate" (Wang et al., 2014, p. 120). Korobova and Starobin found that international students "value more institutional emphasis on helping [international students] cope with their non-academic responsibilities and providing the support they need to thrive socially" (2015, p. 82). These researchers also elaborate how international students are more likely (at least towards the end of their studies) to engage in serious conversations "with students of different races or ethnicity and students [with different] religious beliefs, political opinions, or personal values" (2015, pp. 81-82). These elaborations describe the need for universities to provide opportunities for social connections between both international students and their domestic counterparts.

Hechanova-Alampay et al. articulate that the type of support received is as important as the amount of support an international student receives (2002, p. 462). As the types of acculturative stress differentiate, so too do the strategies for dealing with these types of stress. With diverse barriers such as these in mind, J. Wang finds that peer acceptance, both among international and domestic peers, is essential for international student acculturation (2012, p. 75). Peer acceptance, along with a student's emotional intelligence, was also found to be significant predictors of acculturative stress (Vergara, Smith, & Keele, 2010, p. 1503).

In summery, students who display strong social connections tend to have more resources available to help manage acculturative stress. Language skills, as well as socio-emotional skills, play a significant role in establishing and maintaining these social connections. Universities also play a role in facilitating social interactions between international students, other international students, and domestic students.

2.2.2   Discrimination

One aspect international students have to deal with is the issue of discrimination, which is significantly linked with campus climate and plays a major role in how students perceive their time at the university (Wang et al., 2014, p. 120). Several studies note perceived occurrences of prejudice, alienation, or discrimination reported by international students (Chavajay, 2013; Wang et al., 2014, p. 120; Wu, Garza, & Guzman, 2015, p. 6). The issue has a very negative impact on student adjustment and wellbeing (Yeh & Inose, 2003; Li & Gasser, 2005; Vergara, Smith, & Keele, 2010; Chavajay, 2013; Wang et al., 2014; Wu, Garza, & Guzman, 2015). Research indicates geographic region of origin in relation to the host country, social connectedness, and English language fluency all play a part in "smoother interactions with majority group members" (Yeh & Inose, 2003, p. 23).

Chen in his study identifies a link between the physical and psychological wellbeing of international students and the influence of prejudice and discrimination from the host residents (1999, p. 56). Issues of perceived discrimination push international students to socialize with other international students, especially those from their native country. Perceived discrimination also helps form a barrier that limits interactions with domestic students and facilitates the separation of international and domestic students (Chavajay, 2013, p. 673; Kosheleva, Amarnor, & Chernobilsky, 2015, p. 461; Moores, & Popadiuk, 2011, 291). Wang et al., citing an article by Hanassab from 2006, define institutional discrimination as "negative behaviors that prevents disfavored groups from accessing the same privileges afforded to others" (2014, p. 120). Sometimes the-

se feelings originate from an inability to initiate friendships with domestic students, as reported by Yasin and Bélanger (2015, p. 28) in their study at one Canadian university, which can generate a feeling of an "us" and "them" mentality, which in turn can lead to perceived discrimination when combined with frustration and other negative feelings brought about by acculturative stress (Hechanova-Alampay et al., 2002).

2.3   Campus Services

Campus services, regarding the international student sense, here refers to services assisting international students provided by a university or institution. Such services include, but are not limited to, items such as "counseling, housing and finance advice, and academic support, which is usually termed as language and learning support…that contribute to student safety and wellbeing" (Forbes-Mewett & Nyland, 2012, p. 182), student orientations, info-sessions, and student health services (Ellis-Bosold, 2013, p. 162; Wu, Garza, & Guzman, 2015, p. 8), training staff members in dealing with international students (Wu, Garza, & Guzman, 2015, p. 8), and/or the creation of an explicit 'foreign student advisor' position or department within the university (Bista, 2015, p. 87).

Important for understanding international student adjustment within a university community is having knowledge of the structures available to facilitate the adjustment process. One key focus of this understanding is on the roles and duties of the international student advisors available at a university for help. A study performed by Clark in 2002 summarized some of the roles international students gave international student advisors as "a facilitator for international student activities; an advisor on immigration issues; an advocate for various personal needs; an academic advisor; and as a staff member" (p. 87, cited in Bista, 2015, p. 91). This diverse array of roles an international student advisor takes on plays a factor in the effectiveness of their aid and therefore influences adjustment. Universities with clear, concrete organizational structures and policies regarding their international students and advisors are in a better

position to provide needed assistance and aid. Given that the role of international student advisors "is no longer limited to advising students and assisting them in adjustment and academic problems" (Bista, 2015, 91), one or two staff members attached to a Campus Life or Student Affairs department may not be enough to tackle the diverse needs of the most diverse student population. Other preexisting departments and structures at a university perform important roles in the acculturation process for international students.

2.3.1   Counseling Services

Counseling services are important structures for international students. International students generally "constitute a high-risk group, having more numerous and more severe adjustment problems than domestic students" (Russell, Thomson, & Rosenthal, 2007, p. 60) and therefore constitute a strong need for counseling services. International students adjusting to new host country's climate and culture often face psychological and physical challenges to their wellbeing derived at least in part by the acculturative stress associated with their relocation (Chen, 1999, p. 51; Jacob & Greggo, 2001; Menzies, Baron, & Zutshi, 2015, p. 3; Russell, Thomson, & Rosenthal, 2007, p. 60).

Russell, Thomson, & Rosenthal in an Australian study identified a vast list of issues affecting international students. Common problems include the lack of social support and meaningful relationships, language difficulties, discrimination and racism, culture shock, financial problems, homesickness, identity problems, coping problems, stress management issues, and a host of other problems (Jacob & Greggo, 2001, pp. 76-77; Menzies, Baron, & Zutshi, 2015, pp. 2-3; Russell, Thomson, & Rosenthal, 2007, p. 60) which fall into the realm of counseling services. Russell, Thomson, & Rosenthal found that a student's age and perceived level of acculturation played a role in the likelihood of the student seeking assistance from counseling services, while other demographic variables do not play a significant role (2007, p. 72).

Research regarding international students' use of wellbeing services identifies that a substantial number of students did not seek services (Russell,

Thomson, & Rosenthal, 2007, p. 60), even when students perceive a need for such services (p. 71), specifically counseling services. This is mainly due to lack of knowledge about the existence of the service, their location, the mechanics of obtaining an appointment, and what the associated fees are (Russell, Thomson, & Rosenthal, 2007, 71).

Another counseling-related difficulty facing international students is the sense of self. Panicacci & Dewaele articulate in their 2017 article the effect of bilingualism and multilingualism on students' sense of self. In a study on bilingualism/multilingualism and identify, multiple participants in their study reported a "sense of feeling different when switching languages", with some participants referring to the topic of bilingualism as linguistic schizophrenia (Panicacci & Dewaele, 2017, p. 2). Dewaele, in a 2016 study and cited in the afore-referenced paper, found perceived feelings of "fakeness" and identity crisis when switching language as being related to anxiety and fluctuate over time (ibid, p. 3).

In short, many factors influence the counseling needs for international students. They have unique challenges when compared to their domestic counterparts, and have many inter-group differences that can hinder any sort of universal "magic bullet" approach. Regardless of the difficulties associated with helping international students with the possible myriad of problems facing the group, counseling services remain vital to the acculturative and adaptive process.

2.3.2   Health Services

Campus health services play an integral role in student wellbeing and providing a perceived safety net for students to fall back on when needed (Ellis-Bosold, 2013; Wang, Slaney, & Rice, 2007, p. 1280; Russell, Thomson, & Rosenthal, 2007; Yeh & Inose, 2003, p. 16). Campus health services are usually more frequented than counseling services (Russell, Thomson, & Rosenthal, 2007, p. 71), though both structures play significant roles in providing support to international students (Moores, & Popadiuk, 2011, p. 292). International students

though tend to be rather reluctant to utilize the health services available from their university as well as the surrounding community (Ellis-Bosold, 2013, p.161).

One survey done by Ellis-Bosold done in America found that when asked who they felt responsible for their health, international students (specifically Chinese students) identified their university as being just as responsible as themselves (2013, p. 159). This study also found a strong connection between having a mandatory student orientation session about campus health services (location, how to book an appointment, etc.) and the likeliness international students are to utilize campus health services (88%) (ibid, p. 160). These findings are seconded by findings from Yakunina, Weigold, & Weigold, who found that students who actually utilize campus resources tend to have lower amounts of negative acculturative stress and a more positive adjustment (Yakunina, Weigold, & Weigold, 2013, p. 70).

2.3.3   Academic Services

"**A**cademic goals", Glass et al. note, "are among the most prominent motivational factors shaping international students' desire to study abroad" (Glass et al., 2015, p. 353). Once these international students have begun studying abroad, Korobova & Starobin identify that the best way to predict if a student will graduate is to measure their academic preparation, motivation, and overall university engagement (2015, p. 73). With this in mind, universities attracting international students implement a myriad of programs to assist these students as they settle in and attempt to adjust to their new life. These programs include items such as tutor groups and cohort English classes (Andrade, 2006, p. 147; Menzies, Baron, & Zutshi, 2015, p. 3), extracurricular programs on campus, (Korobova & Starobin, 2015, p. 73), cross-cultural study programs (Glass et al., 2015, p. 355). Academic services generally attempt to assist students in achieving academic success, which is defined and extensively articulated by Korobova & Starobin as "extent to which students are achieving their education goals, and it is often measured by assessment" (2015, p.74). Given the assessment-based

nature of measuring success, many academic services provided by universities aim at helping international students improve their academic performance.

Issues regarding university academic services gauged for international students are prevalent and can have a deep felt impact on these students. International students tend to not have the same depth of academic support as domestic students (Korobova & Starobin, 2015, p. 74). International student academic success is determined by factors such as learning strategies implemented by the students, classroom dynamics, language proficiency, and direct social and educational assistance provided by the universities (Korobova & Starobin, 2015, p. 75).

Academic success for international students is also influenced by acculturation and social connectedness. Glass et al. note that "a sense of belonging increased cross-cultural interaction between international and host country students, and it substantially enhanced international students' academic performance" (2015, p. 355). The influence of social connectedness on academic success is not limited to connections with other students. Glass et al. pursue the thread of a social connection between international students and their professors through the lens a sense of belonging and the need for social interaction has on student motivation (2015, pp. 354-55).

To sum up, many factors go into supporting international students academically. Ecological factors, both social and structural, play large roles in supporting the needs of international students. In turn, academic performance and success has been identified as important to international students and therefore can be a large source of stress and a large factor for student wellbeing.

2.4   Language

A major barrier to international students when studying in a foreign country is the issue of the language barrier. Much research has been done regarding students' English levels and their integration into campus communities (Chen, 1999; Li & Gasser, 2005; Pathirage et al., 2014; Rui & Wang, 2015; Yeh & Inose,

2003) in English speaking countries. Scholarship has identified issues such as linguistic challenges increasing acculturative stress experienced by international students (Chen, 1999, p. 51-52; Miranda et al., 2011, p. 532; Misra, Crist, & Burant, 2003; Sandhu & Asrabadi, 1994, p. 436; Yeh & Inose, 2003, p. 16). The challenge intercultural communication poses to international students, both with locals in their host country but also among themselves as a heterogeneous group, are significant for students and staff to overcome.

There has been much research regarding language and international student acculturation. A study done in 2014 by Pathirage, Morrow, Walpitage, & Skolits found "ESL courses can be an effective tool in strengthening the college life off non-native English speaking students, regardless of their native language and level of study" (p. 32), a theme also taken up in Sandhu & Asrabadi (1994, p. 436). International students in this study found the course to be useful for students in both academic and societal interactions (ibid). Findings in a 1994 study by Yang & Clum, cited by Misra, Crist, & Burant, agree with Pathirage, Morrow, Walpitage, & Skolits. These findings indicate "English language proficiency is a more important determinant of international students' adjustment than age, sex, marital status, or education" (2003, p. 138-39).

Andrade has identified that "many of the problems experienced by international students is a lack of language proficiency and cultural knowledge… evidence suggests that 'language problems' may actually be culturally based ways of seeing the world" (Andrade, 2006, p. 143). These differing perspectives on world view contribute to episodes of miscommunication and therefore hamper interactions between international students and their domestic counterparts and acts as a significant source of acculturative stress. Chen also discusses this perspective when describing how lack of language skills hampers communication and become more introverted (1999, p. 51-52) thus turning a voluntarily mobile student eager to interact and acculturate into the host culture into an involuntary mobile student who is resistant to acculturation.

International students studying abroad face the additional challenge of not always studying in their mother tongues. Many international programs are

delivered in English, and the number of international students studying abroad who are not native English speakers outnumbers the number of native speakers. Because of this, providing academic support to students when a language barrier is present can be of particular difficulty. Research in this area, specifically with native and non-native English speakers in Canada demonstrate the tenuous link between English ability and academic success especially when comparing the grade point averages (GPAs) of domestic and international students at the undergraduate and graduate level (Andrade, 2006, pp. 143-4).

The challenge of language also persists regarding interactions between professors and students. Hsiao-ping et al. note regarding studies involving international students and their native English speaking professors that the international students often pretended to understand what their professors or fellow students were saying (2015, p. 3). Also pointed out was the finding that a student having a low English proficiency generally correlated into a negative impression by professors (2015, p. 3).

In summery, language skills (specifically English language skills) have a strong impact on acculturation. English is a world language and the lingua franca facilitating communication between linguistically diverse populations (Barnes, 2005; Jenkins, 2006; Rumnaz Imam, 2005; Schulzke, 2014). It affects the ability of international students to study and work in an academic setting and can be a significant predictor of academic success. In addition, the lack of language skills is either the root cause or a significant contributor to many problems faced by international students.

3   AIMS

The overall aim of this study is to examine the perceptions of international students studying at the University of Jyväskylä, Finland and their acculturation therein. This study will focus on examining how international students identify with the institution and its community as a way to measure student acculturation. As described in section 2.1 above, when students are proud of their university, like being a part of its community, and are satisfied with their experiences at the university and within its community, they tend to show positive mechanisms for dealing with acculturative stress and thus demonstrate acculturation.

Student acculturation is influenced by themes as described in the previous section, such as language, social connectedness and engagement, perceived discrimination, and others. This research will use these thematic categories to interpret the amount of international student acculturation. Figure 1 below shows a conceptual understanding of how international student acculturation is influenced by various institutional constructs.

FIGURE 1 Acculturation as Influenced by Student Perceptions of Institution Structures and Climate

International Office Services

Academic Services

Acculturation

Social Engagement

Campus Discrimination

Identification with Institution
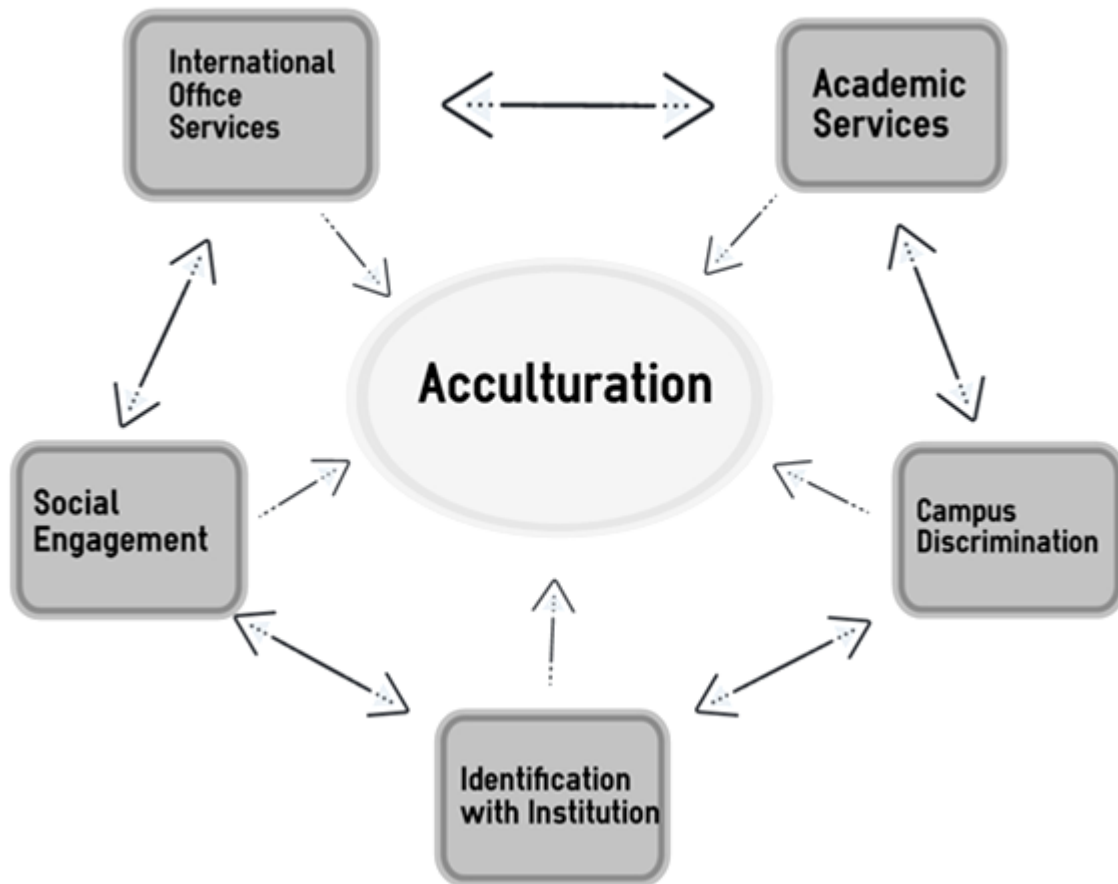
These constructs, shown in the darker gray boxes, all influence each other as well as student acculturation. For example, perceived levels of campus discrimination can influence the likelihood of a student accessing the academic services available at the university, which in turn would impact how well a student identifies with the university.

Using Figure 1 as a theoretical model of student acculturation, this research will examine how perceptions of the university campus and atmosphere will influence international student acculturation. This will be done by measuring how much students identify with the community and institution of the University of Jyvaskyla (the "Identification with Institution" category) against student perceptions of campus discrimination, academic support, social engagement, and the services offered by the international office.

In particular, this study will examine the following questions:

1. Is the International Friendly Campus Scale, as developed by Wang et al. in 2014, a tool which can be used to examine student perceptions of acculturation at the University of Jyvaskyla?

2. What impact do themes of Campus Discrimination, Social Engagement, Academic Support, and International Office Services have on the Identification with Institution theme as described by the data obtained in Jyvaskyla?

3. How can the aforementioned themes potentially be manipulated to improve Identification with Institution scores?

4   METHODS

International student acculturation can be examined in a variety of ways. This research replicates a quantitative study originally done in the US that measures international student acculturation through a brief survey. This section describes the original study, the survey participants, the survey process, and how the   data   was   analyzed.

4.1   Quantifying International Student Acculturation

A quantitative method of data collection and analysis of student perception of acculturation was used in order to ensure a diversity of participants and sources of data, as well as to keep in line with the original development and implementation of the tool. As such, this study used the International Friendly Campus Scale developed by Wang et al. in 2014 to collect said data. The use of a theoretically and practically grounded survey tool allowed for data to be collected from a significant and diverse population in order to obtain as many different perceptions on the issue of international access to the University of Jyvaskyla community as possible. The use of surveys and quantitative analysis also allows for uniformity in data collection. Quantitative analysis was used to interpret the data in order to derive significance and relationships of and between the variables.

This method was also chosen because its ability to quantify mathematically relationships between various points in the data and therefore allow demonstrable answers to the research objectives and overall aims. This can be done because a statistical analysis can give objective measures of data significance, relevance, and other attributes.

Finally, a quantitative method of data collection will allow for a wider understanding of the applicability of the findings. A qualitative data collection method would not generally allow for the data to be generalized. However, by

using a quantitative data collection method the data can be more generalized and the results can tentatively be applied to other relatively similar settings.

4.2   Survey Participants

For this research international students who have lived in Jyväskylä, Finland, for at least 10 months, or one academic year, were examined. The students selected are all members of international degree programs at the University of Jyväskylä. These international degree students were selected because they have had experience living in a foreign community and attempting to integrate into that community. Students who have not been in the community for at least one academic year (exchange, Erasmus+, and new degree students) were excluded on the grounds that they have not had adequate opportunities and experiences integrating into the target community.

The research performed surveyed 114 individuals, which corresponds to roughly a quarter of the international degree student population enrolled at the University of Jyvaskyla during the 2016-17 academic year (n=425)[1]. After removing from this count students who do not meet the research criteria (n=15) the survey still takes into account more than a fifth of the overall international degree student population at the university (24.1%).

The result of the survey process netted a data set (n_0=114). This data set was then modified to remove students who did not fit the criteria mentioned above. Fourteen students were thus removed from the list due to insufficient time spent in Finland, with an additional entry removed because the student was Finnish. The new total of respondents was modified to n=98. The largest number of respondents (n=98) were American (13%, n=6), German (12%, n=12), and Chinese (7%, n=7), with 39 countries being represented. The Average age was 28.1 years old (SD=5.3) and the average time spent in Jyvaskyla was 2.1

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[1] The total number of international degree students is estimated to be about 425 based on communication with the Jyvaskyla Student Union. However, due to particulars with student accounting at the university, an exact total of international degree students at the bachelor, master, and doctoral level is unknown. For the purpose of this research, the quoted number of 425 will be used.

years (SD=1.7). Overall 59.2% of respondents were female (N=58) and 40.8% were male (N=40).

With more than one fifth of the total second year international student cohort represented in this study and 39 countries being represented, the data generated in from the University of Jyvaskyla study represents a large sample size of the target population. However, the issue of validity regarding motivation for student responses, with the potential for student responses to be skewed in the university's favor, must be taken into account. It is possible that those students who decided to respond to the survey did so because they wanted to report their favorable impression of the university. In this regard, the external validity of the study must be examined and is discussed in a later section.

Finally, the privacy and anonymity of the survey participants was maintained as well as possible. Participation in the survey was voluntary, and participants were informed that all information collected was to be used only for research purposes. Identifying information such as names, addresses, phone numbers, e-mail addresses, and other personal identifying information of that sort was intentionally not collected in order to maintain anonymity. Student's gender, nationality, age, and other descriptive yet non-identifying information relevant to international student acculturation was collected solely for research purposes. All data obtained by the researcher was not shared, sold, nor transmitted beyond the current research. Participants had the option to contact the researcher at any time and request their data be stripped from the survey. No participants have requested to do so.

4.3   The International Friendly Campus Scale

4.3.1   The International Friendly Campus Scale in Context

Of particular interest in this research is a study done by Wang et al. in 2014. This study measures international student acculturation by examining the campus "[measuring] campus climate for international students" as reported by international students (Wang et al., 2014, p. 120). This study assumes interna-

tional student adjustment can be facilitated by their environment, and relies on the Bronfenbrenner's ecological framework (Wang et al., 2014, p. 119). Based on their review of literature, Wang et al. narrowed their focus on international student acculturation down to five categories: Campus Discrimination, Identification with Institution (which measures belongingness & satisfaction), Social Engagement/Connection (hereafter Social Engagement), Academic Support, and International Office Services (ibid). A sample of the International Friendly Campus Scale is located in the Appendix.

Major themes in acculturation research fit into Wang et al.'s categories, such as the theme of language, which guides how well international students can interact and participate in their local community. In this way the International Friendly Campus Scale provides data on how well international students have entered the social ecology of their institution. With this data, an institution can examine how well international students are acculturating to the local community, the effectiveness of policies and structures in place at the universities (for example policies regarding academic opportunity or student socialization), and student wellbeing based on their sense of belonging and satisfaction.

It consists of a series of 18 question items separated into five categories, those being *International Office Services, Campus Discrimination, Academic Support, Social Engagement,* and *Identification with Institution*. Each of the 18 questions allowed for answers using a five point Likert scale ranging from *1-Strongly Disagree* to *5-Strongly Agree*. In addition to the 18 survey items from the original International Friendly Campus Scale, four descriptive questions were added (survey questions 1-4, see appendix A). Certain questions were adapted from the original survey in order to fit the research into a Finnish frame of reference. The two adaptations were the substitution of "Finland" for "America" in the study's questions and the use of "the University of Jyväskylä" in place of the previous study's institution. In addition to Wang et al.'s original survey, 4 additional personal information questions were added for the University of Jyvaskyla version.

In order to maintain consistency, the data collection tool was preserved as much as possible from the original. Some items on the original survey did not transfer to the Finnish context well, such as the concept of identifying with the institution and the role of the university's international department in student life. These differences were disregarded when the research was conducted in order to preserve as much of the original study as possible. A further discussion of consistency and possible generalizability will be addressed in a later portion of this work.

4.3.2 Survey Design and Procedure

This current research is based off the International Friendly Campus Scale. Wang et al.'s survey categories take into account major themes in acculturation research, such as Wang et al.'s theme of Social Engagement being similar to that of the acculturation theme of social connectedness. In order to understand the link between the survey categories and the corresponding major themes in acculturation research, and how students perceive these categories Wang et al. used a series of survey items to break each category down. This research will be similar. Each category is comprised of survey questions (survey items). These survey items make up a survey category. These survey categories then are linked to some of the themes in acculturation research. For example, the acculturation theme of discrimination is directly linked to Wang et al.'s category of Campus Discrimination, the theme of academic services is linked to the category of Academic Services, social connectedness is linked to Social Engagement, and counseling and health services are linked to International Office Services. Some major themes of acculturation do not have a corresponding category, such as the theme of language, but instead are integrated into the categories. An example of this is survey items 11, 13, and 18, which can be found in the Appendix. In addition, the survey category of Identification with Institution does not have a direct link with any single major theme. Instead, as outlined in section 2.1, how students identify with their institution can be seen as an expression of their acculturation.

The survey was given using an electronic format and all information was collected electronically in order to facilitate the collection and analysis processes. A link to the survey was e-mailed in two main waves to the International Degree Student mailing list at the University of Jyvaskyla, as well as posted on various social media sites such as Facebook and Whatsapp. The e-mail contained a short overview of the survey and a brief explanation of my research. Two weeks later a second e-mail was sent as a reminder to prompt students who still intended to complete the survey but had not yet.

The survey process carried out at the University of Jyvaskyla was identical to the one used in the original article and in order to faithfully replicate the experiment done by Wang et al. (2014) the same survey and method were used. The procedure this research followed was put forth by Wang et al. (2014) and carried out according to their procedure.

Some deviations from the procedure stated in Wang et al. were omitted or altered. The first of these is the wording of the instructions. The original survey did not post the exact wording of the instructions given to the participants, so the original wording was lost. Second, the original survey was sent as part of a collection of three surveys for participants to complete. This was done as a way to verify the scale during its creation process. Since this step was not needed in the present research, it was omitted. Third, the original study used two validity checks for participants, items such as "please simply select [Strongly Disagree] for this option", with the resulting completed surveys then being filtered based on incorrect responses to the validity check questions (ibid, p. 122). This step was omitted in order to increase the brevity and reduce the redundancy of the survey items. Finally, the original survey used a random award system to entice completion (ibid). Due to fiscal constraints this step was omitted as well.

4.4 Reliability & Validity

4.4.1 Validity

In order to perform useful, valid research a study must be constructed with both internal and external validity. Khorsan and Crawford define a study's internal validity as "whether the study results and conclusions are valid for the study population" (2014, p. 2). The internal validity of the research done at the University of Jyvaskyla regarding the International Friendly Campus Scale will be discussed in the results and discussion sections of this work.

In addition to internal validity, a study must also be externally valid. Khorsan and Crawford cite a study by Cook and Campbell which defines external validity as "the inference of the causal relationships that can be generalized to different measures, persons, settings, and times" (2014, p. 3), meaning that a study can be externally validated by how well results or conclusions can be applied outside of the study's actual population to a broader audience.

In this sense, and picking up the thread of an earlier discussion from section 4.2 regarding external validity of the International Friendly Campus Scale, three key items must be addressed to evaluate external validity. These are the study's recruitment, participation, and model validity (Khorsan and Crawford, 2014, p. 8). Regarding the research done at the University of Jyvaskyla the recruitment of study participants all fit the specified criteria mentioned in the survey design, and those that did not were excluded from the study. Participants of the study were representative of the general population to which they were recruited and represent a diverse body in terms of age, background, and length of stay in Finland. Finally, the model being applied in the research is clearly drawn both in the study by Wang et al. and in the studies performed by a myriad of other researchers in the field, as noted in the literature review.

The issue of validity is also present when determining which research tool to use. The validity of a research tool is defined as "the degree to which it measures what it is supposed to measure" (Pallant, 2011, p. 7). The concept of a scale's validity is split into three parts. These are content validity, criterion va-

lidity, and construct validity. These three parts all work together to validate a scale or measurement tool.

The content validity of a scale is how well a tool has sampled what it was supposed to (Pallet, 2011, p. 7; Patrick et al, 2011, p. 968). Qualitative input of data, according to Patrick et al., is vital to determining the content validity of a quantitative construct such as a scale or survey (2011, p. 968). Statistical tests such as factor analyses or research theory analyses can support the qualitative input, but quantitative measures alone are not enough (ibid). As mentioned above, in creating the International Friendly Campus Scale Wang et al. derived the items for their scale in a process the included meetings and discussions with university faculty, staff, and acculturation experts; reviewed by a panel of psychologists; and then submitted to a pilot study and subsequent revisions (2014, p. 121). This mixture of qualitative and quantitative methods to determine the content validity of the scale's items provides strong assuredness of content validity.

The second aspect of determining a tool's validity is examining the criterion validity. Pallant defines criterion validity as "the relationship between scale scores and some specified, measurable criterion" (2011, 7). This is determined either by comparing results to those previously obtained using the same means, or running the test on two different populations and correlating the expected results with the obtained results (Bland, 2006, p. 1; Higgins & Green, 2014). This was done in the International Friendly Campus Scale by including measures for subjective wellbeing, so that "students who perceive a friendlier campus environment would report higher life satisfaction, stronger positive affect, and lower negative affect" based on the hypothesis of a stronger sense of connectedness and wellbeing and a lower sense of academic stress and discrimination would be evident on a campus friendlier to international students (Wang et al., 2014, p. 120).

The final aspect of a measurement tool's validity is its construct validity. Pallant describes construct validity as "testing a scale not against a single criterion but in terms of theoretically derived hypotheses concerning the nature of

the underlying variable or construct" (2011, p. 7). In short, this means testing a scale against one's hypothesis to determine if the scale actually measures what one intends. Wang et al. ran their International Friendly Campus Scale alongside six other psychometric scales in order to satisfy construct validity (2014, p. 121).

4.4.2   Reliability

The International Friendly Campus Scale is a reliable tool for collecting data regarding acculturation of international students. Reliability of a scale means how free the scale is from random error (Pallant, 2011, p. 8). To test the reliability and internal consistency of a scale such as the International Friendly Campus Scale, Cronbach's alpha is computed and the score compared to an outcome of accepted values between 0 and 1 (Tavakol & Dennick, 2011, p. 53). This is done by examining the internal consistency and interrelatedness of the scale's content ("the extent to which all the items in a test measure the same concept or construct") and estimating the scale's index of measurement error (ibid). This measure "reveals the effect of measurement error on the observed score" when applied to a group (a student cohort, for example) and not one individual student (ibid). Generally speaking, a Cronbach's alpha score between .70 and .95 is considered an acceptable score for a scale (Pallant, 2011, p. 6; Tavakol & Dennick, 2011, p. 54), unless doing exploratory research when the cut-off minimum value is, "by convention", .60 (Garson, 2009). Tavakol & Dennick note a few factors that could throw off the score, such as an insufficient length for the scale (few questions) or a scale that is too long, thus testing the same question multiple times (2011, p. 54). An example of this would be having one item stating "I like studying in Jyvaskyla" and another stating "I enjoy studying in Jyvaskyla". These two items are extremely similar and are highly likely to measure the same variable which would increase the alpha score because these two items would fit extremely well with each other.

Wang et al. note in their 2014 article that the results from the scale's five subsections having scores ranging between .70 and .86 (p. 124). These scores

are for the original results obtained at the university where Wang et al.'s team performed the original research. The Cronbach's alpha scores are displayed in Table 1.

TABLE 1 Cronbach's Alpha for Survey and Survey Categories

	International Office Services	Campus Discrimination	Academic Support	Social Engagement	Identification with Institution
Cronbach's Alpha	.77	.70	.79	.57	.86

The categories examined in the University of Jyvaskyla data demonstrate a reliable fit of the data and an internal consistency. The Cronbach's alpha scores which do not meet the minimum level will be discussed in section six.

4.5   Data Analysis

To analyze the data, the study was conceptually split into two parts. The individual questions were (and shall henceforth be) referred to as "item(s)", while the various groupings referred to in the previous section are referred to as "categories". This difference facilitates discussion of two separate subsets of data.

The data obtained from the online survey was downloaded into an excel document then analyzed using SPSS version 24. Descriptive statistics were obtained on the raw data for each of the 18 items. The 18 items were then organized by their thematic categories (Identification with Institution, Discrimination, Academic Services, Social Engagement, and International Office Services) as set out by Wang et al. in the original study. The data was correlated based on the survey items and examined to see if many items held correlations around the moderate level, which is typically .3 (Pallant, 2011, p. 100; Wuensch, 2017).

After the survey items were correlated and examined, a factor analysis was ran. The results examined to determine if the factors could be analyzed and the statistical test was appropriate. The results of Bartlett's Test of Sphericity was significant, and the Kaiser-Meyer-Olkin value was .80 ($p<.01$), suggest-

ing a factor analysis is appropriate (Pallant, 2011, p. 183). The factor analysis utilized a promax rotation and extracted five factors with eigenvalues of greater than one, explaining 65% of the overall variance. Analysis of the eigenvalues as well as of the Scree plot of the factors suggests a five factor solution, consistent with the finding of Wang et al in 2014. In addition, the grouping of the survey items was fairly consistent with the categories established in the original study. Due to this consistency, a five factor solution consistent with the original study was identified as logical and consistent for the Jyvaskyla data. Based on a factor analysis of each survey item, the chart of which is located in the Appendix, the structure of the original survey as set out by Wang et al. was identified as suitable for a transfer of context from the original American Midwest context into Jyvaskyla.

After the internal consistency of the transferred scale was found to be suitable, a standard multiple regression was run on the data. The dependent variable used was Identification with Institution, and the independent variables were the survey categories as well as three personal identification variables (Gender and Age). All the independent variables were entered simultaneously, which allows the analysis to determine the predictive power of the independent variable on the dependent variable (Pallant, 2011, p. 149). The results of the regression analysis are given in the next section.

In order to analyze the results from the calculations, several basic assumptions have to be made. In order to obtain the data, several calculations had to be done. First the data was analyzed using a factor analysis. Then the data had to be correlated, which was done using a multiple standard regression analysis. Both of these tools require assumptions about the data in order to be correctly used. Assumptions include correlation in the data to a specific point, above a moderate of .20 yet below the multicollinearity level of .90 (Pallant, 2011). If the data was below a moderate magnitude any correlation would tend to be insignificant and minimal. If the data was correlated above .90 it means the data is probably correlated too well and suggests multiple items may be measuring the same information repeatedly (ibid, p. 151).

Other assumptions include normality ("the residuals should be normally distributed about the predicted DV [Dependent Variable] scores"), linearity ("the residuals should have a straight-line relationship with predicted DV scores"), and homoscedasticity ("the variance of the residuals about predicted DV scores should be the same for all predicted scores"), all of which indicate the distribution of the obtained data (Pallant, 2011, p. 151). These assumptions can be checked by graphing the distribution of the data. The data obtained at the University of Jyvaskyla meet these assumptions.

5   RESULTS

The correlation for each survey item is given in Table 2 in the appendix. The data obtained from the University of Jyvaskyla survey items is described in Table 3. Descriptive statistics for the survey categories are given in Table 4.

Table 2 shows how the survey categories correlate to one another. A correlation with an absolute value of .3 or more demonstrates the two items have arbitrarily reliable correlations of moderate magnitude between them (Pallant, 2011, p. 100). Correlations, however, can be too strongly correlated.

TABLE 2 Category Correlation Matrix

	Identification with Institution	International Office Services	Campus Discrimination	Academic Support	Social Engagement
Identification with Institution					
International Office Services	0.49**				
Campus Discrimination	-0.50**	-0.26**			
Academic Support	0.54**	0.43**	-0.55**		
Social Engagement	0.47**	0.32**	-0.18	0.20*	

** Significant at the .01 level
*Significant at the .05 level

The above table describes how the survey categories correlate with one another using described by the Pearson correlation coefficient, also known as the effect size, which is the number on the table above (Hopkins, 2017). In general, Cohen's interpretation of the effect size is also used to determine correlation, and aligns ≤.1 as low, .3 as medium, and ≥.5 as large (ibid). This would mean

that a correlation of .54 would be a large correlation, whereas a correlation of .20 would have a small correlation. The .3 value for correlations that Pallant describes is an arbitrary value which would be interpreted on Cohen's scale to be of medium correlation.

TABLE 3 Category Descriptive Statistics

	Minimum	Maximum	Mean	Std. Dev.	Variance	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Identification with Institution	1.67	5.00	4.26	.75	.56	-1.20	.24	1.45	.48
International Office Services	2.00	5.00	3.64	.69	.48	.10	.24	-.57	.48
Campus Discrimination	1.00	4.75	1.96	.77	.59	.94	.24	.76	.48
Academic Support	2.00	5.00	4.26	.74	.55	-.99	.24	.64	.48
Social Engagement	2.00	5.00	3.63	.74	.55	-.11	.24	-.34	.48

Table 4 shows the descriptive statistics for the survey categories outlined by Wang et al. The Campus Discrimination category was negatively phrased thus demonstrating a low mean score. The variance of the data can be interpreted as how spread out the data is away from the mean (IDRE Stats, 2017). This is similar to a standard deviation, except the variance is calculated by squaring the standard deviation value (ibid). Skewness refers to the distribution of the data. A symmetrical distribution has a skewness of 0, a negative value means the mean is distributed left of the median, and a positive value means the mean is to the right of the median (ibid). The kurtosis is a measure of how the peak and spread of the data distribution differ from a normal distribution; a positive kurtosis means the data is grouped close to the median resulting graphically in a higher peak and a sharper slope to the bell curve while a negative value has a lower peak and the graph's tails are more spread out (ibid).

Running a linear regression analysis on the survey categories, respondents' age, and their gender gives the data shown in Table 5. The standardized coefficients β column denotes an estimate of how much an independent variable will contribute to a change in the dependent variable in standard deviations. In this case, the Campus Discrimination category has the strongest incremental effect on the Identification with Institution category. The standard error gives the estimated amount to which the actual statistic could vary from what is predicted by the model; the lower the standard error, the more accurate the prediction.

TABLE 4 Regression Analysis with Identification with Institution as the Dependent Variable

	Unstandardized β	Coefficients Std. Error	Standardized Coefficients β	t	p	95% Confidence Interval for β	
						Lower Bound	Upper Bound
Constant	1.67	.65		2.57	.01	.38	2.96
International Office Services	.24	.09	.22	2.70	.01	.06	.42
Campus Discrimination	-.29	.09	-.29	-3.28	.00	-.46	-.11
Academic Services	.22	.09	.22	2.36	.02	.04	.41
Social Engagement	.29	.08	.29	3.56	.00	.13	.45
Age	.01	.01	.05	.69	.49	-.01	.03
Gender	.18	.12	.12	1.56	.12	-.05	.42

*Dependent variable: Identification with Institution

A histogram chart, normal probability plot, and scatterplot are all located in the Appendix. These charts depict graphically whether the assumptions made about the data at the beginning of the analysis were true or not (Pallant, 2011, p. 158). The normalcy assumption, that is whether the data is normally distributed, can be observed in the histogram chart. The linearity assumption,

whether the residuals have a straight line relationship with the dependent variable, can be seen in the P-P plot. The homoscedasticity assumption, that is whether the variance is relatively uniform for the data, is displayed in the scatterplot. If the homoscedasticity assumption is true, then the data will be roughly rectangular in shape with most of the data centered around the 0,0 area (Pallant, 2011, pp. 158-59).

The model described by the regression analysis shows a good fit in determining the dependent variable. The model summery, or R^2 value, describes more than half of the variance of the dependent variable (R^2=.53, or 53%) with a standard error of the estimate being .53. The variance inflation factor (VIF) values, measured by taking the inverse of the tolerance value, denotes how much standard error is present in the measurement by measuring how much the variance of a regression coefficient is inflated (Johnson, 2017). The VIF for each category in the survey ranged from 1.05 to 1.69, demonstrating an acceptable level of variance below the commonly used limit of 10 (Pallant, 2011, p. 158). These low VIF values indicate the non-multicollinearity assumption described at the beginning of the section is valid.

In analyzing the data, it was found that the respondent descriptive information variables (Age and Gender) had no statistically significant association with the relationship between the survey categories and the dependent variable. As the table shows, the strongest predictors of Identification with Institution were the survey categories, specifically the categories of Campus Discrimination and Social Engagement. The low alpha value for the Social Engagement category would tend to indicate an unreliableness of the data to fit with the findings from the rest of the study. A discussion of this issue will be taken up in the next section.

6   FINDINGS

This section discusses the findings of the research. As mentioned above, acculturation is influenced by how well students identify with their institution, levels of discrimination on their campus, the levels of academic support students receive, the social networks students build and maintain, and the extent to which students receive support from the university's international office.

6.1   Scale Transferability

The first task of this research was to determine whether or not the International Friendly Campus Scale is suitable for use at the University of Jyvaskyla. In order to use the data, the scale must be checked in terms of validity and reliability. Table 1 in section 4.4.2 shows the Cronbach's alpha scores for the survey categories from the University of Jyvaskyla data. Cronbach's alpha measures the reliability of a scale by measuring the random error present in the data. A scale with $\alpha \geq .7$ is generally accepted as being free enough of random error to be reliable. The University of Jyvaskyla survey categories had alpha scores ranging between .57 and .86. This means that those categories above .7 had a reliable fit of the data and were internally consistent, the exception to which will be discussed in a later section.

This data shows that the International Friendly Campus Scale can reliably be used in the context of international students at the University of Jyvaskyla as outlined in section 4.2. However, in order to validate the findings, a second research project would be needed to assess exactly how genuine these findings are in regards to the student population and their feelings of acculturation. This thread will be taken up in more detail in a later section on the limitations of the survey.

6.2 Identification, Acculturation, and Relationships

The second research question seeks to better understand the relationship between the Campus Discrimination, Social Engagement, Academic Support, and International Office Services categories have on the Identification with Institution category. As outlined in previous sections, measurements of how students identify with their institutions are directly connected to their levels of acculturation. Acculturation is the process of adapting to a new setting and negotiating ones old sense of self with their newfound place in the domestic society. This adaptation and adjustment usually means behavior modifications to deal with acculturative stress and a reinterpretation of one's identity to accommodate their new situation. The Identification with Institution category, as outlined by Wang et al., is made up of questions probing student satisfaction, pride, and the degree to which they like their university. These questions directly measure acculturation because positive answers to these questions would mean students are successfully finding their place in the new community.

While the three survey items that make up the Identification with Institution category directly probe feelings of identification, they are not alone. Table 5 above shows how the other survey categories contribute to the Identification with Institution category. The table shows how each of the independent variables, those being the survey categories along with participants' age and gender, contribute to the dependent variable.

The table shows participants' age and gender do not play much of a role in describing the Identification with Institution variable. Instead, the survey categories contributed much more to the dependent Identification with Institution variable. The largest contributor, according to Table 5, were the Social Engagement and Campus Discrimination categories with standardized β's of .29 and -.29 respectively.

6.2.1   Social Engagement

The Social Engagement category plays an interesting role here. As mentioned above, the Cronbach's alpha statistic for this category, that is the statistic measuring how much the questions measure the same concept or construct as well as how free the measurement is from random error, is $\alpha=0.57$, well below the accepted amount of 0.7. This would mean that the survey items that make up the Social Engagement category contain a potentially problematic amount of random error and/or do not measure what they should sufficiently well, yet still the measurements they do make explain the dependent Identification with Institution variable extremely well compared to the other variables with sufficiently high Cronbach's alpha measurements. Put simply, the Social Engagement data, while not sufficiently measuring what it should, still explains how international students identify with the institution better than some other survey categories.

As stated in Section 2.2.1 regarding social connectedness, many researchers place a large importance on the role social connections play in the acculturation process. Social connections are a support network for dealing with acculturative stress. They provide students comfort, support, and needed resources for tackling the problems they experience when living abroad. Not having these connections would theoretically be a detriment to international students as it would leave them isolated from these much needed supports and resources. In terms of acculturation and identification, low reported scores of social connectedness would mean students are feeling isolated and disconnected from the community they are trying to become a part of. Therefore students who are not well connected socially could be expected to report lower satisfaction with the university and its community they are having difficulty being a part of, a dislike for the university, and potentially less pride in being associated with the university.

The survey items for this category may explain some of the score. These survey items break down the category of Social Engagement into some of its constituent parts allowing for a more detailed understanding of the concept and

more accurate reporting by the survey respondents. The Social Engagement category is made up of survey items 5 (campus sponsored programs), 11 (friendships with international students), 12 (friendships with domestic students), and 14 (participation in social activities). The questions themselves can be found in the appendix while Table 3 in the results section shows the descriptive statistics for the survey questions.

Items 5, 12, and 14 had means of 3.39, 3.21, and 3.54 respectively; while item 11 had a mean of 4.39, nearly a standard deviation higher than the others in that category. Item 11 also has the most skew of the category, -1.78, but it also has a median value of 5 (with the possible values being 1-5), while the other items have lower medians (Median=4, 3, and 4 for survey items 5, 12, and 14 respectively). The kurtosis of survey item 11 is 2.83, meaning that most of the responses for this question are grouped close to the median answer. Considering that the median answer for this survey item is 5 (*Strongly Agree*), that means most participants strongly agree with having close friendships among other international students.

In contrast to this, the descriptive statistics of the other survey questions are not as positive. Survey item 12, asking about close friendships with domestic students, has lower statistics. The mean response for this question is 3.21 (SD=1.25). Its median value is only 3, which was labeled "neutral", has a nearly symmetrical distribution of the data (Skew=-0.06), and survey item 12 has a kurtosis of -1.10. This means that the response data for survey item 12 is fairly equally distributed on both sides of the mean, but the data does not have a normal distribution when plotted. Instead the bell curve has a lower peak and more spread out tails. This in turn means the participants varied considerably in their reporting of close friendships with domestic Finnish students.

The descriptive statistics for survey item 5 regarding student awareness of social engagement programs is similar to that of survey item 12 (Mean=3.39, SD=1.11, Median=4, Skew=-0.36, and Kurtosis=-0.66). This shows that many students are not aware of social engagement programs; the logic being that if students were aware they would agree to the statement (4-5), and since the data

shows a mean closer to 3 than to 4 more students are unaware of these programs.

The last survey item, item 14, asks about student participation in social activities. This is phrase so that a response of 4 or 5 would show engagement, while a response of 1 or 2 would indicate students do not engage in social activities. The mean of this survey item is 3.54 (SD=1.16), its median is 4, the skew statistic is -0.53, and the kurtosis statistic is -0.5. This shows the mean score is slightly less than the median, and the overall spread of the scores is a bell curve with a lower peak and longer tails, or in other words that many responses are further away from the center mean score. This again shows many students report not engage in social activities at the university, the logic being if students socialized then they would agree with the statement (responding with a 4 or a 5).

A summery of the survey items from the Social Engagement category would be as follows. Many international students have close friendships with other international students. However, many international students do not have close friendships with domestic students. A potential explanation for this is that many students are unaware of programs aimed at socializing students, and that even if students are aware of socializing programs many do not participate.

6.2.2   Campus Discrimination

The data obtained from the survey also shows that the Campus Discrimination category as an independent variable also explains a large amount of the dependent Identification with Institution variable. However, given the wording of the survey items in this category many of the results from measurements with this variable are negative, such as many of the correlation coefficients and the regression analysis. The Campus Discrimination category also had a β coefficient of -0.29, similar to the value of the Social Engagement coefficient (β=0.29). However, unlike the Social Engagement category, the value of

Cronbach's alpha for the Campus Discrimination category is 0.70, showing that the data fits well and has an acceptable amount of random error.

As noted above in the literature review, discrimination on campus can strongly influence the rate of and degree to which international students acculturate. Discrimination on university campuses can be a major barrier to acculturation and prevent minority groups outside the dominant culture from negotiating their place within the community. Discrimination can take on several forms, from overt and sanctioned discrimination such as intentional exclusion from groups or activities based on characteristics clearly defining a minority group to unintended discrimination based on the same characteristics. An example of the former would be exclusion from participation in an event or program based on a student's race, ethnicity, or culture, such as the denial of a British biology student membership in the Biology Student Organization because they are not a Finnish student. An example of the later unintended type of discrimination would be an international sociology student not having any class offerings because their program does not offer classes in English despite it being an international program. Feelings of discrimination on the part of international students negatively impacts their views of the university and its community. This in turn would limit the amount to which these students identify with their university and its community thus hindering international student acculturation. If students feel discriminated against, they in turn will be more likely to have less positive views of their university, not be very proud to associate with a university they feel is discriminatory, and be less satisfied. These aspects of the Identification with Institution category directly relate to international student acculturation as outlined above and in previous sections.

With the above link between acculturation and perceived levels of campus discrimination in mind, the results of the Campus Discrimination section should be examined. This category and theme is measured by the International Friendly Campus Scale by four survey items, those being items 4 (international students being treated as less intelligent), item 8 (international students being treated differently or unfairly), item 10 (people at the university make degrad-

ing remarks), and item 13 (equal access to resources and opportunities). Descriptive statistics for these survey items can be found in Table 3 in the Results section above and the full questions can be found in the Appendix. The means for these survey items are all fairly low (Mean=1.56, 1.74, 1.79, and 2.73 respectively) and the standard deviations all demonstrating most scores not straying too far from the mean (SD=0.83, 0.98, 0.98, and 1.37 respectively). This, as mentioned earlier, can be explained by the wording of the questions, where an affirming score (4 or 5) would indicate discrimination is present. So given the phrasing, a low mean score would indicate low levels of discrimination perceived by the survey respondents.

With an examination of the means in mind, survey item 13 stands as markedly different from the other items in the category. For one, it has a much higher mean score and a larger standard deviation than the others. The skew statistic of item 13 is 0.25, meaning that the data is pretty evenly distributed if the data were plotted. Combining that with the variance present (Variance=1.83) many responses are present on both sides of the mean. This means that within one standard deviation (responses between 1.36 and 4.1 out of 5) the data is fairly evenly distributed. The kurtosis value for item 13 is -1.11, meaning the data is spread away from the mean closer to the tails. All of this together would indicate that respondents' opinion on the question of equal availability of opportunities and resources is divided. Some students feel strongly that they do not have equal opportunity to resources while others feel that equality is present.

One reason for this spread and split in opinion is the nature of the survey respondents and the structure of the university. Survey respondents hail from a variety of faculties and programs at the University of Jyvaskyla. These faculties and programs are not administered by the same rules and policies. Some programs within one faculty may have higher degrees of equality between domestic and international students compared to other faculties. For example, a program like that of the International Master's Degree Program in Educational Sciences might be a more developed program compared to a program like the

International Master's Degree Program in Nuclear and Particle Physics because of the number of students in the respective programs and the role these international students play in the university. In this example, the Educational Sciences program has a large number of applicants for the 2017-2019 program compared to the Nuclear and Particle Physics program, which has none at the time of writing; and the role played by many students from the Educational Sciences program on the University of Jyvaskyla campus includes executive positions on student groups and active participation in student body leadership and governance.[23] Thus, the program students are in and the organization of their faculty can play a determinant role in their perceptions of discrimination at the university.

6.3   Improving Identification and Acculturation

One of the main overall goals of this research is to collect data on international students' acculturation. This was done, as mentioned in several places in this work, by examining how participants identify with the University of Jyvaskyla as a way to measure their acculturation. The results and conclusions obtained from this data can thus be used to help improve international student identification and therefore the acculturation process. The data and its analysis identify some common trends in the data which in turn shows places where the university can improve its performance to assist its international students through the acculturation process.

The data on international students has identified the following themes. First, the Social Engagement and Campus Discrimination categories help to explain large amounts of the Identification with Institution category. Second, that

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[2] Based on numbers obtained by the University of Jyvaskyla Student Union and presented at the Student Subcommittee for International Affairs, April 11, 2017 (Stojcsics, 2017).

[3] International Educational Sciences students comprised at least one quarter of the executive board of the International Degree Student Community Organization, the umbrella group for all international degree students at the University of Jyvaskyla, for the past three years in a row. They also are active members in the Student Subcommittee for International Affairs, as observed in committee meetings (Stojcsics, 2017).

while explaining less of the Identification with Institution category, Academic Services and International Office Services still are important factors in explaining how well international students identify with their institution. Third, student demographic variables of age and gender only explain a small portion of the Identification with Institution category.

6.3.1   Theme 1 – Social Engagement and Discrimination

Looking at the first theme, the University of Jyvaskyla can improve international student acculturation by increasing the social connectedness of its students (the Social Engagement category) and decreasing levels of discrimination present at the university. Since these are two very broad concepts, a more detailed look into the makeup of these concepts as measured by the survey items is in order.

International students have unique needs not present in domestic student populations due to the nature of being an international student. Their acculturation process is more laden with acculturative stress, both positive and negative, than that of the counterpart domestic student population. Because of this international students have a greater chance of being at-risk for a myriad of potential problems. These One major problem is isolation. The data in this study shows international students tend to have strong connections with other international students. However, they tend to be unaware of campus-sponsored social engagement programs, have fewer close friendships with domestic students, and tend to report lower overall levels of socialization.

Possible solutions to this are pretty straightforward, even when taking into account the allocation of finite resources like time and money. These possible solutions include things like holding and promoting more socializing opportunities such as board game nights, trips to museums and other scholarly pursuits, and integrating more domestic students and international students into the same classes. The main goal is to increase contact between domestic and international students. This contact can happen in a multitude of places and contexts. The most important factor is that this contact happens.

In addition, increasing contact between domestic and international students would have the added benefits, such as reducing perceived levels of discrimination at the university and in its community. Solutions such as integrating classes would have a duel benefit in this regard. By providing existing classes in English instead of solely the domestic language, more options would be available for international students thus increasing the available resources and opportunities international students have. In addition, by changing the language of instruction to a lingua franca language such as English the class would then allow for a mixed grouping of domestic and international students studying and working together, which would increase contact between the two groups making the chances for establishing friendships greater than if the chance were not present. Finally, by having only one joint offering of the class instead of a separate offering for domestic and one for international the cost of resources in administering the course offering would be reduced (depending on the size of the course).

By increasing the extent to which international students and domestic students interact, international students will establish more solid support structures to manage their acculturative stress. Increasing interactions between these two groups would also facilitate the acculturative process by providing international students a means through which to observe and understand the domestic culture and thus being better able to negotiate their place within said culture and society. In addition, increasing contact would provide opportunities to equal out the distribution of resources and opportunities between the two groups by having the same structures and policies in place for both groups thus correcting the separate but equal mindset.

6.3.2   Theme 2 – Academic Support and International Office Services

The second theme examines the perceived role Academic Support and International Office Services play in explaining the Identification with Institution category. These two categories are both very structural within the university, and

changes to these would occur more in the university's sphere of influence than in the students'. However, these two categories still play important roles in explaining how international students identify with the university and thus the acculturation process.

Student perceptions of the Academic Services category differ from that of International Office Services. An examination of their means (Mean=4.26 and 3.64 respectively) show nearly a standard deviation between them, and that students have a much more favorable opinion of their academic situation than the services being offered by the international office and its constituent organizations.

The differences in student opinion of these two categories can be seen in the descriptive statistics. Not only does the Academic Support category have a higher mean than the International Office Services, but the kurtosis measurement shows many responses close to the mean value. Considering that mean value is pretty high, 4.26 (SD=.74), and the survey items making up this category are positively stated, most respondents therefore agreed with the corresponding survey items and thus have a very positive perception of the academic services available to them at the university. The kurtosis for this category .64, showing that many responses fell close to the mean and thus many students felt the academic services offered at the university to be adequate and supportive.

In contrast, the International Office Services category had a comparatively lower mean, 3.64 (SD=.69), nearly a standard deviation below that of the Academic Services category. The kurtosis for this category is -0.57, showing that the survey respondents had a divided opinion on the matter. A look at the items that make up this category looks similar to the category itself. The statistics can be found in the Item Descriptive Statistics Table in the Appendix. The means for these items range between 3.41 (SD=1.05) for item 3 to 3.82 (SD=.88) for item 9. The kurtosis statistics for these items are, with the exception of item 7, negative. This means that survey respondents had varying views of the survey category and its constituent survey items.

The high mean and positive kurtosis values for the Academic Support category shows that many students are satisfied with the academic support they receive. In contrast, the International Office Services category has a decidedly mixed review. Reasons for this could include a lack of understanding on the part of survey respondents as to what the international office does. Justification for this can be seen in the descriptive statistics for survey item 5 regarding the knowledge of campus sponsored social engagement programs, with the understanding that the international office, being the campus structure dealing with international students, would be putting on these programs. Other reasons for the comparatively lower view of the international office must be probed in future research.

6.3.3   Theme 3 – Participant's Age and Gender

The final theme observed in the regression analysis is the role participant background information plays on how they identify with the institution and thus their acculturation. Table 5 above shows the survey respondent's gender and age do not play important roles in explaining the Identification with Institution variable. This would mean that the campus climate at the University of Jyvaskyla is not very concerned with the gender or age of its students.

7   DISCUSSION

7.1   Jyvaskyla Discussion

After obtaining the data from the International Friendly Campus Scale adminis-
tered at the University of Jyvaskyla, examining the results, and analyzing the
findings, some interesting points and conclusions about the data can be made.
Variances in the data or unexpected trends and results can throw a proverbial
monkey wrench in any sort of straightforward interpretation of the data. Some
of the unexpected results come from an analysis of the Social Engagement cate-
gory and certain aspects of the Campus Discrimination category that are not
entirely explained by some current theories in the field of international student
acculturation. These will be discussed in this section.

7.1.1   Social Engagement

On intriguing outcome stemming from a comparison between the results ob-
tained by Wang et al. when they ran their study in 2014 and the results obtained
in Jyvaskyla is the Cronbach's alpha calculation. As stated in a previous sec-
tion, Cronbach's alpha is calculated to determine the reliability of a scale by
measuring the interrelatedness of the scale items. An alpha of .7 or greater is
considered a reliable score or indicator. In the study by Wang et al., each cate-
gory of the International Friendly Campus Scale had an alpha score of .7 or
greater, with the Social Engagement category having a reliability score of the
exact minimum of .7 (2014, p. 124).

After calculating the alphas for each category using the Jyvaskyla data,
similar alpha scores were obtained with one major exception. The Cronbach's
alpha for the Jyvaskyla Social Engagement category was .57, well below the .7
reliability limit. This means the category of Social Engagement is not a reliable
fit when determining how well the scale will measure international student ac-

culturation in Jyvaskyla. This could be for several reasons. First, the mean scores for the items in the Social Engagement category vary greatly, as can be seen by the descriptive statistics for the survey items located in the appendix, but overall are quite low with an overall mean for the category being only 3.63 compared to the mean for the Academic Support category with a mean of 4.26, nearly a whole standard deviation above the Social Engagement mean. Breaking the Social Engagement category down to the mean scores for each survey item shows that international students tend to report strong relationships with other international students (M=4.37), yet report relationships with domestic (Finnish) students much less (M=3.23) and generally socialize more rarely (M=3.52). A reported cause for this low level of socialization is the reduced awareness of programs sponsored by the university or student union aimed at student social engagement (M=3.38). As discussed in an earlier section, socialization positively contributes to international student acculturation and satisfaction. There is a significant correlation between scores for satisfaction and awareness of social programs, but no correlation between satisfaction and the other items in the Social Engagement category. This would mean that knowing about or having the opportunity for planned social programs where students irrespective of origin can meet and form friendships would be beneficial to the students' satisfaction and wellbeing.

A further analysis of the interrelatedness between the items in these two categories shows a significant correlation between positive association with the university (item 1) and knowledge about sponsored social programs (item 5), friendships with other international students (item 11), and friendships with domestic students (item 12). This supports the observed significant positive correlation between the Social Engagement category and student's Identification with the Institution category, and would suggest a link between the mean scores of one category might have on that of another.

A second explanation for the low alpha score for the Social Engagement category, aside from the hypothesis of students at the University of Jyvaskyla are less socially engaged, is that students place less of a reliance on social en-

gagement. The International Friendly Campus Scale is situated in Bronfenbrenner's ecological framework, as stated earlier. Wang et al. notes that "students' ability to adjust does not simply depend on the individual, but also the environment students are in" (2014, p. 119). But this can also be read as adjustment not only relies on the environment, but also on the students. Therefore, an explanation of lower social engagement can rest on the students themselves. If students are not inclined to be socially active, then they would report lower scores in the Social Engagement category. A support of this possibility was mentioned in an earlier section when discussing the possible correlation reported feelings of isolation has on social engagement, and is supported by a discussion in Spenader during a section on international student personality factors and proactive language learning and acculturation (2011, p. 383). Students who feel isolated tend to be less likely to engage socially.

Feelings of isolation in Finland can be seen as part of the local ecology. Effects of ecological influences such as conditions of physical weather and climate may hinder social engagement and promote isolation; the idea being students may not want to travel outside when the weather is -25^c and the sky is black. Other socio-ecological factors might influence feelings of isolation, such as a lack of inviting body language or friendly smiles from strangers. If a student is used to being able to smile at a stranger and strike up a conversation as a typical social norm, then the lack of this norm would logically lead to feelings of isolation due to the perceived lack of open and friendly communication among the domestic population.

However, the regression analysis table clearly shows the Social Engagement category as being both statistically significant and the second largest predictor of the Identification with Institution category, which would tend to discredit the hypothesis of international students placing less of a reliance on social engagements. The data clearly shows social engagements and relationships are important for international students at the University of Jyvaskyla. Therefore, it is logical to conclude the Identification with Institution scores are lower than they could be as a result of the lower Social Engagement scores.

7.1.2 Discrimination and Access to Resources

One outstanding aspect of the Campus Discrimination category was the high mean score of survey item 13. This aspect of the campus discrimination theme examines how international students feel about their access to resources and opportunities. Given the results reported and analyzed above, an interesting discussion arises about the nature of unintended discrimination.

Many student have reported feelings of discrimination in respect to the equal opportunity of resources and opportunities available to them at the university. International students, once accepted into the university as students, are supposed to have rights to opportunities and resources equal to those of the domestic students. However, the question as to the feasibility of this must be examined. What exactly does it mean to be equal? This concept is not always clear. For example, should the university allocate an equal amount of resources to international students as they do domestic students? Research on international students shows them to have needs and challenges beyond those of their domestic counterparts, as described in various sections above. This would mean an equal allocation of resources would not equate into an equal result. So, then, should the allocation of resources be equal or the result of the allocation?

Clearly some sort of moderation must be preserved and decisions must be made. An international master's program at the university with only one student in it cannot reasonably expect to have the same sort of course offerings and availability as its domestic counterpart if the domestic program has tens or hundreds of students. Universities only have a finite amount of resources, and decisions must be made as to how bust meet the needs of the most students.

Yet this does not mean universities can ignore minority groups either. It would be unreasonable to have equal funding for a program with one student and a program with a hundred students. However, that one student should still have an adequate amount of resources and opportunities available to them.

So what, then, would adequate be? Some students feel they have very adequate opportunities when compared to their domestic counterparts. Others

feel differently. Anecdotal evidence for programs having no class offerings available in English for international students, vital materials for international students only being found in Finnish, and problems international students have trying to obtain help from faculty members are routinely discussed at Student Subcommittee for International Affairs (SIA) meetings (Stojcsics, 2017).

The data shows that clearly not every student feels this way, or at least reports equal access to opportunities and resources as an issue. Yet others do. The data for this survey item from the Camus Discrimination category is much different compared to the other items that make up this theme. The greater reporting of this unintended form of campus discrimination makes it an issue that the University of Jyvaskyla, as well as other universities in general, should examine.

Solutions to problems such as this are as myriad as they are multifaceted. It could be as simple as translating a thesis template into English so that international students can understand it, an issue brought up in the SIA meeting in April of 2017 (Stojcsics, 2017), or it can be as complex as restructuring faculties so that program offerings are commensurate with available funding and student interest.

In short, feelings of discrimination at the University of Jyvaskyla are low, but tend to grow upwards towards moderate feelings when the issue is the availability of opportunities and resources for international students. Many students feel they do not have the same opportunities and resources compared to their domestic counterparts, despite having equal rights to those resources and opportunities. This feeling is not pervasive throughout the university, but it does pose a potential challenge to international student acculturation at the university and is an issue that should be addressed by the university.

7.1.3   Identification and Acculturation

As articulated above, international student acculturation can be measured by their satisfaction with the university and their affinity and pride in being a part of the local community. These factors are all part of the Identification with In-

stitution category as set out by Wang et al. International students at the University of Jyvaskyla have reported rather high levels of satisfaction. This can be translated into fairly high levels of acculturation and placement within the University of Jyvaskyla community. As found by the data, student satisfaction and therefore acculturation is significantly impacted by the campus and local culture of the University of Jyvaskyla. Individual variables play a role, specifically gender and years lived in Finland, but not in the same way variables pertaining to the local community and university.

The data shows an interesting relationship between what is significant and what is important. For example, much of the literature places a strong importance on social engagement and interaction regarding acculturation. Yet the Cronbach's alpha score for the category shows the data obtained does not fit well and does not do a good job in describing the situation. In addition, a correlation of the survey categories shows the Social Engagement category to have the lowest (albeit still large) correlation with the Identification with Institution category. Yet further still the standardized beta coefficient shows the Social Engagement category not only to be a significant contributor the Identification with Institution category, but it is also the second largest contributor. What, then, is the real relationship between the Social Engagement category and the Identification with Institution category and student satisfaction? The data is not exactly clear on this point.

Yet the conception of identifying with an institution is not clearly spelled out despite the specificity of the survey items in the category. What does it actually mean to identify with an institution? This question is taken up in the next section on generalizability.

7.2   Generalizability & Context

One important item to keep in mind when replicating research in a different context is continuity. In this case, the issue of continuity arises first and foremost with the institution of higher education itself. The role universities play in

the lives of their student in the United States is different than that of European schools such as the one where this study took place.

One example of this difference is the concept of identifying with the university. Universities in the states are communities within themselves. They have sports teams, rivalries, colors, fight songs, logos, mascots, and a host of other unique identifiers very well known to many Americans. When they attend a particular university they identify themselves with these symbols of the school. In the fall, crowds gather at the university's football stadium to watch their team, recruited by the school's athletic department, play against a rival school in a nationally organized set of official games and tournaments. Students paint their faces, wear their school colors, play the school's fight song in the school's band, and laugh and cheer with the school's mascot. These events help foster a feeling of belonging to the local community. They also provide opportunity for international students to meet and interact with domestic students by creating a common link and therefore a means to strike up a conversation.

In contrast, the University of Jyvaskyla has some of these monikers, but not to the same degree as universities in America. There is no fight song nor school mascot, and no obvious school colors. As a result the atmosphere of the university is different from where the survey was originally created. This aspect is not present at the University of Jyvaskyla, so assuming a die-hard Spartan (a term used to describe someone from Michigan State University) or Wolverine (ditto but from the University of Michigan) would have the same sense of attachment to their university as a student use to a different system is an unreasonable assumption. The validity of the category "Identification with Institution" on the International Friendly Campus Scale must be reasonably questioned when the scale is transferred into a European context. Since the role of the institution in the lives of its students is a matter of cultural norm (national, local, and campus culture) the concept of institutional identification in the American context cannot be adequately equated to that of a European context.

Despite the mathematical justification for legitimate transferability of the scale, as mentioned in a previous section, a complete replication of the study must take into account the conceptual differences identifying with an institution encapsulates. Questions about pride, affinity, and satisfaction on a survey can be widely misconstrued from the survey creator's original intent. One student may be satisfied with the university because he or she can be on a first name basis with their professors, while another might see such informality as a negative aspect and be dissatisfied with the same concept. In short, what one student might report as satisfaction may be dissatisfaction in another based on the students' varying backgrounds and expectations.

Examining variances in identification and satisfaction from another angle, in the original study Wang et al. note in their section on limitations the effect a change in context could have on the scale's use. They articulate how university size, type (private, community, etc.), and setting (country, region, city, and city type) can significantly contribute to international student acculturation and the friendliness of the university (2014, p. 126). This question of the importance of the study's context is important for the applicability of the study and its usefulness in the future. The scale is relatively small, only 18 questions of which 3 deal with a student's feelings towards the university. This means much is conceivably left un-probed regarding this aspect. A more detailed study involving international students and the type of institution is needed to determine to what extent the International Friendly Campus Scale can be generalized among universities of differing types, let alone those in different settings and size. An example of this can be seen in comparing an American liberal arts college to a community college. The liberal arts college will have a school fight song, colors, sports teams, and many cultural factors that significantly contribute to the development of a specific campus climate and culture a student could potentially identify with.

In contrast, a community college lacks this campus climate and culture. So two universities can be extremely different with respect to the strength with which its students identify, even though these universities can theoretically be

located in the same part of the same city. With this example in mind, a special consideration as to the importance and depth context and setting play in the transferability of this scale to areas as disparate as one side of the world is to another.

To sum up, despite the mathematical consistency shown when transferring the scale from the original context to that of the University of Jyvaskyla, much more research as to the transferability of the International Friendly Campus Scale is needed.

7.3 Limitations of the Study

7.3.1 Factor Analysis

Several limitations must be mentioned regarding this study. A primary limitation has to do with the categorization of the items and how they loaded in the factor analysis performed on the Jyvaskyla data. The original study by Wong et al. created a series of five categories with which to group the items on the International Friendly Campus Scale. In their development, Wang et al. ran a factor analysis which resulted in a 5 factor solution and selected a total of 18 items from the 43 on the pilot questionnaire based on, amongst other criteria, that each item loaded on its corresponding factor (2014, p. 122).

The Jyvaskyla data was also subjected to a factor analysis. An examination of the data from the pattern matrix showed that some items did not load on the correct factor. Most items loaded correctly, but some did not. For example, the first factor, the category "Campus Discrimination", loaded the four items from the original study, as well as item 16 and item 15. In all, factors three and four, the "Identification with Institution" and "Social Engagement" categories respectively, did not load all of the correct survey items on the required factor. Factors one, three, and five ("Campus Discrimination", "Identification with Institution", and "Academic Support" respectively) loaded additional items not present on the original factor.

This, in short, means that questions on the original International Friendly Campus Scale associate differently in the Jyvaskyla context when compared to the original context of the study. For example, survey item 16 loaded with the "Campus Discrimination" category questions in the factor analysis as well as the "Academic Services" category. The differences observed in the factor loadings can be interpreted in different ways. In the preceding example, survey item 16 can be interpreted both as a question regarding proper academic support, but also as a discrimination question, the logic being a faculty member unwilling to help an international student would be discriminating against the international student when compared to a domestic student. Other theoretical explanations can be made for the misloading of the items, such as the insecure role the international office plays in Jyvaskyla compared to the original context. Yet whatever theoretical explanations can be given, the data shows a fundamental difference between the interpretation of the International Friendly Campus Scale between the two contexts thus leading to a fundamental limitation of the study based on transferability and the assumption of measuring the same feelings or perceptions.

7.3.2   Survey Participants Data

Another possible limitation of the survey is the lack of concrete data regarding the international student population at the University of Jyvaskyla for those students who qualify for this study. This study examined bachelor, master, and doctoral level students who have been at the university for at least one year. However, due to the limitations of the student union system and the compartmentalization of the university data on these student groups is decentralized. The student union only accounts for students who are members, which are comprised of bachelor and master level students. Doctoral students may join, but membership is not compulsory as it is with the other two degree groups. Lists of international doctoral students are not posted nor distributed outside of their various faculties, and obtaining information on the total number of doctoral students is not feasible with the current system.

Therefore, it is impossible to know the proportion of the international student population that participated in the Jyvaskyla Friendly Campus Scale research or its makeup. Because of this, knowing whether the surveyed population is an accurate subsection of the entire international degree student population at the University of Jyvaskyla or not is not possible.

7.4   Applicability of research results

Research performed using the International Friendly Campus Scale is widely applicable to the University of Jyvaskyla and its community. Using the data collected, several recommendations can justifiably be made. These recommendations include establishing a better channel of communication to and between students at the University of Jyvaskyla, improve the role the international office plays in the lives of international students, and increasing the opportunities and resources available to international students so they are nearly equal to those of domestic students.

The first recommendation is improving the communication between students at the university. As the data shows, students report significantly fewer friendships with domestic students and engage in few social engagements organized at the university. This suggests few opportunities available for international students, or at the very least international students as being unaware of these opportunities. More channels of communication would provide more opportunities for international students to socialize with their domestic counterparts as well as other international students. This would better provide the social fulfillment necessary for international student acculturation, as articulated above. It would also give the international office, at least the student union's iteration of an international office, a more concrete role in the structure of the university. Possible communication channels abound and include means such as bulletin boards, e-mails, flyers, e-calendars, social media, word-of-mouth, and a slew of others abound and need only the will and organizational means to utilize.

The third recommendation would be more difficult to carry out, but only for the lack of resources. As the data indicates, many students have a negative view of the university community due to the lack of equality of resources. These resources and opportunities include items such as class offerings, student body leadership opportunities, subject organization participation, an adequate amount of translated materials, and a host of other opportunities. The data obtained from the international students at the University of Jyvaskyla clearly shows a need for a more equal atmosphere. Overt discrimination such as negative comments and belittlement is reported as being almost entirely absent. However, the data also clearly shows institutional discrimination as being a part of everyday life for international students.

7.5 Challenges for Further Research

7.5.1 Potential Problems

The main challenges for further research is two pronged. The first prong is cross-contextual replication. This study needs to be replicated in a variety of different contexts in order to determine the veracity of the survey tool. In order to achieve full understanding of the multifaceted variables of international student acculturation, information is needed about international students in a myriad of contexts. The use of a single, well understood tool in varying contexts provides a baseline for understanding the unique needs and challenges of these contexts. Therefore, further research is needed to fully understand the tool.

The second prong is following up after policy prescriptions have been implemented. This post-implementation study would be needed to follow up and verify the initial research. Utilizing a second, repeated study would allow the university community to verify the needs identified by the first study are both valid needs and that these needs are sufficiently taken care of. Therefore, further research about the international student community is needed as well.

7.5.2   Potential Opportunities

Opportunities for further research abound. Many themes and details were discovered in this research. However, in order to gain a more in-depth view of these, more detailed research must be done. For example, in order to probe more deeply student perceptions and possible reasons for those perceptions, students might be interviewed. This would restrict the breadth of a research, but in contrast it would give much needed depth of understanding.

Using this current research as a guide, further research could consist of in-depth interviews of international students regarding their social connectedness, the opportunities to socialize, and how their reasons for making their social decisions. Other sources of fruitful research would be a study of resource distribution and access at the university. This is a problem identified in the current research which would be of consequence for the University of Jyvaskyla to pursue.

In conclusion, while challenges to doing future research with the International Friendly Campus Scale are present, the information gleamed by using this tool still provides adequate ground from which to pursue further research. Opportunities available for research must be sought with a mind to the potential pitfalls of context and enforcement. Nevertheless, using this tool in the context of the University of Jyvaskyla has provided several strong avenues for future research.

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APPENDICES

Appendix 1 The International Friendly Campus Scale*

Background Information

What is your age?

What is your gender?

What is your nationality?

How long have you lived in Finland?

Campus Discrimination

4. I feel as though I am treated as less intelligent at the University of Jyvaskyla because of being an international student.

8. I am treated differently or unfairly at the University of Jyvaskyla because of being an international student.

10. I hear people at the University of Jyvaskyla make insensitive or degrading remarks about international students.

13. Compared to Finnish students, I don't have equal access to resources and opportunities at the University of Jyvaskyla.

International Office Services

2. Compared to other student services on campus, the International Office gives special consideration to the characteristics of international students.

3. The International Office has helped my transition in Finland.

7. The International Office continues to improve on serving international student.

9. The International Office is a safe/comfortable place for me.

Identification with Institution

1. I like associating myself with the University of Jyvaskyla.

6. I am proud to be a student at the University of Jyvaskyla.

15. I am satisfied with my overall experiences at the University of Jyvaskyla.

Social Engagement

5. I am aware of helpful campus-sponsored programs for social engagements.

11. I have close friendships with other international students at the University of Jyvaskyla.

12. I have close friendships with Finnish students at the University of Jyvaskyla.

14. I engage in social activities here at the University of Jyvaskyla.

Academic Support

16. Faculty members here at the University of Jyvaskyla are willing to give helpful academic advice to international students.

17. I feel comfortable discussing academic issues with faculty at the University when needed.

18. Faculty members at the University make a real effort to understand difficulties international students may have with their academic work.

* This survey is split into categories. The survey given to participants was in numerical order and without the category labeling.

Appendix 2 Survey Item Descriptive Statistics

TABLE 4 Descriptive statistics for survey responses (n=98)

	Minimum	Maximum	Mean	Std. Dev.	Variance	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Question 02	2.00	5.00	3.73	.84	.71	.01	.24	-.78	.48
Question 03	1.00	5.00	3.41	1.05	1.11	-.35	.24	-.28	.48
Question 07	1.00	5.00	3.60	.82	.68	.06	.24	.03	.48
Question 09	1.00	5.00	3.82	.88	.77	-.10	.24	-.47	.48
Question 04	1.00	5.00	1.56	.83	.68	1.54	.24	2.41	.48
Question 08	1.00	5.00	1.74	.98	.95	1.28	.24	.93	.48
Question 10	1.00	5.00	1.79	.98	.95	1.19	.24	1.03	.48
Question 13	1.00	5.00	2.73	1.37	1.87	.25	.24	-1.11	.48
Question 16	1.00	5.00	4.41	.81	.66	-1.48	.24	2.49	.48
Question 17	1.00	5.00	4.37	.90	.81	-1.66	.24	2.96	.48
Question 18	1.00	5.00	4.01	.92	.86	-.74	.24	.16	.48
Question 05	1.00	5.00	3.39	1.11	1.23	-.36	.24	-.66	.48

TABLE 4 Descriptive statistics for survey responses (n=98)

Question 11	1.00	5.00	4.39	.96	.92	-1.78	.24	2.83	.48
Question 12	1.00	5.00	3.21	1.25	1.57	-.06	.24	-1.10	.48
Question 14	1.00	5.00	3.54	1.16	1.34	-.53	.24	-.50	.48
Question 01	2.00	5.00	4.29	.82	.68	-.92	.24	.05	.48
Question 06	1.00	5.00	4.27	.93	.86	-1.19	.24	.94	.48
Question 15	1.00	5.00	4.23	.78	.61	-1.36	.24	3.05	.48

Appendix 3 Survey Item Correlation Matrix

TABLE 5 International Friendly Campus Scale Survey Item Correlation Matrix

	Item 02	Item 03	Item 07	Item 09	Item 04	Item 08	Item 10	Item 13	Item 16	Item 17	Item 18	Item 05	Item 11	Item 12	Item 14	Item 01	Item 06	Item 15
Item 02																		
Item 03	.52***																	
Item 07	.38***	.49***																
Item 09	.34***	.51***	.48***															
Item 04	.01	-.05	-.11	-.16														
Item 08	.01	-.14	-.09	-.19	.44***													
Item 10	-.12	-.22*	-.15	-.18	.36***	.46***												
Item 13	-.12	-.21*	-.12	-.37***	.31**	.47***	.32***											
Item 16	.13	.32***	.31**	.37***	-.30**	-.54***	-.27**	-.44***										
Item 17	.19	.29**	.33***	.45***	-.32***	-.42***	-.37***	-.41***	.65***									
Item 18	.20*	.14	.24*	.38***	-.28**	-.34***	-.21*	-.19	.46***	.56***								
Item 05	.09	.19	.26**	.34***	-.03	-.08	-.10	-.20*	.24*	.30**	.28**							

TABLE 5 International Friendly Campus Scale Survey Item Correlation Matrix

Item 11	.26*	.22*	.08	.13	-.15	-.14	-.22*	.04	.05	.13	.21*	.13					
Item 12	.13	.15	.01	.03	.01	-.12	-.14	.06	-.02	-.02	-.01	-.05	.33***				
Item 14	.00	.24*	.24*	.26**	-.13	-.03	-.30**	-.03	-.01	.10	.15	.41***	.36***	.35***			
Item 01	.35***	.33***	.41***	.20*	-.22*	-.36***	-.21*	-.18	.36***	.30**	.35***	.37***	.33***	.23*	.31**		
Item 06	.39***	.36***	.29**	.21*	-.31**	-.40***	-.32***	-.37***	.42***	.49***	.39**	.43***	.28**	.11	.29**	.74***	
Item 15	.41***	.35***	.40***	.32***	-.38***	-.51***	-.30***	-.38***	.51***	.39***	.42***	.32***	.28**	.17	.26*	.63***	.65***

*Correlation is significant at the .05 level
**Correlation is significant at the .01 level
***Correlation is significant at the .001 level.
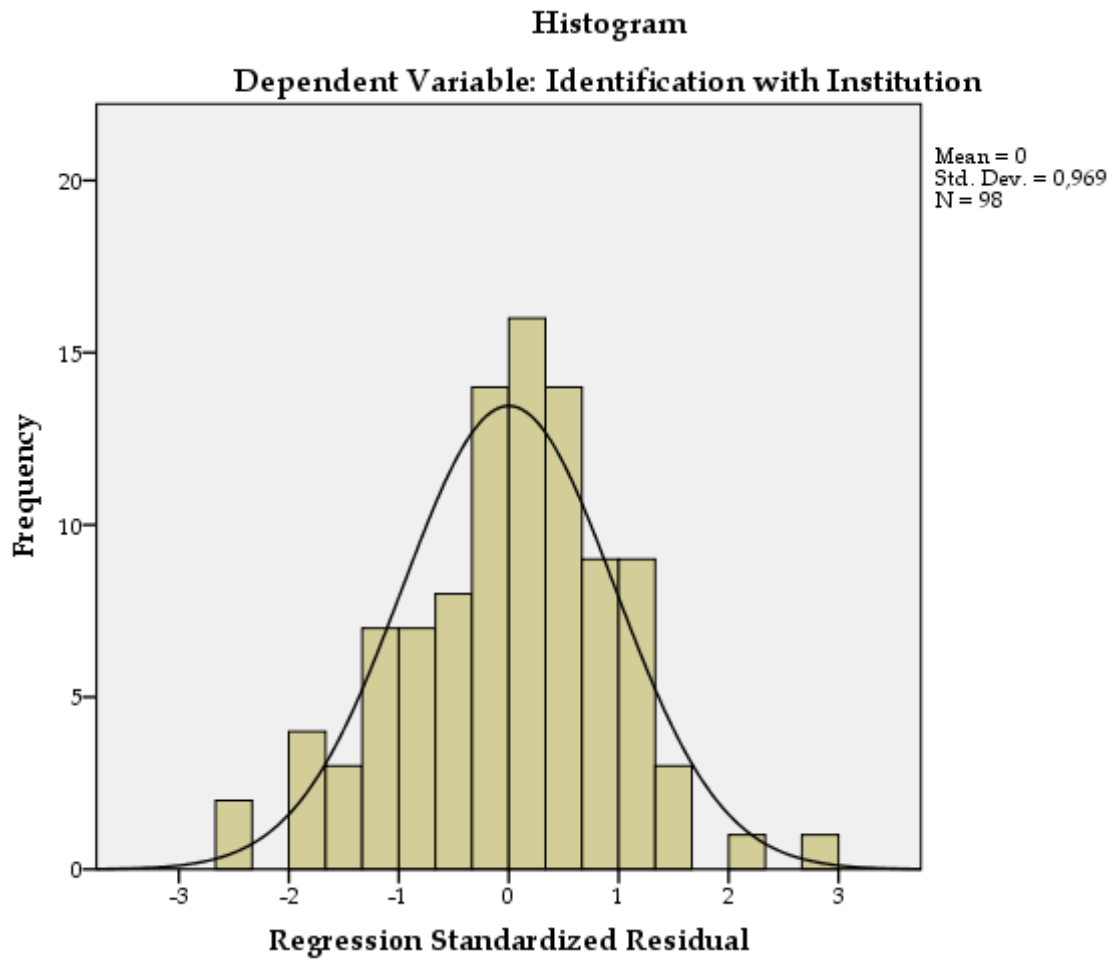
Appendix 4 Pattern Matrix from a Factor Analysis

TABLE 6 Pattern Matrix from a Factor Analysis

	Factor Loadings				
	1	2	3	4	5
Discrimination					
4. I feel as though I am treated as less intelligent at the University of Jyvaskyla because of being an international student.	**-.54**	.16	-.04	-.07	-.06
8. I am treated differently or unfairly at the University of Jyvaskyla because of being an international student.	**-.94**	.17	.01	.04	.03
10. I hear people at the University of Jyvaskyla make insensitive or degrading remarks about international students.	**-.48**	.07	.01	-.25	-.06
13. Compared to Finnish students, I don't have equal access to resources and opportunities at the University of Jyvaskyla.	**-.43**	.01	-.06	.10	-.27
International Office Services					
2. Compared to other student services on campus, the International Office gives special consideration to the characteristics of international students.	-.23	**.82**	.25	-.22	-.12
3. The International Office has helped my transition in Finland.	-.07	**.70**	.03	.06	.07
7. The International Office continues to improve on serving international student.	-.06	**.65**	-.07	.09	.16
9. The International Office is a safe/comfortable place for me.	.05	**.59**	**-.29**	.13	**.41**
Identification with Institution					
1. I like associating myself with the University of Jyvaskyla.	.14	.16	**.60**	.01	-.06
6. I am proud to be a student at the University of Jyvaskyla.	.00	-.08	**.97**	-.01	.23
15. I am satisfied with my overall experiences at the University of Jyvaskyla.	**.47**	.27	**.29**	.06	-.08
Social Engagement					
5. I am aware of helpful campus-sponsored programs for social engagements.	-.19	-.02	**.33**	.27	**.42**
11. I have close friendships with other international students at the University of Jyvaskyla.	.11	.17	.12	**.31**	-.18

TABLE 6 Pattern Matrix from a Factor Analysis

12. I have close friendships with Finnish students at the University of Jyvaskyla.	.20	.13	-.04	**.37**	**-.36**
14. I engage in social activities here at the University of Jyvaskyla.	-.06	-.07	.04	**.99**	.06
Academic Services					
16. Faculty members here at the University of Jyvaskyla are willing to give helpful academic advice to international students.	**.55**	.11	-.02	-.17	**.40**
17. I feel comfortable discussing academic issues with faculty at the University when needed.	.26	.04	.11	-.09	**.69**
18. Faculty members at the University make a real effort to understand difficulties international students may have with their academic work.	.25	.08	.08	.01	**.41**

Appendix 5 Regression Analysis Charts

Histogram

Dependent Variable: Identification with Institution

Mean = 0
Std. Dev. = 0,969
N = 98

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Identification with Institution
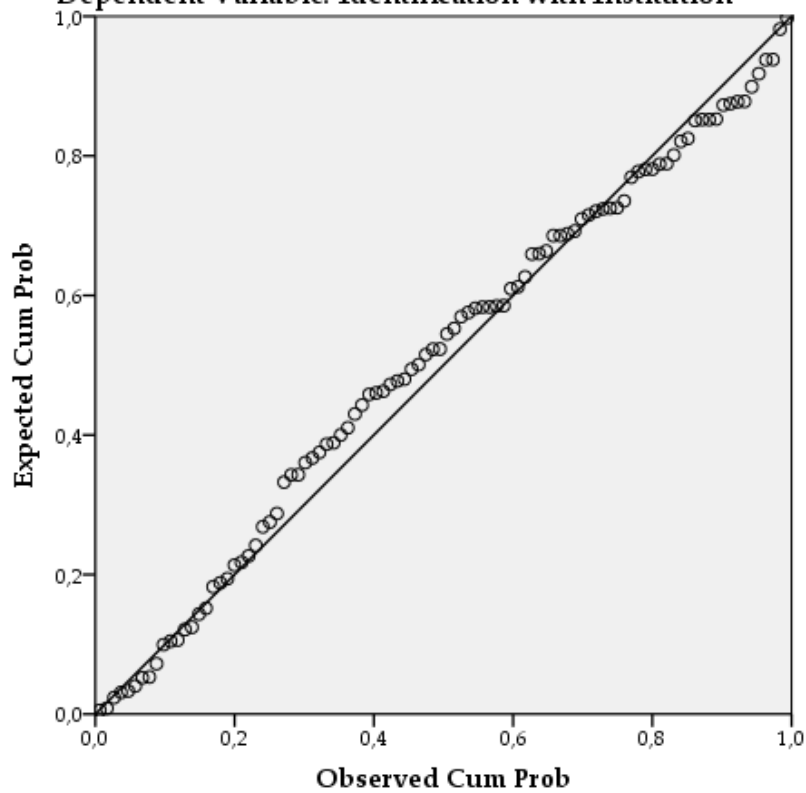
Scatterplot

Dependent Variable: Identification with Institution