

**ENGLISH FOR SPEAKERS OF OTHER LANGUAGES
(ESOL) STUDENTS AND ACADEMIC SUCCESS: THE
ROLE OF CAMPUS CLIMATE, FACULTY AND PEER
SUPPORT**

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Ethics Approval

Ethics approval to proceed with this research was granted by the Auckland University of Technology Ethics Committee (AUTEK) on 07/08/2008, application number 08/118.

Abstract

Background: English for Speakers of Other Languages (ESOL) students, enrolled in health care tertiary education, have lower graduation rates compared with English native speakers. The demographic profile of most western countries is continuously changing and therefore this issue has become a concern especially for those countries which are confronted with an acute health care workforce shortage. One of the most important predictors in student retention is their perception of academic success. The purpose of this study was to explore ESOL health undergraduate students' perceptions of campus climate, faculty and peer social support, and sought to determine whether or not there is a relationship between these factors and ESOL students' perception academic success.

Methods: The study was carried out at Auckland University of Technology (AUT). The inclusion criteria for this study were: undergraduate students enrolled with the Faculty of Health and Environmental Sciences, having other than English as their first language, and studying predominantly on one of AUT University's campuses, namely Akoranga campus. The study implemented had a cross-sectional design using a novel purpose built electronic survey. ESOL health undergraduate students' insights were explored using a 22-item web-based survey consisting of three scales: peer and faculty support, campus climate, and academic success. The content validity and reliability of each scale were tested. The study questionnaire was made available online to all ESOL health undergraduate students willing to participate in the research. Generalized estimating equations were used to test the study hypothesis. Six related binary outcome variables, measuring perceptions of academic success, were included in the analyses.

Results: Twenty-seven ESOL health undergraduate students from a variety of health undergraduate programs agreed to participate in the research. The majority of participants were of Asian ethnicity with ages between 21 and 30 years and had completed their secondary education overseas. The GEE analyses showed that campus climate was significantly associated with academic success, $p\text{-value}=0.01$, but peer and faculty support was not, $p\text{-value}=0.07$. The estimated odds ratio (OR) for the campus climate relationship implies that for every unit

increase in the first principal component factor for campus climate, the odds that a participant agreed with the academic success scale decreased by 0.43 (95% CI: 0.30, 0.84). The only open-ended question of the survey revealed that 39% of the participants did not intend to leave the faculty before graduation, while 17% saw the “lack of support” as a possible reason for abandoning the university without a degree.

Conclusion: ESOL undergraduate students’ perception of campus climate may have an influence on their perception of academic success. Students’ perception of peer and faculty support was not significantly associated with academic success, but 17% of respondents to the open-ended question saw “lack of support” as a possible reason to leave the course before graduation. The findings were hampered by the small sample of ESOL students recruited.

Chapter 1 - Introduction

There are two significant factors currently confronting the health workforce. The first is the health care workforce shortage (World Health Organization (WHO), 2006, p. 67, August 14); and the second is the increased numbers of culturally and linguistically diverse health care consumers in most western countries (Davidhizar, Dowd, & Giger, 1998; Gardner, 2005c; Klisch, 2000; Shakya & Horsfall, 2000; Wilson, Andrews, & Leners, 2006; Yoder, 2001). As the aging health care workforce begins to retire and the enrollments in health education start to decline, the demand for health care workers is growing, with only a slow improvement in supply (Chen et al., 2004; Colalillo, 2007; Jackson, Mannix, & Daly, 2001; Ramsburg, 2007; Saver, 2006). Consequently, the critical worldwide shortage of health professionals is predicted to worsen (Colalillo, 2007) and is expected to last longer and be more severe than in the past (Ramsburg, 2007; Shelton, 2003). The World Health Organization (WHO) (2006) estimates that the health workforce scarcity affects, presently, fifty-seven countries (most of them in Africa and Asia) and that over 4 millions health care workers are needed to fill the gap. In New Zealand, a shortage of 40,000 to 70,000 of health and disability workers is projected for the next two decades (Ministry of Health, 2007, October 31).

Nursing, for instance, which occupies the largest percentage of the international health care workforce (Gaynor et al., 2007), is facing a global crisis with New Zealand, Australia, Canada, United Kingdom (UK), Western Europe and the United States (US) experiencing severe shortages. Moreover, it was estimated that by the end of 2020, up to half of current workforce will reach the retirement age, which will worsen the nursing workforce shortage (Jackson et al., 2001; North, 2007; Warr, 1999). In the Australian nursing sector there will be an estimated deficit of 40,000 health care workers by the year of 2010 (Gaynor et al., 2007). The Canadian Nurses Association (CAN) (2009) anticipates a shortage of 113,000 registered nurses by 2016, while in UK quantifying projected nursing shortages is difficult to ascertain due to the scarcity of the available

data on the nursing labour market, but it is anticipated to be as important as the deficit in other western countries (Gaynor, Gallasch, Yorkston, Stewart, & Turner, 2007).

As a consequence of the nursing shortage, many of the industrialized countries recruit nurses from overseas countries to fill the gaps in the national nursing workforce (Jackson et al., 2001; North, 2007; Warr, 1999). However, the recruitment of nurses from developing countries, as a solution to nursing shortage, is seen as being ethically argumentative and only as a short-term solution (Jackson et al., 2001; Warr, 1999). Moreover, North (2007) suggests that the recruitment of international registered nurses (IRN) may convert a temporary workforce shortage into a structural deficiency of the nursing system. In Ireland and the UK, for instance, the number of IRN rose rapidly prior to 2001 to decrease after that, leaving the National Health Service (NHS) heavily dependent on IRNs and in some regions unable to manage the demand for nurses without them (North, 2007).

Much of the current literature focuses on doctors, nurses and midwives' scarcity for which data have been collected (Organization for Economic Co-operation and Development, 2008). However, the workforce crisis is equally affecting other health professional categories, such as pharmacists (Canadian Pharmacists Association, 2005; Department of Labour, 2005, November-b; Knapp, Quist, Walton, & Miller, 2005), dentists (Attaran & Walker, 2008; Brown & Raborn, 2001; Noone, 2008), occupational therapists (Department of Labour, 2005, November-a) and physiotherapists (Schofield & Fletcher, 2007; Taylor, 2008).

Compared to the issue of workforce number deficits, diversity among health care consumers is now widespread, and encountering patients who speak limited or no English is commonplace (Yoder, 2001). Worldwide migration and cultural trends have given rise to an increase multicultural mix of healthcare consumers in many western countries (Omeri, Malcolm, Ahern, & Wellington, 2003). The United States Census Bureau (2008, August 14) predicts that by 2042, ethnic minorities, now roughly one-third of the US population, will represent over 50% of the total population. Also, it is estimated that by 2017, 20% of Canadians will be a member of a visible minority ethnic group (Canadian Nurses Association, 2009).

New Zealand, like other western countries, is a culturally diverse society. The demographic profile of New Zealand, caused by the process of immigration, continues today and it does not show signs of declining. Polynesians, Asians, Arabs, Nigerians, Indians, and South-eastern Europeans, to name a few, comprise the ongoing influx of new people from diverse parts of the globe and are a significant demographic reality of the early 21st century. In the 2006 census, approximately 32% of the people in New Zealand identified themselves as being a racial or ethnic minority and the number of racial and ethnic New Zealanders is projected to rise. The future New Zealand demographic profile is predicted to be even more diverse than it is at present (Statistics New Zealand, 2007).

It is argued in the health care literature, that in order to meet the needs of a multicultural population, a culturally diverse healthcare workforce is required (Gardner, 2005a; Klisch, 2000; Rogan, San Miguel, Brown, & Kilstoff, 2006). If the health workforce is to be effective, sustainable and self-sufficient, it must reflect the diversity of population (Canadian Nurses Association, 2009). As highlighted in numerous American and Canadian studies, there is a need of cultural and ethnic diversity in the health care sector (Amaro, Abriam-Yago, & Yoder, 2006; Bolderston, Palmer, Flanagan, & McParland, 2007; Canadian Nurses Association, 2009; Gardner, 2005a, 2005c; Klisch, 2000; Shelton, 2003). Moreover, this deficit of culturally diverse health professionals leads to disparities in the health care of ethnic minority groups (Amaro, Abriam-Yago, & Yoder, 2006; Evans & Greenberg, 2006). Thence, there are sometimes considerable tensions around this issue. On one hand, as Davidhizar et al. (1998) suggests, culturally diverse health consumers prefer culturally and ethnic congruent health care providers. On the other hand, health care professionals often perceive culturally diverse client as non-compliant without considering their different cultures and practices (Pinikahana, Manias, & Happell, 2003).

In contrast to US and Canada, New Zealand and Australia have both a highly culturally diverse health care workforce. According to the Health Workforce Information Report (2008), many ethnic minorities are over-represented in the health care sector while New Zealand European and other European ethnicities are under-represented. Table 1 presents a snapshot at 30 September 2008 of New Zealand District Health Boards (DHBs) workforce by ethnicity (Health Workforce Information Programme, 2008). The reason for over-representation is the massive immigration of

health care professionals to New Zealand and Australia resulting in an extremely diverse health care workforce (Negin, 2008). However, the reliance on overseas trained physicians, for instance, is not a universal characteristic of western countries. Mullan (2005) affirms that besides New Zealand and Australia there are only five other recipient countries of international graduates and among them are: the US, Canada and UK. The heavy reliance of these countries on international trained workforce suggests that they would have substantial shortages without overseas graduates (Mullan, 2005). Therefore, in most of the western countries, workforce ethnic diversity is explained mainly by the relocation of overseas trained doctors, nurses, midwives and other health professionals rather than by high retention rates of ethnically diverse students in health education.

Negin (2008) calls the high influx of IRN and other health professionals from Pacific Islands, towards Australia and New Zealand, the “brain drain”. The author asserts that the migration of skilled workers from Oceania is having a negative impact on health in this region; the shortage of health workers is a chronic problem for Pacific Islands. The ratio health care worker/patient is critical in Solomon Islands, Papua New Guinea and Vanuatu. The debate concerning the “brain drain” in most developing countries has not reached Australia and New Zealand yet. Both countries have been shielded from this debate for the reason that their contribution to the “brain drain” in Africa, which according to WHO (2006) faces the greatest health workforce challenges, is limited. However, as Negin (2008) suggests Australia and New Zealand have an obligation and moral responsibility to address their contribution to the health care workers shortage in Pacific and the poor health outcomes that result.

Table 1: A breakdown by ethnicity of New Zealand health workforce, as shown in the Health Workforce Information Programme data report, as of September 30, 2008

Workforce	NZ European	Other European	Maori	Pacific Islander	South East Asian	Indian	Other Asian	Minority Ethnicities	Other Ethnicity
Allied Health	56%	23%	10%	1%	1%	2%	1%	2%	4%
Medical	40%	31%	3%	1%	1%	7%	4%	10%	3%
Midwifery	52%	35%	5%	1%	1%	1%	0%	4%	2%
Care and Support	46%	10%	21%	10%	3%	6%	1%	1%	3%
Nursing	54%	20%	5%	3%	4%	5%	1%	4%	4%
Corporate and Other	55%	19%	10%	4%	1%	4%	1%	3%	5%
Technical and Scientific	53%	23%	4%	4%	4%	6%	1%	4%	4%
Total Workforce	52%	21%	8%	3%	2%	5%	2%	4%	4%
New Zealand Census 2005 Proportion	67.6%	5.6%	13.3%	6.3%	0.6%	1.6%	1.1%	3.4%	0.0%

Note: * Minority Ethnicity includes Chinese, Middle Eastern, Latin American and African ethnicities

**Ethnicity could not be assigned to 21.7% of employees, which may impact on the analysis.

Adapted from Health Workforce Information Programme (2008) “Base Data Report (Snapshot at 30 September 2008)”, p. 21

Consequently, one of the reasons for the lack of health care workforce diversity and, furthermore, for the shortage of health care professionals (in some Organization for Economic Co-operation and Development (OECD) countries) is that the retention into health care training programs of culturally diverse students constitutes a critical issue in health education (Campinha-Bacote, 1998; Davidhizar et al., 1998; Griffiths & Tagliareni, 1999; Labun, 2002; Oseguera & Rhee, 2009). Moreover, as Porter (2008) mentions the population of non-traditional and culturally diverse students that most health programs are seeing today, is higher than ever. Many countries such as: New Zealand, Australia, Canada and the US, with a highly diverse population, are pressured to increase the retention rates of culturally and ethnically diverse students into health care education. The western countries reliance on international health graduates is reducing the supply of physicians, nurses and midwives in many developing countries, and what is more important in countries with already weakened health care systems. Moreover, the international recruitment of health care workers rises concerns of health equity and health disparities in these countries (Mullan, 2005).

1. Statement of Problem

Global trends in minority population growth and immigration patterns have influenced the proportion of students traditionally occupying classrooms and clinical laboratories. Health faculties, worldwide, are continuously challenged by the mix of non-traditional students that represent a diversity of ethnicities or cultures (Omeri et al., 2003). Consequently, many research and non-research papers have focused on health faculties ability to cope with these changes and have acknowledged that most tertiary institutions are not well prepared to teach these non-traditional students (Griffiths & Tagliareni, 1999; Weaver, 2001).

It is argued, mostly in the American literature, that most students with diverse ethnic or cultural backgrounds are not readily choosing to enter health care programs. Furthermore, when they chose a health care career they often confront barriers to admission in the health schools (McQueen & Zimmerman, 2004) and, what is more, those who are admitted in programs have difficulty graduating (Bolderston, Palmer, Flanagan, & McParland, 2007; Klisch, 2000; Labun, 2002; Rogan et al., 2006;

Yurkovich, 2001). Consequently, student attrition presents numerous challenges for directors and deans of nursing, worldwide (Wells, 2003). Exact numbers are not available, but it is estimated that the attrition rate of ethnically diverse nursing students, in the US, is as high as 85% percent in some schools of nursing (Gardner, 2005c). In addition, Klisch (2000) asserts that the attrition rates of ESOL nursing students are higher than the rates of English language native speakers. In Australia, a third of all students entering tertiary education fail to complete the program and about a half of these withdraw in their first year (Department of Education Training and Youth Affairs, 2000, August 28).

In New Zealand, Scott (2004) suggests that the common perception of the education system is that we are doing well in terms of participation rates, but not so well in terms of completion rates. According to the same author, approximately 51% of New Zealand domestic undergraduate students leave the program they are studying before graduation (Scott, 2004). A Ministry of Education report shows that 54% of New Zealanders starting a bachelors degree in 2002 had either completed or were still enrolled in 2006 (2007). From the ethnicity point of view, European and Asian students have high completion rates, 47 respective 55%, and they are both higher than than Maori and Pacific students rates, 39 respective 33% (Scott, 2004). Until recently, completion and retention rates were not the focus of many articles. However, recent shifts in government strategy and policy have given a greater importance to completion. Moreover, the New Zealand government has already discussed a performance-based funding strategy similar with the one already operating in Australia (Scott, 2004).

Successful recruitment of culturally diverse student populations does not necessarily assume program completion or entry into the health care workforce (Jeffreys, 2007a). The fact that institutions do not purposely exclude students does not mean that they are including them as fully valued members of the institution and providing them with support that enables them to translate access into success (Engstrom & Tinto, 2008). As such, Engstrom and Tinto (2008) made the observation that “access without support is not opportunity” (p. 50).

It is also well known that health faculties do not always have the time or expertise to help students with financial issues and continuing family obligations or the overwhelming sense of isolation and fear of academic failure (Cabrera & Padilla, 2004;

Evans, 2004b; Villarruel, Canales, & Torres, 2001). Moreover, an appraisal of students' perceptions, obstacles, strengths, and weaknesses is a necessary precursor for any intervention. Such an appraisal often extends beyond solely identifying students who are at risk for academic failure or attrition to comprehensively understand what factors restrict or support successful students who remain enrolled. Gaining insight into students' perceptions is particularly valuable for meeting the needs of diverse, adult learners (Jeffreys, 2007b).

Many ESOL students admitted to health programs arrive from another country, as international students. Such students are often living on their own for the first time, without their families and friends (Jalili-Grenier & Chase, 1997; Shan Choi, 2005). Therefore, ESOL students often experience a cultural shock at the same time as trying to study in a health professional program. In addition, Omeri et al. (2003) cite social isolation, prejudice and racism, as well as financial and familial concerns as factors affecting ESOL students' academic outcomes. It is also documented that ESOL students experience learning difficulties related to the teaching language (Abriam-Yago, Yoder, & Kataoka-Yahiro, 1999, Klisch, 2000) and expected learning styles (Omeri et al., 2003). However, Zollo (1998) argues that, in fact, their difficulties are related to universities' lack of cultural responsiveness.

Ethnically diverse students are considered disadvantaged in attaining success in their studies. There are negative views by faculty staff and peers about the succeeding abilities of these students. Gorman (1999, December 8) observed that "the degree to which students are disadvantaged depends on how much their cultural backgrounds differ to that of the university". Often ESOL students face social or interpersonal barriers such as unfavorable faculty attitudes, lack of faculty awareness of cultural or ethnic issues and unfriendly peer-group attitudes. The majority of academic faculty members, as argued by San Choi (2005), assume that students' academic difficulty results from students' lack of competence.

In addition to confronting barriers, students are expected to adopt the professional health system grounded in the norms and values of the culturally dominant society, although they often hold different health beliefs, assumptions, and theories. This additional conflict occurs, especially, because many health concepts and theories are grounded in the norms and values of the dominant culture (Yoder, 2001, p. 322).

Moreover, the bias in evaluation of student performance can make the student to feel unwelcomed in educational settings (Barbee & Gibson, 2001; Byrne, 2001; Janes & Hobson, 1998; Merrill, 1998; Villarruel et al, 2001; Yurkovich, 2001). Other barriers encountered by ESOL students and affirmed by Villarruel et al. (2001) are: financial burdens, perceived discrimination by faculty and peers, English as a second language and cultural values, such as the importance of family and the perceived gender roles.

All these issues can affect ESOL students' academic success and may limit participation within the university culture. The end result is that many ESOL students tend to feel estranged by their experience in the health tertiary education, despite faculties offering assistance to them. Consequently, many of them are not successful within the university sector which results in high attrition rates and financial loss not only for the students but for the faculty and the society as well (Pitkethly & Prosser, 2001; Tinto, 2005). On the occasions that overseas students succeed, despite the barriers encountered, the high price they pay is in personal commitment, constant diligence and single minded attention to academic goals, as it was found by an Australian study (Burns, 1991).

Consequently, reasons for student withdrawal need to be identified and monitored (Pitkethly & Prosser, 2001). Moreover, as Tinto (2005) suggests, the ability of an institution to increase its rate of retention results from its capacity to implement conditions within the institution that promote persistence and success among its students.

2. Purpose of Study

Increasing the racial and ethnic diversity in the health care work force is one strategic direction identified by governments, health profession bodies and community groups as a means of promoting access to culturally appropriate health care (Gardner, 2005b; Noone, 2008; Villarruel et al., 2001). Despite the lack of diversity within health sector, in many areas of the globe, there have been few studies concerning the high attrition rates of ethnic minorities within health education (Villarruel et al., 2001). Most of the studies described in the academic literature focus on African American or Latino

students (Garcia, 2005; Hernandez & Lopez, 2007; Hurtado & Carter, 1994), or on the language difficulties encountered by ESOL students (Burns, 1991; Gay, Edgil, & Stullenbarger, 1993; Porter, 2008; Sanner, Wilson, & Samson, 2002; Shakya & Horsfall, 2000; Shan Choi, 2005; Shelton, 2003). This research intends to reveal the perceptions of the ethnic minorities students particular to one New Zealand tertiary education environment. It is my belief that apart from language difficulties there are other obstacles which encumber ESOL students progression toward graduation.

Academic campuses worldwide have acknowledged the need to evaluate and assess their ethnic and cultural climates in an effort to better prepare their students for life in a multicultural and global society (St. Juste, 2006). The present study adds to the limited body of research in New Zealand regarding students' perceptions of faculty and peer support, and campus climate. It brings into focus the relationship between these factors and students' perception of academic success.

Non-academic reasons for students' non-completion have started to be recognised among the student population in the last twenty years. For instance, an UK study at Liverpool's John Moores University in 1992/93 revealed that personal factors had significantly affected the decision to leave of over 60% of both part-time and full-time students. Similarly, institutional factors were found as the main reason for students withdrawal in a research conducted at Sheffield Hallam University in 1995. Over 40% of those followed up stated that they had disliked or found the course unsuitable, while less than 20 percent cited personal factors such as finance accommodation, illness and employment. However, McGivney (1996) cautions that personal reasons may be underestimated and that students prefer to say that they left the program for course-related reasons than for personal motives. The author also suggests that it may be a combination of program dissatisfaction and other issues, such as not having settled in which lead students to leave the course before graduation (McGivney, 1996).

According to Tinto (1993), students retention necessitates not only that students to choose to remain in the program, but, at the same time, to achieve a predetermined level of academic performance which subsequently motivates them to persist into the program until graduation. Campus climate is one of the factors with a strong influence on student decision to continue or withdraw, because it affects the individual's integration into the academic and campus social life (Garcia, 2005). Consequently,

universities worldwide have engaged in campus climate research to determine what can be done to improve the university experience for their students (Ah Sam, 2005). Sedlacek (n.d.) suggests that campus climate studies are extremely useful to educational leaders as they engage in developing operative cultural diversity plans, whether around curricula, students' residence life, or their recruitment and retention. The author also argues that campus climate surveys, once carried through, should conduct to decisive actions that build on the collected data.

Faculty social support (psychological and functional) has also been reported to be an extremely important factor in ESOL students' retention (Klisch, 2000; Shelton, 2003). Students who feel accepted by faculty and peers as a vital part of the campus community tend to preserve and succeed in their pursuit of a higher education (Tinto, 1993). Similarly, Shelton (2003) affirms that students who receive a high level of support from the faculty are more likely to complete the program. Moreover, Pascarella and Terenzini (1991) assert that students interactions with faculty's administration and academia, and peers outside the classroom and perception of faculty concern for their development predict perseverance in undergraduate programs.

Jalili-Grenier and Chase (1997) suggests that there is a major difference between tertiary institutions and ESOL students' perception of required social support and signification of supportive campus climate. Consequently, this study focuses on factors believed to impact on ESOL students persistence in tertiary education, with the main focus on health undergraduate education. Accordingly, this study aspires to investigate the relationship between ESOL students' perceptions of faculty and peer support, campus climate, and academic success.

3. Summary

This chapter sought to explain why the author of this study attempted to investigate ESOL students' perceptions of campus climate and, faculty and peer support and their role in students' academic success. This research is beneficial because it focused on a growing population, ESOL health students, as well as a current trend, worldwide globalization. Moreover, with the health care workers shortage a serious

concern for most countries, the study of ESOL students' barriers to success is justifiable.

The next chapter - Review of the Literature - is an in-depth review of the current research available on these topics. It served as a foundation from which the present study was developed.

Chapter 2 - Review of the Literature

This quantitative study seeks to explore the perception of ESOL undergraduate students enrolled within a faculty of health sciences of campus climate, and faculty and peer social support, and seeks to determine whether or not there is a relationship between these factors and ESOL students' perceptions of academic success. Consequently, this chapter introduces a review of research and non-research papers relevant to the purpose of this study. Moreover, this chapter reviews concepts, theories and studies pertaining to cultural diversity in tertiary education and, primordially, in health tertiary education. ESOL students are speakers of English language and other foreign dialects, however, issues of language and dialect are often inseparable from issues of culture (Milstone, 2005). Therefore, this chapter also includes a review of perceptions and characteristics of cultural, ethnic and linguistic diversity.

The requisite for persevering and increasing diversity initiatives in tertiary education has been considered paramount for over three decades (Roy-Woods, 2007). The population of students on academic campuses is growing more diverse than ever (Dennis, Phinney, & Chuateco, 2005). Worldwide, faculties have begun to educate students diversely and prepare them for a world of increasing diversity. Some universities have addressed this matter by changing the structure of the campus community to reflect national demographics and others by changing the campus climate to support students' of all ethnicities perseverance into tertiary education until graduation (Roy-Woods, 2007).

Early studies, published during the 1980s, on the retention of culturally diverse students, were centred, in particular, on African-American and Latino students' persistence in tertiary education (Klisch, 2000; Wells, 2003). Moreover, the focus of those North American articles was on previous initiatives such as, student aid reform and affirmative action, which had, initially, favourable outcomes, but have also created additional problems. These initiatives ultimately failed in providing the additional

support services and special programs needed to insure the success of the minority populations. Moreover, they aroused resentment from the dominant ethnicity students (Roy-Woods, 2007).

More recent studies have validated the findings from previous research that an institutional commitment to diversity increases student satisfaction with faculty (Ah Sam, 2005). However, they also showed the need of an all-inclusive institutional commitment to diversity that encompasses a simultaneous approach, with increased representation of culturally diverse students, development of a positive campus environment respectful of diversity, and the introduction of diversity in the curriculum to maximize the educational benefits of diversity on student learning (Chang, 2002).

1. Cultural, Ethnic and Linguistic Diversity

Cultural Diversity

There are many different interpretations of culture, but no single definition convinces all sociologists. Some definitions, however, are fairly broadly accepted, such as the characterization formulated by Sir Edward Burnett Tylor: "Culture is that complex whole which includes knowledge, beliefs, art, morals, laws, customs and any other capabilities and habits acquired by man as a member of society" (Tylor, 1871). Furthermore, Escotet and Alvarez (2000) define culture as the beliefs, values, ethics, customs, and material objects that define a people's way of life. St Juste (2006) makes a further comment suggesting that culture comprises people conceptions and their possessions but it is, also, a link between the past, the present, and the future.

The role of culture in human life is crucial to the understanding and regulation of the educational process. Moreover, people perceive academic institutions as the means by which each society endeavours to communicate and perpetuate its assumption of a good life, which derives from the society's assents about the world, its knowledge and philosophy. Moreover, these assumptions vary from society to society and culture to culture (Adler, Pai, & Shadiow, 2005). Consequently, as each society has its own predominant culture, each person has his/her own private culture, which is a

combination of individual's community culture and several distinct cultures of other individuals of which he/she is aware (Milstone, 2005).

Therefore, when referring to a culture, generalizations do not apply to all members. Cultures are not completely homogeneous but heterogeneous, as every culture is comprised of several subcultures. Members of these groups share many characteristics of the larger culture, but are distinct in significant ways by virtue of their ethnic background, work affiliation, religious convictions, or other significant factors (Decapua & Wintergest, 2004). Assembling these characterizations for the purposes of this study, culture is described as persistent patterns of norms, values, attitudes, expectations, beliefs, and assumptions that frame the behavior of individuals and groups in a university, which are echoed in its academic and social events (Milstone, 2005).

A growing body of research is clearly documenting the value of a culturally and ethnically diverse student population because it leads to an enriched educational experience (Gurin, Dey, Hurtado, & Gurin, 2002), a workforce with enriched cross-cultural competence and higher levels of creativity and innovation (Milem & Hakuta, 2000). Given the significance of these educational outcomes, it is important to understand the forces affecting institutional climates toward cultural diversity (Inkelas, 2003).

Ethnic Diversity

According to Statistics New Zealand, ethnicity is defined as the ethnic group that people identify with or feel they belong to (Statistics New Zealand, 2006). An ethnic group is described as a social group whose members share a sense of common origins, history and destiny, possess one or more dimensions of collective cultural identity, and feel a sense of unique collective solidarity. Therefore, people can belong to more than one ethnic group, and a person's ethnicity may change over time (Khawaja, Boddington, & Didham, 2007). Moreover, ethnicity is not the same as ancestry or race and therefore, people may identify with ethnicities even though they may or may not be descendants or related with people belonging to those ethnicities (Didham, 2009, November 11).

The relationship between ethnicity and student success, and retention has been explored in several studies. Shakya and Horsfall (2000) affirm that student ethnicity determines the kind of support a student receives from his or her peers. Moreover, the authors caution against the phenomenon of ethnocentricity, which involves comparing foreign cultures with one's own and judging the latter to be superior. Ethnocentric behaviours were signalled in an Australian study, among some students, lecturers, clinical educators or patients (Shakya & Horsfall, 2000).

In another study, Dennis, Phinney and Chuateco (2005) revealed that ethnic minority students take more time to complete their program and are more likely to leave without a degree. Juhong and Maloney (2006), in a study carried out at a New Zealand university, concluded that self-reported ethnic identification is a significant predictor in explaining variations in academic success. Moreover, poor academic success accounts for higher dropout rates among minority groups (Juhong & Maloney, 2006).

In a substantial review of the literature, Pascarella and Terenzini (1991) determined that most of the current research assumes no difference in the change and development of ethnic minority undergraduate students compared to their dominant culture counterparts. The research assumes that the identity development, related characteristics and backgrounds students bring with them to university, their experiences while there, and the process of such development are more or less uniformly the same for minority students as they are for the majority. There is, however, a significant body of research which indicates that ethnically diverse students differ from the culturally dominant students in a variety of personal and socioeconomic characteristics upon enrolment, and their experiences in the tertiary education (academically, socially and psychologically) differ in important ways from those of their peers (Pascarella & Terenzini, 1991).

Language

Language is, in more ways than one, the expression of our cultural identity. We use language for knowledge about our environment, history and science (United Nations Educational Scientific and Cultural Organization (UNESCO), n.d.). Language is an issue for ESOL students whose command of English is not what is defined by some

universities as adequate for academic success (McQueen & Zimmerman, 2004). Having a distinct language or even pronouncing words incorrectly is in most cases a barrier to communication with ESOL student. Sometimes, it is source of teasing or ridicule (Bolderston et al., 2007). Myles and Cheng (2003) reveal that most ESOL students have no difficulties in communicating with non-ESOL students, however, they find frustrating to converse with other ESOL students of different ethnicities, because they cannot understand their accents. In other ESOL nursing students study, Villarruel et al. (2001) found that culturally diverse students perceive their language difficulties and accents as negative reflections about their intelligence. In addition, other students felt that faculty and administrators are making incorrect assumptions about their English language difficulties based on their ethnic minority status (Villarruel et al., 2001). Therefore, Rogan et al. (2006) caution the academic community against the impetuous assumption that ESOL students academic problems are simply related to the language.

2. Academic Success in Tertiary Education

Academic success of ESOL students has become a growing priority for most universities (Mills, Heyworth, Rosenwax, Carr, & Rosenberg, 2008; Omeri et al., 2003; Wharrad, Chapple, & Price, 2003). The reason is that students' poor academic outcomes are frequently associated with the quality of the tertiary institution and therefore, influencing its reputation (Mills et al., 2008). Moreover, as Mills et al. (2008) suggest academic success is the strongest predictor of first year student retention.

The literature on academic success is extensive. Each study has its own definition or interpretation of what it means by academic success. Common explanations of a student academic success include: faculty ratings, faculty advisor reports, membership in honors programs, academic records, public recognition for academic achievement, class rank, and standardized test scores (Post, 1998). Other definitions refer to: acquiring intellectual skills, independent scholarship, timely graduation, social confidence (i.e., dealing with people), increased awareness of moral issues, and creative works (Willingham, 1985). These definitions are more or less similar, and the differences among the academic success characterization, typically, exist because each of the definitions was centered on specific research studies.

Mills et al. (2008) suggested a much simpler definition and considered academic success in terms of student's academic performance and retention. According to them, academic performance is affected by student knowledge acquisition and the ability to demonstrate and utilize learned information. Academic success is seen as a complex process which involves the interplay of many institutional factors such as support programs and type of degree, and individual student factors. Retention, on the other hand, is associated with the number of students who continued to be enrolled in a program after a certain period of time (Mills et al., 2008).

A number of studies have explored factors that relate to academic success in medical school, particularly for minority groups (Jeffreys, 2007b; Wise, Harris, & Pearson, 2008, August 14). Some early studies have looked at students' satisfaction with the overall learning environment with few attempts to disaggregate the components of students' satisfaction and investigate the impact of these components on academic success (Harris, 1995; Wise et al., 2008, August 14). Studies that are more recent have looked at the relationship between academic success and the sense of belonging among medical students (Wise et al., 2008, August 14). The influence of demographic factors, such as sex and age was also explored, however, some of them had inconclusive results (Kirby & Sharpe, 2001). Student characteristics such as socio-economic status, language spoken in the home and ethnicity have also been used to predict academic performance (Mills et al., 2008). Academic success was also linked with pre-entry qualifications (i.e. traditional and non-traditional qualifications), which were found to be a better predictor of students' success in several research and non-research papers (Porter, 2008; Wharrad et al., 2003).

It was also suggested that students who have contact with faculty members outside the classroom are also more likely to be academically successful and satisfied with their university experience. Moreover, students who become more comfortable interacting with academic staff and are more likely to be comfortable in the classroom (Tinto, 1975, 2005). Researchers have also found that the environment plays a powerful role in student behavior. Changing the environment leads to a positive change in student behaviour and therefore in student perceived academic success. For instance, creating a welcoming environment for students can also be significant to academic success.

Students who feel welcome and involved in the learning may be more academically successful (Post, 1998).

3. Campus Climate

The term of "campus climate" is applied to describe perceptions, judgements and evaluation, either positive or negative, that students have about their university's response to ethnicity and diversity on campus (Hurtado, Carter, & Kardia, 1998). Campus climate is usually the result of values, cultures and traditions adopted by the campus community including faculty staff and students (Garcia, 2005). Orozco (2003) defines campus climate as consisting of the academic, social, and interpersonal comfort level of racial and ethnic minority students on campus.

Initial experiences on campus are important, especially for first year students, as showed in an Australian study (Mills et al., 2008). These early experiences influence students' persistence in higher education (Pitkethly & Prosser, 2001). As minority student retention is based on myriad factors – campus climate without doubt has an impact on the comfort level, and in turn, the retention rate of minority students (Garcia, 2005). The appearance, facilities and ambiance of an institution are important in helping students to settle in. In a study of student retention it has been found that the standard facilities, particularly library computing, study and social facilities, have contributed to decisions to withdraw (McGivney, 1996).

Faculties and universities engage in climate research to determine what can be done to improve the academic experience for their students. Of the numerous studies investigating the academic environment on student success, a common finding is that institutional climate and culture contribute to student satisfaction and success. An unfriendly climate negatively affects student retention (Hurtado & Carter, 1994), poor academic achievement (Fuertes & Sedlacek, 1995; Hurtado et al., 1998), and low graduation rates (Taffala, Rivera, & Tuchel, Hurtado et al., 1998; Santos, Morales, Ortiz, & Rosales, 2007; 1993). Positive perceptions of the campus climate lead to meaningful educational experiences (Ah Sam, 2005), academic success and graduation rates (A. R. Brown, 2004), and higher levels of student involvement (Astin, 1993).

Moreover, research studies consistently find that a warmer campus climate is related to student's willingness to socialize, discuss ethnic and cultural issues and moreover, promote tolerance (Roy-Woods, 2007).

The majority of overseas research on campus climate focuses on the experiences of cultural and ethnic minority students. Institutional emphasis on cultural and ethnic diversity is not surprising, given the fact that university students continue to grow in number and diversity with respect to culture and ethnicity. A heterogeneous student population, coupled with emerging evidence supporting the educational benefits of diversity, has resulted in the promotion of diversity efforts at universities across nations (Post, 1998). In contrast, much of the campus climate literature centers on particular ethnicities, such as African American and Latino and to a lesser extent on other minority groups. For instance, less is known about the effects of the campus climate on Asian and Pacifica students (Ah Sam, 2005).

Understanding and assessing campus racial climate is an important part of examining access, persistence, and graduation for underrepresented minority students, through their education (Roy-Woods, 2007). Allen and Solorzano (2001) affirm that a positive campus climate includes at least four elements: inclusion of ethnic diverse students, faculty and administrators, a curriculum that reflects students' ethnic diversity, programs to support the recruitment, retention and graduation of ethnic diverse students, and university goals that reinforce the academic community commitment to diversity.

The general findings of campus climate studies indicate that ethnic and cultural sub-groups often have differing views on what campus diversity means to them and what kind of diversity would aid their comfort and satisfaction with campus life (Roy-Woods, 2007). For instance, researchers in the Virginia Tech study concluded that there is no single, uniformly perceived climate for diversity, and that, those in the majority, whether based on ethnicity, gender, or disability status, tend to perceive a more positive climate and to be less sensitive to negative experiences of others (A. R. Brown, 2004).

The literature on campus climate emphasizes a common conclusion: most students, regardless of their culture or ethnicity, desire to make the campus climate more open to diversity. However, students differ on how to achieve this desiderate. In a comprehensive ethnographic study of students on issues of diversity, researchers at the

University of California at Berkeley found that African Americans want more classes, programs, and institutional commitments and responses related to diversity while the dominant ethnic students want more personal contacts (Institute for the Study of Social Change, 1991). While dominant ethnicity students perceive diversity in terms of proportions, Asians perceive diversity in terms of cross-race social interactions. Similar to African Americans, Asian American students prefer improving the campus climate for diversity through institutional or structured activities (Ah Sam, 2005).

4. Faculty and Peer Support

Porter (2008) suggests that faculty support can make a significant difference in the retention of ESOL health students. The author affirms that when students perceive that they are in a caring environment, are more likely to progress and seek help from the faculty (Porter, 2008). The most important effects of tertiary institutions upon ESOL students occur through students' interpersonal experiences with faculty members and other students. Peer support may be extremely important for the students' academic adjustment (Dennis et al., 2005; Tinto, 1993), whereas student progress may be influenced by the extent to which family and friends support their learning, and by the initial support and encouragement, they receive in an institution. Consequently, the attitudes and behaviour of teaching and administrative staff can have a strongly positive or negative impact on morale of new students (McGivney, 1996).

Regarding the faculty support (i.e. academic and allied staff), all the evidence indicates that good staff-student interaction is one of the keys to good retention rates. A study at a new university has found that about a third of former students claimed to have had good relations with less than 50% of the staff with whom they came into contact. Many studies have found that is the informal contact with a staff member, not necessarily a counsellor or a tutor, that gives students the encouragement they need. However, as other studies show, most faculty staff are more prepared to discuss academic matters than personal or social issues (McGivney, 1996).

Peer support, which indicates social integration, may be an important predictor of academic success for younger students and may not be of central importance for

students who are older (Dennis et al., 2005). However Smith, Altbach and Lomotey (2002) found that older ethnic majority students are generally supportive of assisting ethnic minority groups in the campus community in need of special help. However, when they perceive this assistance as negatively affecting the opportunities of the majority population, support vanishes. The authors conclude that while it is easy to recognize the right thing to do, it is much more difficult to change behaviour and actually do the right thing (W. A. Smith et al., 2002).

Positive peer and faculty interaction can influence students' sense of belonging by making academic environments appear more socially or academically supportive. For instance, Johnson et al. (2007) affirm that socializing with dominant ethnic students contributed to ethnic minority students sense of belonging. Furthermore, in a study of non-traditional Latino students, Nora and Cabrera (1996) found that the encouragement of fellow students, faculty, and advisors supported students' social integration into campus life. Similarly, a positive relationship was identified between supportive faculty interactions in both academic and social environments and students' subsequent sense of belonging (Hurtado & Carter, 1994; Johnson et al., 2007).

Rolleston and Anderson (2004), in a study which took place in a New Zealand University, revealed that faculty and peer support factors were highly rated among Maori and Pacific students who chose to leave the program. The authors suggest that tertiary institutions have a responsibility to advise and support students who are at risk of leaving the course by cause of external factors, which cannot controlled by the faculty. They argue that a student who has less personal problems has greater chances to persist until graduation. Significantly, there was no difference between the number of students who considered social factors more important than academic factors in student retention (Rolleston & Anderson, 2004).

According to social identity theory, individuals show preference for their own social group and they are likely to favour its members (L. I. Brown, 2004). Likewise, optimal identity theory asserts that, for minority groups, there is also a need for within-group social identification and at the same time, recognition of group difference. The dominant ethnicity students are often seeing this social identification as separation and often misunderstood it. Furthermore, this misunderstanding can result in negative

reactions from the dominant group for whom social identification is less important (Roy-Woods, 2007).

Consequently, on campuses where the difference between culturally diverse students and culturally dominant students is not acknowledged, minority students feel the need to band together for psychological and social support of one another. This is a form of defense against the tacit and not so tacit patronizing attitude and hostility some feel from the faculty, students, and faculty administration (Pascarella & Terenzini, 1991). Therefore, ethnic minority students have much more inter-group contact than do their peer students, but their patterns of interaction need to be understood in light of their psychological development (Humphreys, 1999). Tatum (1997) argues that ethnic grouping emerge as a response to an environmental stressor, namely cultural and ethnic discrimination. Joining with one's peers for support in the face of stress is a positive coping strategy. Research, including Tatum's (1997) and that of Allan and Solorzano (2001), Hurtado and Carter (1994), and Pascarella and Terenzini (1991) suggests that ethnic aggregation can be an important component contributing to the psychological health and educational success of many students (Roy-Woods, 2007). Research also suggests that this clustering does not deprive the student from achieving the educational benefits of inter-group contact within faculty classrooms and on campuses (Humphreys, 1999).

Researchers have theoretically and empirically linked persistence and completion in higher education to students' abilities to connect with a peer group and develop positive relationships with faculty (Astin, 1993; Pascarella & Terenzini, 2005). Such relationships constitute indicators of the extent to which students have integrated themselves into the academic and social aspects of an academic community, which Tinto (1993) asserted is critical to students' first year persistence decisions. However, several scholars (Hurtado & Carter, 1994, 1997; Hurtado et al., 1998; Tierney, 1992; Wise et al., 2008, August 14) have taken issue with the centrality of integration to academic success, especially as it pertains to African American students, arguing that Tinto's integration theory emphasizes student, rather than institutional, responsibility for change and adaptation (Johnson et al., 2007).

Hurtado and Carter (1997) contended that integration as conceptualized by Tinto (1993) does not value culturally supportive alternatives to academic participation but

instead emphasizes “mainstream” activities that may not foster ethnic diverse student success. Consequently, they offered the concept of *sense of belonging*, which translates as individual’s perception of whether he/she feels included in the academic community. Rather than expecting students to bear sole responsibility for success through their integration into existing institutional structures, sense of belonging illustrates the interplay between the individual and the institution. Students’ success, therefore, depends upon the extent to which they feel welcomed by institutional environments and climates (Hurtado & Carter, 1997). Consequently, a key influence upon sense of belonging, at least for Latino students is their perception of supportive campus climates (Johnson et al., 2007).

5. Summary

This integrative review of the literature has revealed some of the issues and concerns facing ESOL students in health education. Most of the studies presented focus on Latino and African American students, and especially on nursing students. This clearly shows that there is a lack of research concerning students of other ethnicities and furthermore, other health professions. This chapter has also included a review of perceptions and characteristics of ethnic, cultural and linguistic diversity, perceptions of academic success, perceptions of campus climate, and perceptions of faculty and peer support.

The next chapter presents some of the theories and concepts already discussed in the literature review under the heading “conceptual framework”. Research question and objectives will conclude the next chapter – Research Objectives.

Chapter 3 – Research Objectives

This research seeks to expand upon previous research of English for speakers of other languages (ESOL) undergraduate students' perceptions of campus climate, faculty and peer social support and seeks to determine whether or not there is a relationship between these factors and ESOL students' academic success (Cabrera & Padilla, 2004; Garcia, 2005; Oseguera & Rhee, 2009; Tinto, 1975, 1993, 2005). While, worldwide, there is dearth of studies concerning ESOL students enrolled in undergraduate studies (Amaro et al., 2006; Colalillo, 2007; Gardner, 2005a, 2005b, 2005c; Omeri et al., 2003; Sanner et al., 2002; Shakya & Horsfall, 2000), few papers describe the New Zealand experience on improving ESOL students academic outcomes, such as academic performance and retention, in tertiary education (Juhong & Maloney, 2006; Prebble et al., 2005; Rolleston & Anderson, 2004; Zepke & Leach, 2007).

The purpose of this study was to survey ESOL health undergraduate students perceptions of campus climate, faculty and peer support, and academic success. Furthermore, the research sought to determine if there is a relationship between these variables and demographic factors, such as, age, ethnicity, first language and secondary education, and an institutional factor – the degree or program these students were admitted. Moreover, the author has designed the study to investigate, particularly, ESOL health undergraduate students enrolled with a New Zealand tertiary institution.

1. Conceptual Framework

The primary goal for the current study was to examine in which ways heterogeneous psychosocial variables, identified in other studies, are important predictors of student academic success (Dennis et al., 2005). The conceptual framework for this study was a synthesis of Tinto's (1993) theory of student retention and Shelton

(2003) model of student retention. Findings from other studies had, also, a significant contribution to the formulation of the study's conceptual framework, especially in regard to certain demographic variables included in this study.

Tinto's (1993) theory of student retention suggests that the degree of student integration within an institution is interrelated with the student decision to persist or not into the program. Also, integration occurs when the student has adequate interaction with similar individuals within the institution. Moreover, he/she feel as part of the academic community when his/her goals, abilities and values are coinciding with those of other students. According to Tinto (1975, 1993, 2005) nonacademic variables and relationships with faculty and peer have more influence on student retention than academic variables. A diagram of Tinto's model is presented in Figure 1.

However, the integration (academic and social) determine whether the student perceive the benefits to be worth the costs and therefore, having an important role in students retention or attrition. Shelton (2003) affirms that Tinto's theory is sociological, perceiving the student as part of the academic community. What occurs within the environment of the academic community influences students' persistence and academic success (Tinto, 1993). Moreover, academic success while at university, in Tinto's (1975) opinion, is the single most important factor in predicting students retention.

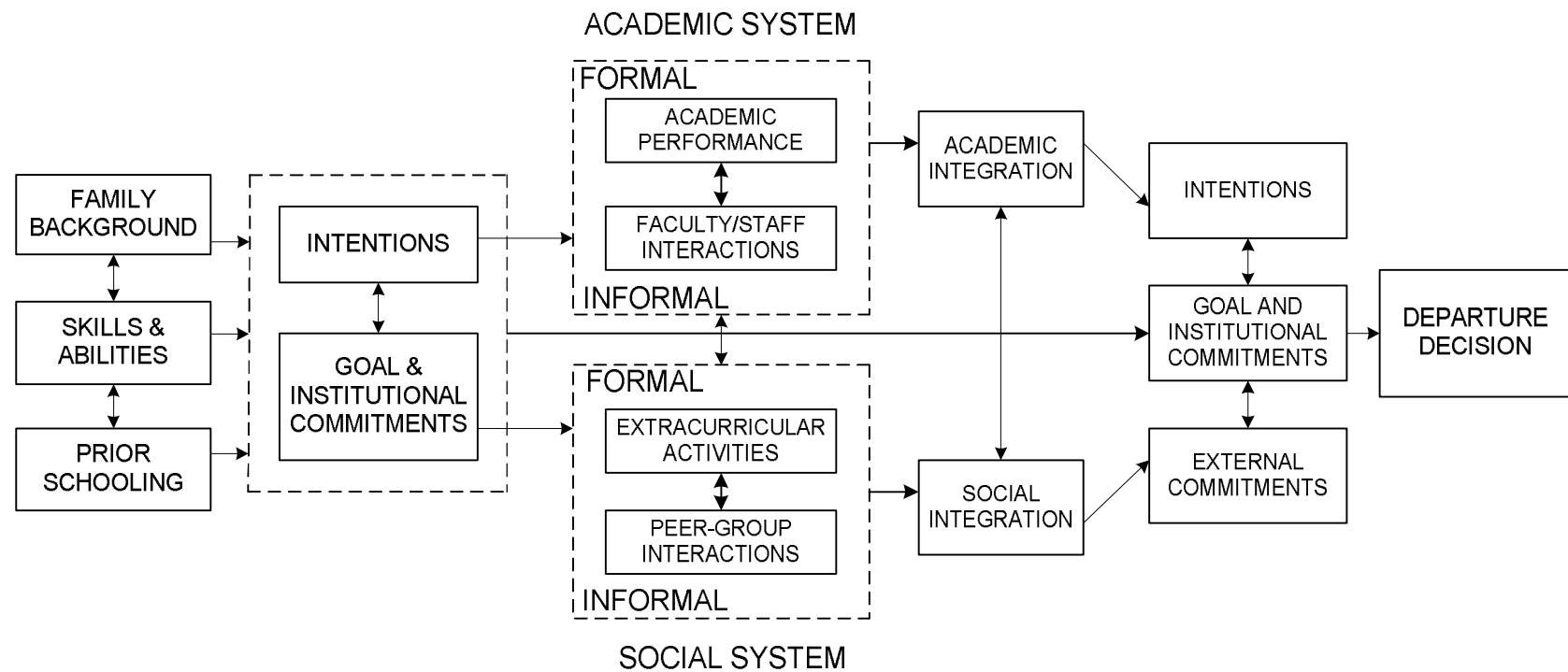
This opinion is supported by Jeffreys (2007a) who affirms that environmental variables more than academic ones influence the student academic success. Furthermore, Sedlacek and colleagues (Fuertes & Sedlacek, 1995; 2000; Wawrzynski & Sedlacek, 2003) have also found that non-cognitive variables, such as adjustment and student perceptions can be sometimes more relevant than cognitive variables in predicting academic success for ethnically diverse students.

Shelton's (2003) model of student retention combines elements of internal psychological processes (goals, abilities and academic self-efficacy) with external supports (psychological and functional) to predict academic success and student persistence. Among the sources of external support in Shelton's model are the faculty and peer support, as well as family and employers support. Psychological support implies promoting a sense of competence and worth, while the functional support refers to behaviors that help students to achieve their goals. Shelton (2003) asserts that the

faculty cannot have a considerable influence on the support students receive outside the campus community. Background variables, also presented in the model, have been identified in other studies as risk factors of student retention (C. B. Allen, Higgs, & Holloway, 1988; Campbell & Davis, 1990; Jeffreys, 2007a; Tinto, 1993). A diagram of Shelton's model is presented in Figure 2.

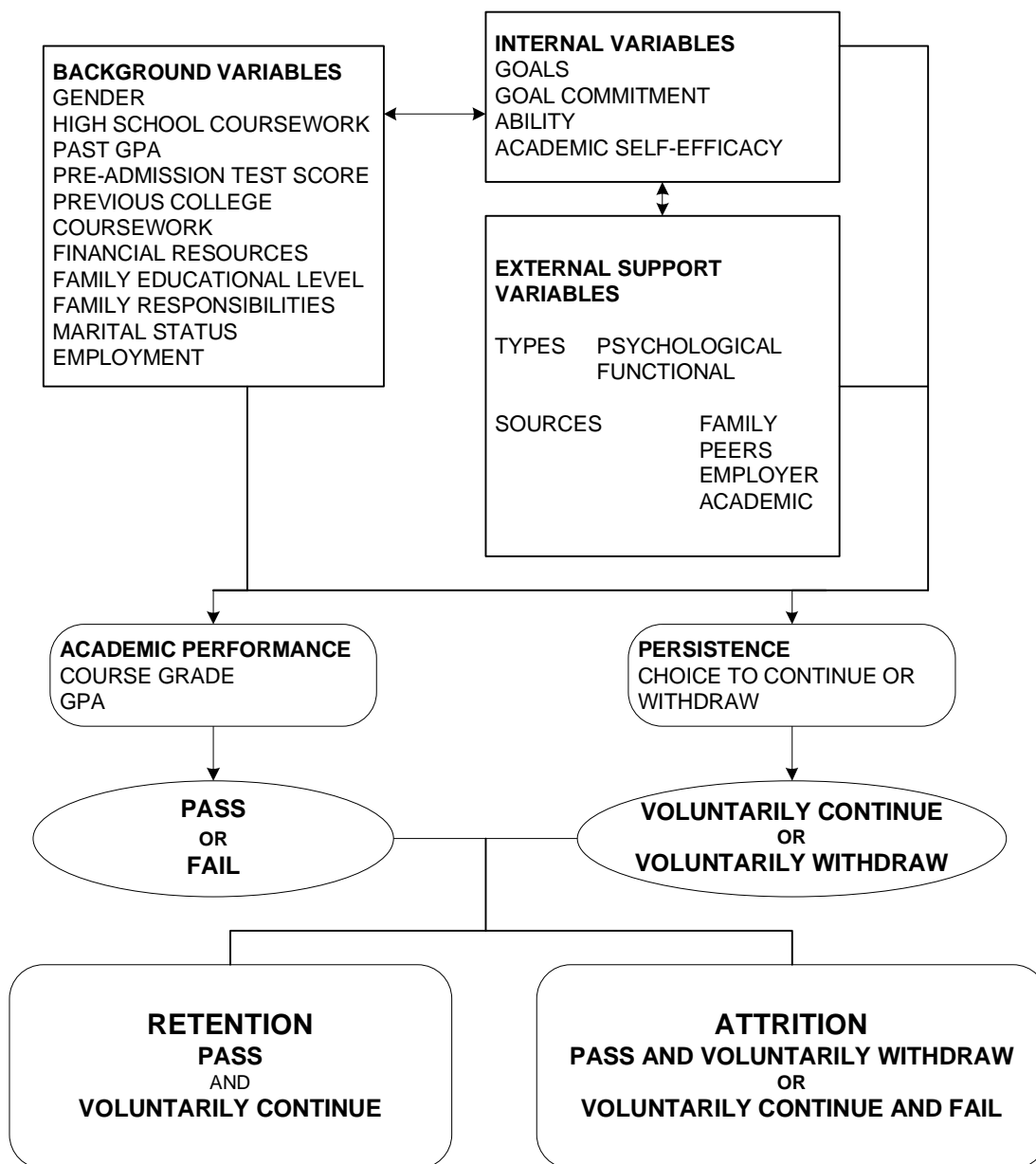
Findings from previous research suggest that student age is related to academic success in tertiary education, as suggested in most studies (Mills et al., 2008), and peer support. However, Dennis et al. (2005) affirm that peer support is less important for older students than for younger ones. Likewise, some studies have found no relationship between student age and academic support (Kirby & Sharpe, 2001), while others have found that older students are more likely to discontinue (Murtaugh, Nurns, & Schuster, 1999) and older students more likely to be retained (Johnes & McNabb, 2004).

Figure 1: Tinto's (1975) theoretical model of institutional departure with its central notion of academic and social integration



Adapted from Tinto, V. (1975) "Dropout from Higher Education: A Theoretical Synthesis of Recent Research" *Review of Educational Research* vol. 45, 89-125.

Figure 2: Shelton’s model of student retention showing the role of academic success/performance in student retention and attrition



Shelton, E. N. (2003). Faculty Support and Student Retention. *Journal of Nursing Education*, 42(2), 68-76.

Other studies suggested a connection between secondary education (Mills et al., 2008; Wharrad et al., 2003), ethnicity (Gardner, 2005b; Juhong & Maloney, 2006; Mills et al., 2008; Wise et al., 2008, August 14), first language (Gardner, 2005c) and program of study (Mills et al., 2008; Zepke & Leach, 2007) and academic success. Consequently, these variables were also included in the study.

2. Research Questions and Hypotheses

The research objectives considered in this study were to:

1. Examine ESOL students' perceptions of the campus climate.
2. Explore ESOL students' perceptions of the peer and faculty social support.
3. Investigate if there is a relationship between ESOL students' academic performance and their perceptions of the campus climate.
4. Discover if there is a relationship between ESOL students' academic performance and their perceptions of the peer and faculty social support

Based on the stated purpose, the following hypothesis was examined:

There is no relationship between peer and faculty social support, campus climate and ESOL students' academic success.

Specifically, the study attempted to answer to the following research question:

Is there a relationship between campus climate, faculty and peer social support and ESOL students' academic success?

Chapter 4 – Research Design and Methodology

This section includes information relative to the study design, setting, participants, survey instrument, study size and potential sources of bias. The study variables and procedures for data analysis are also described in this section.

1. Study Design

The observational study I carried out had a cross-sectional design. The study was non-experimental; all variables were studied in their natural setting (Wiersma & Jurs, 2009) and no interventions were carried out (Mann, 2003), as the aim of the study was to determine relationships and effects occurring between variables (Wiersma & Jurs, 2009). The study had also a cross-sectional design, which is the simplest variety of descriptive or observational studies that can be conducted on representative samples of a population (Last, n.d.). One of cross-sectional studies advantages is that all measurements are made at one point in time, which means that they are relatively quick (Mann, 2003). Moreover, they are less costly than other research methods and rather useful at identifying associations between variables, before larger and more expensive studies are performed (Mann, 2003). The main disadvantage of cross-sectional studies is that they cannot identify cause and effect relationships (Last, n.d.) and they do not offer an explanation for their findings (Mann, 2003). However, they are less costly than other research methods and rather useful at identifying associations between variables, before larger and more expensive studies are performed (Mann, 2003). My study aimed at identifying relationships between three variables: peer and faculty support, campus climate, and academic success and therefore, I considered that the cross-sectional design employed in this study conformed to the research purpose.

2. Setting

The study was carried out at the Faculty of Health and Environmental Sciences, AUT University in Auckland, New Zealand. The Faculty of Health is comprised of five schools: Applied Sciences, Sport and Recreation, Healthcare Practice, Rehabilitation and Occupation Studies and Public Health and Psychosocial Studies. With the exception of the school of Applied Sciences, the other schools are located on Akoranga campus, which is also “home” to the Faculty of Education (Auckland University of Technology, 2009, May 18).

My study has attempted to investigate the relationship between campus climate and ESOL health students’ self-perceived academic success. Consequently, I focused on recruiting ESOL health undergraduate students enrolled with the schools of Healthcare Practice, Rehabilitation and Occupation Studies, and Public Health and Psychosocial Studies. These undergraduate students, at the time my study was carried out, were studying, predominantly, on Akoranga campus.

Data collection began on 11th of August 2008 and it was projected to end on the 15th of September 2008. Due to the small number of respondents, the data collection interval was extended to thirteen weeks in total and it ended on the 20th of November 2008.

3. Participants

The study population for this study was difficult to estimate based on the data retrieved from the health undergraduate students’ enrolment forms. The total number of undergraduate students enrolled with the Faculty of Health and Environmental Sciences (as of September 2008) was 2361. New Zealand European (Pakeha) and Maori students, as well as, the students who did not declare or state their ethnicity were excluded, reducing the study population to 1182. Ethnicity was not an inclusion or exclusion criteria in this study, however, the first language was. The other two selection criteria

for inclusion in the study were the type of degree (i.e. undergraduate) and faculty enrolled with (i.e. Faculty of Health and Environmental Sciences). The exclusion criteria were ESOL students enrolled in other than undergraduate types of degree and ESOL students enrolled with other faculties at AUT University than the Faculty of Health and Environmental Sciences.

The undergraduate students' breakdown by first language revealed that, according to the faculty records, only 495 students have declared that English is not their first (native) language. The real count of ESOL undergraduate students was probably somewhere between these two values. English language is one of the official languages in many countries and territories, therefore many participants, while ethnically diverse did not considered themselves ESOL students. However, there was no data available regarding these cultural and/or ethnic groups and, therefore, the size of the study population could not be accurately estimated. The ESOL undergraduate students' breakdown by ethnicity is presented in Table 2.

The sampling technique chosen for this exploratory research was convenience sampling, which is according to McCormack and Hill (1997) a quick and inexpensive non-probability sampling method. Other sampling technique used to recruit participants was homogenous sampling, which is especially adopted when the aim of the study is to focus on a particular subgroup (Wiersma & Jurs, 2009). In this study, the focus was on students studying only on one of the AUT University's campuses. Furthermore, as the number of participants did not reach the expected size, close to the end of the four weeks initially allowed for data collection, I attempted to increase the size of the sampling group by using a snowball technique. Three ESOL undergraduate students had contacted the researcher, during the recruitment stage, expressing their willingness to participate in research. I took this opportunity to ask the students to encourage other eligible students to participate in research.

Table 2: A breakdown by ethnicity of health ESOL undergraduate students, as of September 2008

Ethnicity	Number of Students	Ethnicity	Number of Students	Ethnicity	Number of Students
Africaans	5	Hindi	57	Rwandan	1
Akan	2	Hindustani	1	Samoaan	12
Albanian	1	Hungarian	2	Serbian	1
Amaharic	2	Japanese	9	Shona	6
Arabic	17	Karen	1	Sinhala	2
Assyrian	1	Korean	72	Slovak	1
Bengali	2	Kurdish	2	Somali	8
Bulgarian	2	Lao	1	Spanish	6
Burmese	1	Latvian	1	Swahili	1
Cambodian	1	Macedonian	1	Swedish	1
Cantonese	16	Malay	3	Tagalog	29
Cebuano	2	Malayalam	10	Tamil	5
Chinese	107	Marathi	4	Telugu	5
Czech	1	No Data	6	Thai	3
Dari	1	Norwegian	1	Tongan	13
Dutch	2	Other	1043	Tuvaluan	2
Farsi	6	Pashto	1	Unspecified	817
Fijian	2	Persian	2	Urdu	7
Filipino	16	Pidgin	2	Vietnamese	2
French	4	Polish	2	Zulu	1
German	8	Romanian	3		
Gujarati	4	Rotuman	1		
Hebrew	1	Russian	9		

A web-based survey created using web programming languages, such as, HTML, JavaScript and Hypertext Pre-processor (PHP), was used to collect data and MySQL, a relationship database management, to store and retrieve data. Prior to data collection, a pilot sample was used to test the web-based survey. The pilot sample consisted of two undergraduate students and two health postgraduate students. None of the students chosen for the pilot sample was eligible to be included in the research sample. The pilot sample was used to ensure that the web-based survey was accessible through the provided URL link, to check for clarity of survey items and to verify that the researcher receives responses, once the web-based survey is submitted. The pilot was considered successful, the four students included in the pilot sample reporting that the survey items were clear and easily understood, and the survey itself was accessible through the URL link provided. Their responses were received and downloaded by the researcher, and the data were stored in a secured Excel database. On account of the pilot sample success, no changes were made to the original survey tool.

Once the pilot web-based survey was completed, the invitation to participate in research (Appendix A) was posted online on the “Student Noticeboard” and hardcopies of the same invitation were posted on the faculty “Student Noticeboards” scattered across the campus. The invitation to participate described the purpose of the study, approximated the time required to complete the survey, ensured confidentiality, and had included a direct URL link that connected the respondent to the participant information sheet page (Appendix B) of the web-based survey.

The participant information sheet informed the respondent of his/her rights as a participant including his/her right to ask questions, discontinue the survey, or request results of the study. Students were informed that the completion of the survey’s questionnaire would be taken as indicating their consent to participate in the research. Participants who wished to “continue” were asked to respond to each question of the survey and provide, as well, the demographic information requested at the end of the survey. No student ID, name or contact details were asked. In order to “submit” the survey each question had to be answered, ensuring that no “missing value” occurs. Once the survey completed, the participant was taken to a final page thanking him/her for participation. The “Thank you” page is presented in Appendix C. The survey was estimated to take approximately 20 minutes to complete.

4. Study Variables

The independent variables included in this study were ESOL health undergraduate students' perceptions of faculty and peer support, and campus climate. The dependent variable in this research was ESOL undergraduate students' self-perception of academic success. A number of five control variables were also included, such as participants' age group, ethnicity and/or culture, declared first language, undergraduate program enrolled with, and if they graduated a New Zealand or overseas high school.

5. Survey Instrument

The data source chosen for the study variables was an online-administered questionnaire. Many cross-sectional studies are carried out using questionnaires (Mann, 2003), which are according to many researchers one of the most important data collection methods in institutional research. Among survey data collection methods, online questionnaires are still young and evolving (Wright, 2005, April). However, they have proven to be cost effective (Madge, 2006; Roy-Woods, 2007) and deliver quick results (Madge, 2006; Mann, 2003). Also, they provide anonymity and enable greater potential access to small population groups such as people with particular ethnicities (Madge, 2006). Another advantage of online questionnaire is the possibility of importing data directly into statistical packages and databases, increasing the speed and accuracy of analysis (Madge, 2006). These advantages and the fact that online questionnaires can be completed at a time and place convenient to the respondent have prompted the researcher to select the online survey as an appropriate data collection method in this study.

The online questionnaire administered to the study's participants comprised three scales, one scale for each examined independent or dependent variable and other five separate questions, which explored the control variables. The three scales were labelled: *Peer and Faculty Support Scale*, *Campus Climate Scale* and *Academic Success Scale*. The whole instrument consisted of 31 items, of which 25 items were accompanied by 5-

point Likert-type ordered response levels. Each point had a designation, i.e. “Strongly Agree”, “Agree”, “Neutral”, “Disagree” and “Strongly Disagree” (Wiersma & Jurs, 2009, p. 363). The last item in Academic Success Scale was an open-ended question to give respondents an opportunity to answer in their own words. To explore the control variables three open-ended and two closed-ended questions were formulated. The closed-ended questions had a finite set of answers from which the respondent had to choose only one option. The three scales devised to measure the study variables are further on described.

Faculty and Peer Support Scale

ESOL undergraduate students’ perceptions of faculty and peer support were measured using an 8-item scale, which was developed by the researcher, using as models two instruments developed for Latino students. The first instrument I used as model was the Perceived Social Support scale created by Schneider and Ward (2003). The scale contains 46 questions and was conceived to assess Latino students’ perceptions of faculty, family, institutional, general peer and Latino peer support (Garcia, 2005). Because my study focussed on ESOL students rather than Latino students, I considered that the majority of the Perceived Social Support scale’s questions were irrelevant to my research and, consequently, they were not included in the final survey instrument. Another reason, for not utilizing the instrument developed by Schneider and Ward and developing a rather new one, was that my study was attempting to measure only the faculty and general peer support.

Consequently, the question from Schneider and Ward Social Support scale, *I do not feel comfortable with most of the students on this campus*, was reformulated as *I feel comfortable with and accepted by most of the students*. Schneider and Ward (2003) question: *Few of the students I know on campus would be willing to listen to me and help me if I had a personal problem*, was altered as: *Most of the students I know on campus would be willing to listen to me and help me if I had a personal problem*. Two other questions were developed using the Social Support scale as a model: *I feel comfortable with and accepted by most of the academic staff on the campus* and *I feel comfortable with and accepted by most of the allied staff on the campus*.

The second instrument which has served as a model for my questionnaire was the University Environment Scale (UES) developed by Gloria and Robinson-Kurpius (1996). The UES is a 14-item scale used to measure racial and ethnic minority students' perceptions of the university environment (Garcia, 2005). The question *University staff has been warm and friendly* was included in my questionnaire as *Academic staff on the campus are always warm and friendly* and *Allied staff on the campus are always warm and friendly*. I thought that making this distinction between academic and allied staff would give us a better understanding of the type of support ESOL perceive or not, as inadequate.

The eight questions, which were finally included in my Peer and Faculty support scale, are presented in Table 3. The Peer and Faculty Support scale compiled by the researcher was accompanied by a 5-point Likert-type scale ranging from “Strongly disagree” to “Strongly Agree”, while the instruments I used as models have both used a 7-point Likert-type scale. The reason for reducing the number of response levels was to ensure a greater uniformity with the rest of the questions included in the final survey instrument.

Table 3: The Peer and Faculty Support scale adapted from the Perceived Social Support scale developed by Schneider and Ward (2003) and the University Environment Scale (UES) developed by Gloria and Robinson-Kurpius (1996)

Peer and Faculty Support scale items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel comfortable with and accepted by most of the students					
I have many friends among the campus' students					
Most of the students I know on campus would be willing to listen to me and help me if I had a personal problem.					
I feel comfortable with and accepted by most of the academic staff on the campus					
I feel comfortable with and accepted by most of the allied staff on the campus					
Academic staff on the campus are always warm and friendly					
Allied staff on the campus are always warm and friendly					
Faculty students and staff give me the moral support I need to continue my education.					

The Campus Climate Scale

The Campus Climate scale I used in my study was also developed using as models the University Environment scale (UES) developed by Gloria and Robinson-Kurpius (1996) and Perceived Social Support scale created by Schneider and Ward (2003). The question *Many of the faculty members that I have contact with are genuinely interested in my point of view*, from the Perceived Social Support scale, was reformulated as *Faculty students and staff are genuinely interested in my point of view. My interpersonal relationship with others on campus have had a positive influence on my personal growth, attitudes and values*, from the same instrument, has become *The Akoranga campus climate has a positive influence on my personal growth, attitudes and values*. The question *The university seems like a cold, uncaring place to me*, from the University Environment scale, was adapted to read *Akoranga campus seems like a warm and caring place to me*. Likewise, the question *I feel as if no one cares about me personally on this campus* was rewritten as *There are many people on Akoranga campus who care about me personally*. The final scale I developed was an 11-item questionnaire, which used a 5-point Likert-type scale ranging from “Strongly disagree” to “Strongly Agree”. One item on the scale was written so that it was reversed scored. Gloria and Robinson-Kurpius affirm that this minimizes the likelihood of obtaining a response set (1996). The Campus Climate scale questions are presented in Table 4.

Table 4: The Campus Climate scale adapted from the Perceived Social Support scale developed by Schneider and Ward (2003) and the University Environment Scale (UES) developed by Gloria and Robinson-Kurpius (1996)

Campus Climate scale items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel that I belong to the campus community.					
There are many people on the campus who care about me personally					
At the campus ESOL students are valued and respected					
My teachers have a positive attitude towards undergraduate ESOL students studying at the campus					
The campus seems like a warm and caring place to me					
Many of the faculty members are sympathetic to the needs of ESOL students					
My own culture is recognized and respected on this campus					
Faculty students and staff are genuinely interested in my point of view					
The campus climate has a positive influence on my personal growth, attitudes and values					
ESOL students prefer to be with other students from a similar ethnic/cultural background					
The campus provides an environment for free and open expression of ideas, opinions and beliefs regardless of ethnicity and /or culture					

The Academic Success Scale

ESOL students' self-perception of academic success was measured using a 7-item instrument developed by the research team after an extensive literature review on academic success. I also had consultations with representatives from The Learning Development Centre at AUT University to ensure that the questionnaire items were at appropriate level/linguistic register for ESOL undergraduate students. The instrument developed used a 5-point Likert-type scale ranging from "Strongly disagree" to "Strongly Agree". The last item of the scale was an open-ended question. Table 5 presents the questions that were included in this scale.

Background Information

This section of the survey instrument was consisting of five control variables: three demographic and two educational. The demographic variables were participant age group, culture and/or ethnicity, and first language. The questions asking the participant ethnicity and first language were formulated as open-ended questions. The question inquiring the participant age had five categories of answers, which are described in Appendix D. The educational variables considered were the place where the participant had attended the high school, with two categorical answers: New Zealand and overseas, and the health program/degree the participant was enrolled with at the time the study was carried out.

The three scales, peer and faculty support, campus climate and academic success, and background information were all merged into a single questionnaire, which is presented in Appendix D.

Table 5: The Academic Success scale developed by the researcher and the 5-point Likert-type scale used to measured ESOL students' perceptions of Academic Success

Academic Success Scale items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with my academic performance.					
I feel confident that I can deal in a satisfactory manner with future academic challenges.					
I think my teachers are satisfied with my results.					
Overall, I consider my educational experience a rewarding one.					
I think I will complete my degree within the expected time frame.					
I will not leave AUT until I complete my degree.					
What would be the primary reason you might leave school before obtaining your degree?					
Please write your answer bellow.					

6. Potential Sources of Bias

The first potential source of bias considered in this study was the chance that the study participants had very different attitudes and demographic characteristics than those from the target population who chose not to respond to my survey. This non-response bias introduced by the study participants is common when using online questionnaires, as some social groups may be underrepresented among internet users. However, this is particularly the case for some social groups, older people and those with lower educational levels (Umbach, 2004). I considered that the undergraduate students had all access to internet, either at home or on campus.

Another commonly debated aspect of online questionnaires is sample bias. I took into consideration this potential source of bias, as the researcher had no control over the sample population and had no way of discerning if there were several respondents at one computer address or if one participant was completing the survey from several computers (Madge, 2006). As Hewson, Yule, Laurent and Vogel state: “when materials are administered via a computer terminal rather than in person, the researcher is less able to judge the extent to which the responses are sincere and genuine” (2003, p. 44).

7. Study Size

The sample size was calculated using the statistical program G*Power version 3.1.0., which calculates the minimum required sample size for a study, given the alpha level, the number of predictors, the anticipated effect size, and the desired statistical power level (Faul, 2008). The alpha level or type I error rate was set up at 0.05. By convention, this value should be less than or equal to 0.05 to claim statistical significance (J. Cohen, Cohen, West, & Aiken, 2003). The total number of predictors in the model was equal with two and the anticipated effect size medium ($f^2=0.15$). The desired statistical power level by convention was set up at 0.80. Based on these parameters the minimum sample size calculated was 103 participants.

8. Data Preparation

Two preliminary actions were taken prior to data analysis. The first action was to recode the Likert-type response levels. Due to the small number of participants enrolled in the study the five response levels were reduced to only two response levels, “Agree” and “Disagree”. The cut-point was set at 60 percent of the Likert item scale. Dichotomization was considered appropriate on account of the small sample size as recommended in Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement (Vandenbroucke et al., 2007). The response levels were also numerical coded as shown in the Table 6, before data were entered into the Statistical Package for the Social Sciences (SPSS) version 16.0. I used numerical values to recode the two response levels left, as there are several important analyses in SPSS that can only work with numeric values (DeCoster & Claypool, 2004). Participants’ age was also dichotomized into “under 30 years old” and “over 30 years old”. Other demographic variables, such as ethnicity, first language and program of study could not be likewise dichotomized, while secondary education was already a binary variable and no transformation was needed.

Table 6: Summary of the Likert-type response levels recoding and the numerical values assigned to each category

Levels of Agreement	Code	Numeric value
Strongly Agree	Agree	2
Agree	Agree	2
Neutral	Disagree	1
Disagree	Disagree	1
Strongly Disagree	Disagree	1

The second preliminary action taken was to assess the internal consistency of the survey instrument. As Field (2005) suggests a scale should reflect the construct it is measuring. The coefficient alpha is the most common measure of scale reliability (Field, 2005) and it was calculated for each of the three numerical scales: peer and faculty support, campus climate and academic success. Field (2005) suggests that a

questionnaire is reliable when no item of the scale causes a substantial decrease in alpha, and if it does we should consider dropping that item from the questionnaire. Therefore, I run first a basic reliability analysis, which showed an alpha coefficient of 0.79 for the peer and faculty support scale, 0.83 for campus climate scale and 0.90 for the academic success scale.

As cautioned by Field (2005), I run a separate reliability analysis for each item included in the scales to seek items which do not correlate with the overall score. The output indicated that the question - *Faculty students and staff give me the moral support I need to continue my education* - does not correlate well with other items of the faculty and peer support total. According to Field (2005) a value under 0.3, means that a particular item does not correlated very well with the scale overall. Therefore, question 8 was dropped and a new Cronbach's alpha was calculated. The new alpha value for the Peer and Faculty Support Scale was 0.81. Three other questions, *I feel that I belong to the campus community*, *ESOL students prefer to be with other students from a similar ethnic/cultural background* and *The campus provides an environment for free and open expression of ideas, opinions and beliefs regardless of ethnicity and/or culture* were found to be low correlated with the campus climate scale and they were dropped from the survey instrument. The new Cronbach's alpha determined for the campus climate scale was 0.87. The academic success scale's items were all well correlated with the scale overall score and all questions were saved. Therefore, the final survey's instrument had only 22 items. The Item-Total statistic for the final questionnaire is presented in Table 7. The Cronbach's alpha calculated for the overall instrument was 0.91.

Coefficient alpha scores of 0.70 to 0.90 are generally accepted as strong predictors of reliability (McMillan & Schumacher, 2001). Nevertheless, Cortina (1993) cautions about such general guidelines, as the value of alpha depends on the number of items on the scale. A scale with a high number of items moderately correlated can have the same alpha value as a scale with a smaller number of items, which are highly correlated. In this study, a coefficient alpha of 0.80 or higher was considered reliable. Once these steps were taken, the data collected was ready for statistical analysis.

Table 7: The result of the reliability analysis run on the final study questionnaire

Survey Item	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
I feel comfortable with and accepted by most of the students	0.33	0.92
I have many friends among the campus' students	0.40	0.92
Most of the students I know on campus would be willing to listen to me and help me if I had a personal problem	0.47	0.92
I feel comfortable with and accepted by most of the academic staff on the campus	0.71	0.91
I feel comfortable with and accepted by most of the allied staff on the campus	0.40	0.92
Academic staff on the campus are always warm and friendly	0.78	0.91
Allied staff on the campus are always warm and friendly	0.63	0.91
There are many people on the campus who care about me personally	0.63	0.91
At the campus ESOL students are valued and respected	0.55	0.91
My teachers have a positive attitude towards undergraduate ESOL students studying at the campus	0.65	0.91
The campus seems like a warm and caring place to me	0.87	0.91
Many of the faculty members are sympathetic to the needs of ESOL students	0.73	0.91
My own culture is recognized and respected on this campus	0.42	0.92
Faculty students and staff are genuinely interested in my point of view	0.58	0.91
The campus climate has a positive influence on my personal growth, attitudes and values	0.42	0.92
I am satisfied with my academic performance.	0.60	0.91
I feel confident that I can deal in a satisfactory manner with future academic challenges.	0.52	0.91
I think my teachers are satisfied with my results.	0.50	0.91
Overall, I consider my educational experience a rewarding one.	0.71	0.91
I think I will complete my degree within the expected time frame.	0.38	0.92

9. Statistical Methods

This section provides details of descriptive analyses performed on the study data set and of inferential statistical analyses conducted on the hypothesis. Prior to conducting statistical analyses, a missing value analysis was performed on numerical and categorical variables (age group, secondary education, program of study, first language and ethnicity) using the missing value analysis command. The output showed that there were no missing values in the data set analyzed. Subsequently, frequencies and percentages for each scale of the questionnaire, and demographic variables: age group, ethnicity, first language, secondary education and study program were calculated.

To reduce the data set to a smaller subset while retaining the original information a principal component analysis (PCA) was conducted for peer and faculty support, and campus climate scales (Field, 2005). PCA not only that reduces the large number of variables to a smaller one, but produces components which are easily interpreted (Jolliffe, 2002) and detects structures in the relationships between variables (StatSoft Inc., 2009). Moreover, this technique can be used to solve problems, such as multicollinearity, by combining variables which are collinear (Field, 2005).

After principal component analyses were performed, the retained factor scores were subsequently used in correlations and generalized estimating equations to test my study hypothesis. Kaiser (1960) recommends retaining only factors with eigenvalues greater than 1. An eigenvalue represents the amount of variation explained by a factor and according to Kaiser an eigenvalue of 1 represents a significant amount of variation (Field, 2005). Furthermore, principal component analysis reveals the determinant of the correlation matrix (R-matrix), which according to Field (2005) is important for testing for multicollinearity and it should be greater than 0.00001. If less than this value then there is a high correlation ($R > 0.8$) in the matrix.

Another test performed, while extracting principal components, was the Kaiser-Meyer-Olkin (KMO) test, which is a measure of sample adequacy. The KMO statistic

varies between 0 and 1. A value closer to 0 indicates that principal component analysis is inadequate, while a value closer to 1 yields distinct and reliable factors. Kaiser (1974) recommends accepting values greater than 0.5, which are barely acceptable. Values between 0.5 and 0.7 are mediocre, between 0.7 and 0.8 are good while values above 0.8 are very good (Field, 2005).

The factors score, extracted as a result of principal component analysis, were saved as variables using the regression method, as I expected these factors to be correlated. Pearson correlation coefficient was also calculated for two independent variables, faculty and peer support, and campus climate. Pearson's correlation coefficient is known as the best method of measuring the correlation, being based on the method of covariance. It gives information about the degree of correlation as well as the direction of the correlation (Statistics Solutions, 2009).

Subsequently, generalized estimating equations (GEE) were used to test the study hypothesis. The reason for selecting GEE was that valid scientific inferences cannot be obtained without properly accounting for the correlation among outcomes within subjects (T. Smith & Smith, 2006). Furthermore, moderate to high correlations were anticipated among my study six outcome variables. The correlated outcome variables, according to Smith and Smith (2006), often occur when measuring multiple related outcomes on the same subject. Consequently, binomial generalized estimating equations were employed to investigate the relationships between faculty and peer support, campus climate, and academic success in crude and adjusted analyses. An exchangeable correlation matrix was employed and robust Huber-White sandwich variance estimators were used (Schluter & Paterson, 2009).

10. Qualitative Data Analysis

One item of the survey instrument was formulated as an open-ended question. The question asked was, *What would be the primary reason you might leave school before obtaining your degree?*. The first step in analyzing the qualitative data was to code participants' responses in order to identify any patterns that require further investigation (Gibbs & Taylor, 2005, June 30). The codes I planned to use were based on themes and

topics emerging from my data set (grounded theory procedures) (Strauss & Corbin, 1990). The technique used to identify themes and codes was “Key-words-in-context”, which means that the researcher looked for the range of uses of key terms in the phrases and sentences in which they occur. The codes identified were further organized in a list of codes, with a short description as recommended by Gibbs and Taylor (2005, June 30) (Table 8).

Table 8: The list of identified codes used in analysing the qualitative placeholder

Code	Description
homesickness	longing for home and family while absent from them
family and personal problems	family and personal problems, other than study or employment related
emigration	leaving the country before graduation for an indefinite period of time
lack of support	lack of peer and faculty (academic and allied staff) support
employment	working long hours and having too less time for study
no intention	firm conviction that he/she will not leave AUT before graduation
not sure	uncertain

Chapter 5 - Results

This chapter provides details of the survey response rates, demographic and background characteristics, description of the primary variable of interest, crude analyses and results of inferential statistical analyses conducted on the study hypothesis. All analyses were conducted in SPSS version 16 and SAS version 9.2 (SAS Institute Inc., Cary, NC, USA).

1. Survey Response Rate and Demographics

Overall, 31 students replied to the survey. All respondents were examined for eligibility criteria (first language, type of degree and faculty they were enrolled with). Of the 31 surveys submitted online, only 27 were eligible, as four students declared “English” as their first language, which was an exclusion criterion. A survey response rate cannot be precisely estimated, as the size of the study population cannot be exactly determined. However, based on data retrieved from AUT records, the response rate is likely to fall between 2.7 and 5.4%.

Of the 27 respondents, 18 declared to be of Asian ethnicity. No student of European ethnicity participated in the study. The majority of participants (18 out of 27) reported to have attended the high school while overseas; only 9 participants have graduated the high school while in New Zealand. When asked which undergraduate program they are enrolled in, only 17 participants provided the program name, as well as the major they study. One respondent declared that he/she does “not feel comfortable to answer this question”. Respondents’ ethnicity, age group, first language, secondary education and program of study distributions are presented in Table 9.

Table 9: A breakdown of study participants by age group, ethnicity, first language, secondary education and program of study.

Variable	Category	Frequency	(%)	
Age Group (years)	under 20	1	(4)	
	21 to 30	19	(70)	
	31 to 40	6	(22)	
	41 to 50	1	(4)	
Ethnicity	African	2	(7)	
	Chinese	8	(30)	
	Filipino	1	(4)	
	Indian	5	(19)	
	Korean	2	(7)	
	Latin American	1	(4)	
	Middle Eastern	3	(11)	
	Samoan	1	(4)	
	Tongan	1	(4)	
	Vietnamese	1	(4)	
	Other Asian	2	(7)	
	First Language	Arabic	3	(11)
Bengali		2	(7)	
Chinese		8	(30)	
Filipino		1	(4)	
Gujarati		1	(4)	
Hindi		3	(11)	
Korean		2	(7)	
Malayalam		1	(4)	
Portuguese		1	(4)	
Samoan		1	(4)	
Somali		1	(4)	
Tongan		1	(4)	
Urdu		1	(4)	
Vietnamese		1	(4)	
Secondary Education		New Zealand	9	(33)
		overseas	18	(67)
Program of Study		Bachelor of Health Science	9	(33)
	Midwifery	2	(7)	
	Nursing	7	(25)	
	Occupational Therapy	1	(3)	
	Oral Health	6	(22)	
	Physiotherapy	1	(3)	
	I don't feel comfortable to answer this question	1	(3)	

Note: *Respondents' ethnicities were coded to be consistent with the classification used by the university "Registry Services" on the "Application for Enrolment Form".

Prior to performing inferential analyses, participants' age and program of study were dichotomized. This was necessary to avoid potential statistical modelling problems due to the small sample size. The cut-off point for age was 30 years old. Table 9 shows that 70% of participants were aged between 21 and 30 at the time of the data collection, and a different cut-point would have resulted in two heavily unbalanced groups. Participants' program of study was dichotomized into "specified program of study" and "unspecified program of study". The grouping for the program of study was arbitrarily chosen based on the observation that some participants have also mentioned in the survey their major of study or specialization, whereas others have been less specific and this may characterise different and important organisational levels of the students. Other possible confounders, such as ethnicity and first language could not be meaningfully dichotomized, because of the large number of categories for each variable. Only future research with larger sample sizes will be able to explore their relationships with academic success, faculty and peer support and campus climate.

2. Description of the Dependent Variable

Descriptive statistics for the dependent variable, ESOL students' perceptions of academic are presented in Table 10, which shows frequencies and percentages calculated for each item of the scale. The majority of participants had agreed with the academic success scale statements responding, ranging from 70% for the question "I think my teachers are satisfied with my results" to 85% for the response "I feel confident that I can deal in a satisfactory manner with future academic challenges" (Table 10).

Table 10: Descriptive statistics for the dependent variable - ESOL students' perception of Academic Success

Academic Success scale	Disagree		Agree	
	Frequency	(%)	Frequency	(%)
I am satisfied with my academic performance	6	(22)	21	(77)
I feel confident that I can deal in a satisfactory manner with future academic challenges	4	(15)	23	(85)
I think my teachers are satisfied with my results	8	(30)	19	(70)
Overall, I consider my educational experience a rewarding one	4	(15)	23	(85)
I think I will complete my degree within the expected time-frame	5	(19)	22	(81)
I will not leave AUT until I complete my degree	5	(19)	22	(81)

A within-subject correlation analysis was conducted to investigate and estimate the degree of that the six academic success binary outcome variables were related for this sample. The result of the analysis, presented in Table 11, showed moderate to high correlations among outcome variables. The Pearson's correlation coefficient had a median of 0.61 and ranged between 0.34 (for variables "*I will not leave AUT until I complete my degree*" and "*Overall, I consider my educational experience a rewarding one*") and 0.88 (for variables "*I feel confident that I can deal in a satisfactory manner with future academic challenges*" and "*I think I will complete my degree within the expected time-frame*"). This implies that the academic success variables are not independent and should be analysed simultaneously. Given these dependent relationships, binomial generalised estimating equations (GEE) were employed in the analysis of the six academic success binary outcome variables. Moreover, because there is no natural or dependent order in the six questions and the sample size was small, an exchangeable correlation matrix was employed in all GEE analyses.

Table 11: The result of within-subject correlation analysis for the six binary outcome variables

	I am satisfied with my academic performance	I feel confident that I can deal in a satisfactory manner with future academic challenges	I think my teachers are satisfied with my results	Overall, I consider my educational experience a rewarding one	I think I will complete my degree within the expected time-frame	I will not leave AUT until I complete my degree
I am satisfied with my academic performance	1.0	0.53	0.82	0.78	0.66	0.43
I feel confident that I can deal in a satisfactory manner with future academic challenges		1.0	0.41	0.70	0.88	0.60
I think my teachers are satisfied with my results			1.0	0.64	0.52	0.52
Overall, I consider my educational experience a rewarding one				1.0	0.60	0.34
I think I will complete my degree within the expected time-frame					1.0	0.76
I will not leave AUT until I complete my degree						1.0

3. Description of the Primary Independent Variables

Descriptive statistics (frequencies and percentages) were obtained for each independent variable included in the faculty and peer support, and campus climate scales. Table 12 presents a summary of these findings.

Table 12: Summary of descriptive statistics for the independent variables, faculty and peer support, and campus climate.

Variable	Disagree		Agree	
	Frequency	(%)	Frequency	(%)
Faculty and Peer Support Scale				
I feel comfortable with and accepted by most of the students	5	(19)	22	(82)
I have many friends among the campus' students.	3	(11)	24	(88)
I feel comfortable with and accepted by most of the academic staff on the campus	5	(18)	22	(82)
I feel comfortable with and accepted by most of the allied staff on the campus	6	(22)	21	(78)
Academic staff on the campus are always warm and friendly	7	(26)	20	(74)
Allied staff on the campus are always warm and friendly	5	(19)	22	(82)
Campus Climate Scale				
There are many people on the campus who care about me personally	9	(33)	18	(67)
At the campus ESOL students are valued and respected.	5	(19)	22	(82)
My teachers have a positive attitude towards undergraduate ESOL students studying at the campus.	8	(30)	19	(70)
The campus seems like a warm and caring place to me.	7	(26)	20	(74)
Many of the faculty members are sympathetic to the needs of ESOL students.	7	(26)	20	(74)
My own culture is recognized and respected on this campus.	13	(48)	14	(52)
Faculty students and staff are genuinely interested in my point of view.	14	(52)	13	(48)
The campus climate has a positive influence on my personal growth, attitudes and values.	6	(22)	21	(78)

To reduce the number of variables in both scales (peer and faculty support, and campus climate) I conducted principal component analyses. For the purpose of my research, only the first principal component extracted for the peer and faculty support scale was retained and utilised as a single weighted overall score.

For the peer and faculty support scale, the first principal component factor retained explained 53%. The analysis also revealed a determinant of correlation matrix of 0.57 and a KMO value of 0.635. A KMO value between 0.5 and 0.7 according to Kaiser is a mediocre score of sample adequacy, while a determinant of the correlation matrix greater than 0.0001 tests negative for multicollinearity (Field, 2005; Kaiser, 1960).

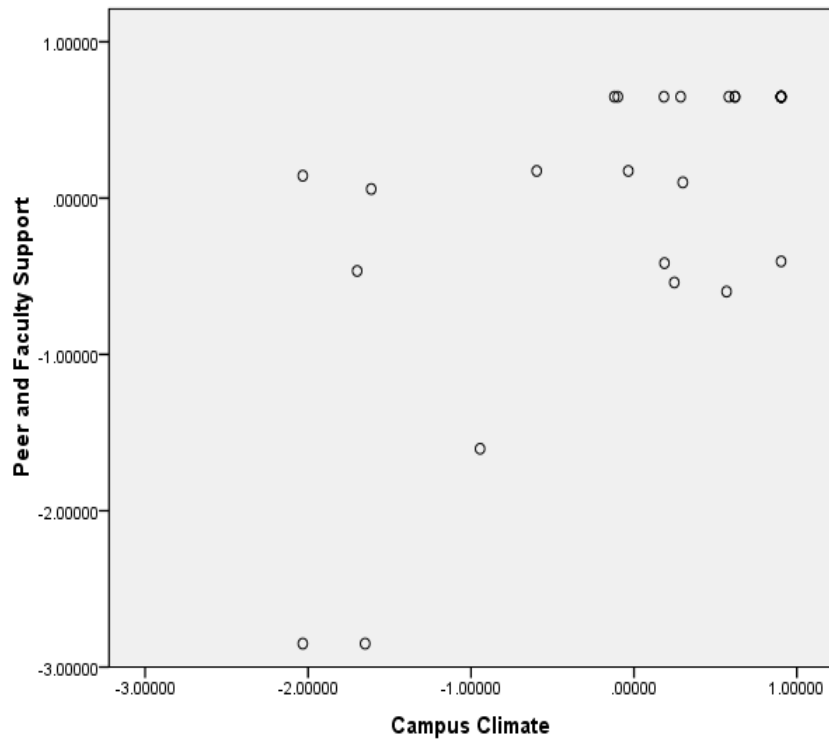
The peer and faculty support factor retained had a median of 0.65, with values in the range of -2.85 and 0.65. A value of -2.85 describes a study participant who chose to answer “Strongly Disagree”, “Disagree” or “Neutral” to seven-eight (of eight) of the statements included in the peer and faculty support scale. Likewise, a value of 0.65 reflects a participant who “Strongly Agree” or “Agree” to all eight statements included in the scale.

For the campus climate scale, the first principal component factor explained 55% of the variance. The determinant of the R-matrix was 0.010 for the campus climate scale, while the KMO value was 0.772, which according to Kaiser is a good score of sampling adequacy (Field, 2005; Kaiser, 1960).

The campus climate factor retained had a median of 0.29, with values in the range of -2.03 and 0.90. Values of -2.03 were obtained for “Strongly Disagree”, “Disagree” and “Neutral” answers to the campus climate scale, whereas a score of 0.90 was the result of seven-eight (of eight) “Strongly Agree” and “Agree” answers obtained to the same questions.

The relationship between peer and faculty support, and campus climate was depicted using a scatter plot and formally investigated using Pearson’s product-moment correlation coefficient. There was a significant moderate positive correlation between the peer and faculty support, and campus climate factors, with Pearson’s correlation of 0.649 and a p-value=0.00. Figure 3 gives a scatter-plot of the factors.

Figure 3: Scatter-plot showing the moderate positive correlation between faculty and peer support and campus climate



4. Crude Analyses

The principal component factors of the independent variables, campus climate, and faculty and peer support were regressed against the six binary outcome variables using a binomial GEE model with an exchangeable correlation structure. Table 13 presents the results of the GEE analysis performed on campus climate, and peer and faculty support, along with the estimated correlation coefficient used in the correlation matrix.

Table 13: Odds ratio (OR) and associated 95% confidence interval (95% CI), together with the p-value and estimated correlation coefficient (ρ) from the separate GEE analyses relating the principal component factors for Peer and Faculty Support and Campus Climate to ESOL students' perception of Academic Success.

	OR	(95% CI)	P-value	ρ
Peer and Faculty Support	0.49	(0.22, 1.07)	0.07	0.51
Campus Climate	0.43	(0.30, 0.84)	0.01	0.46

The GEE analyses showed that campus climate was significantly associated with academic success, $p\text{-value}=0.01$, but peer and faculty support was not, $p\text{-value}=0.07$. The estimated OR for the campus climate relationship implies that for every unit increase in the first principal component factor for campus climate, the odds that a participant agreed with the academic success scale decreased by 0.43 (95% CI: 0.30, 0.84).

5. Multivariable Analyses

The next step in my statistical analysis was to determine if the significant finding in the previous crude analyses were independent or confounded. I considered as candidate for inclusion in multivariable analyses only the campus climate factor which was associated with the outcome at $p\text{-value}<0.05$ in the bivariable model. Potential confounding variables, such as age, ethnicity, first language, secondary education and program of study, were also subjected to initial bivariable analyses. Because of the very small sample size, I considered only binary potential confounding variables, such as age, program of study and secondary education. These variables were assessed by comparing the log likelihood of the intercept model to the log likelihood of the model containing the intercept and variable in question (Lee, Herzog, Meade, Webb, & Brandon, 2007). Each potential confounding variable was included to a baseline model including campus climate. Following the recommendations of Sun, Shook and Kay (1996), the significance of potential confounding variables associations with the outcome at $p\text{-value}<0.15$ was used to select which confounding variables will be considered in a multivariable model. I used the backward elimination of potential confounding variables adopting a statistical significance level of 5%, until a final main effects multivariable model was derived. The results of the bivariable analyses performed on the binary confounding variables and campus climate are presented in Table 14.

Table 14: Odds ratio (OR) and associated 95% confidence interval (95% CI), together with the p-value and estimated correlation coefficient (ρ) from the separate GEE analyses relating the Campus Climate and potential confounding variables to ESOL students' perception of Academic Success.

Confounder	n (%)	OR*	(95% CI)	P-value	ρ
Age (years)				0.27	0.46
≤ 30	20 (74.1)	2.67	(0.46, 15.46)		
> 30	7 (25.9)	1.00	reference		
Education				0.01	0.50
Overseas	18 (66.6)	0.04	(0.00, 0.50)		
New Zealand	9 (33.3)	1.00	reference		
Program of study				0.05	0.48
Specified	17 (63)	0.18	(0.03, 1.04)		
Unspecified	10 (37)	1.00	reference		

Note *Adjusted for campus climate

The final model of predictors of academic success was established based on parameters' p-value in multivariable analysis. Age was discarded from the final GEE model having a p-value > 0.05 . Table 15 presents the results of the GEE analysis assuming an exchangeable correlation matrix with an estimated correlation coefficient of 0.32.

Table 15: Adjusted odds ratio (OR) and associated 95% confidence interval (95% CI), together with the p-value from separate GEE analyses relating each potential confounding variable to ESOL students' perception of Academic Success.

Variable	Adjusted OR	(95% CI)	P-value
Campus Climate	0.07	(0.02, 0.27)	< 0.00
Secondary education	0.01		0.01
Overseas	0.01	(0.00, 0.32)	
New Zealand	1.00	reference	
Program of study			0.03
Specified	0.10	(0.01, 0.77)	
Unspecified	1.00	reference	

In multivariable analyses, after adjusting for secondary education and program of study, campus climate remains significantly associated with academic success, p -value <0.00 . The estimated OR for the campus climate relationship implies that for every unit increase in the first principal component factor for campus climate, the odds that a participant agreed with the academic success scale decreased by 0.07 (95% CI: 0.02, 0.27).

Moreover, secondary education and program of study are also significantly associated with academic success, p -value=0.01, respective p -value=0.03. The estimated OR for the secondary education denotes that the participants with overseas secondary education are less likely, by 1%, to agree with the academic success scale, OR=0.01 (95% CI: 0.00, 0.32). Likewise, the estimated OR for the program of study implies that the students who have specified their program of study are less likely, by 10%, to agree with the academic success scale, OR=0.10 (95% CI: 0.01, 0.77).

6. Open-ended Question Results

Only 18 (67%) participants chose to answer to the open-ended of my survey instrument. A summary of the coded answers is presented in Table 17.

Table 16: A descriptive statistics of the coded answers to the open-ended question

Code	Frequency	(%)
Emigration	1	(6)
Family problems	2	(11)
Full time employment	1	(6)
Homesickness	2	(11)
Lack of support	3	(17)
No intention	7	(39)
Not sure	2	(11)
Total	18	(100)

The table above shows that 39% of participants did not intend to leave the faculty before graduation, while 17% saw the “lack of support” as a possible reason for abandoning the university without a degree.

Chapter 6 – Discussion and Conclusion

The present study attempted to explore the relationship between peer and faculty support, campus climate and academic success of ESOL undergraduate students enrolled in health care programs at a New Zealand University. Based on the exploratory literature available, it was hypothesized that there is a relationship between ESOL students' perceptions of peer and faculty support, campus climate and academic success. The previous chapter discussed the findings related to the stated hypothesis, while this chapter will interpret the results and their significance, review strengths and limitations of the study, discuss implications for professional practice, and provide recommendations for future research.

1. Discussion

Interpretation of findings for Preliminary Analyses

The descriptive statistics for peer and faculty support scale revealed that most ESOL students have a positive perception of peer and faculty support. Between 74 and 89% of the participants answered, "Agree" to the six statements presented in the Peer and Faculty Support scale. The highest percentage (89%) was obtained by the question: "*I have many friends among the campus' students*", while the lowest (74%) was attained by the question: "*Academic staff on the campus are always warm and friendly*". I tried to analyse the ESOL students' perceived faculty and peer support by arbitrary components. The final scale used to assess students' perception of peer and faculty support had six items, 2 concerning peer support, 2 referring to allied staff support and other 2 for academic staff support. The highest agreement percentage was obtained by the peer support questions (82-88%) and the lowest by the faculty support (allied and academic staff) statements (74-82%). There is also a difference in the way participants perceived the allied and academic staff support. They found allied staff to

be more warm and friendly (82%) than academic staff (74%), while academic staff were found to make them feel more accepted (82%) than allied staff (78%). It's difficult to interpret these results when such a small number of students responded to my survey. However, one possible explanation regarding the difference in students' perception is that they interact with allied staff in a different environment than academic staff and for completely different reasons.

Burns (1991) in an Australian study of international students, suggests that students feel when faculty staff are unaware of students social, emotional or health problems and especially, when they are not particularly interested in helping students with other than academic difficulties. It can be argued that social, emotional and health problems are not always easy to detect and moreover there are special student support systems implemented in most universities just to address these special issues. Yet, Burns (1991) argues that such problems are a major source of academic failure.

Campus climate scale consisted of nine statements which overall were also favourably perceived by the respondents. The statement "*Faculty students and staff are genuinely interested in my point of view*" received the lowest percentage of agreement (48%) from the whole scale. The highest percentage (82%) was achieved by the commentary "*At the campus ESOL students are valued and respected.*"

For the academic success scale, the percentages varied between 85% at the following statements: "*I feel confident that I can deal in a satisfactory manner with future academic challenges*" and "*Overall, I consider my educational experience a rewarding one*", and 70% at the commentary "*I think my teachers are satisfied with my results*".

Overall, ESOL students regard the campus, their peers and the staff of the Faculty of Health and Environmental Sciences as supportive and encouraging. However, the low percentage acquired at the commentary "*Faculty students and staff are genuinely interested in my point of view*" leads to the conclusion that ESOL students are accepted by the campus community, in spite and not because of, their cultural diverse status. This conclusion is supported by the 52% agreement reached by the commentary "*My own culture is recognized and respected on this campus*".

Bolderston et al. (2007) offer a possible explanation for this fact. In a Canadian study, they suggested that ESOL students in the past have been expected to change their behaviours to conform to those of their adopted culture rather than staff adopting a more culturally congruent approach. Burns (1991), in another study on study and stress among overseas students in Australian universities, also affirmed that many ESOL students are “plugged into existing courses and taught as if they were Australian students with all the previous cultural and educational experiences that assumes” (p. 74).

Interpretation of findings for Inferential Analyses

I found a significant relationship between academic success and campus climate before and after adjustment for the confounding variables, secondary education and program of study. These findings add to the existing research that suggests that campus climate plays an important role in student academic success (Hurtado et al., 1998).

The relationship between peer and faculty support was statistically non-significant ($p\text{-value}=0.07$), likely because of the really small sample size. The estimated OR for the peer and faculty support implies that students who have agreed with the peer and faculty support scale are less likely, by 49% to agree with the academic support scale. The result contradicts other studies on faculty support which found that an increase in student support has a positive influence on their academic performance (Cabrera & Padilla, 2004; Gardner, 2005a; Mills et al., 2008; Shelton, 2003). Shelton (2003) suggests that the feeling that faculty cares and wants them to succeed creates an atmosphere more conducive to academic success and encourages students to persist. Nevertheless, my findings were consistent with Robbins, Lauver, Le, Davis, Langley and Carlstrom (2004), who did not find social support to be a strong predictor of either retention or academic success.

A possible explanation for these findings is that the study included not only traditional students, but also older students. According to Metzner and Bean (1987), academic success is not related to non-traditional students' persistence or withdrawal from university. The peer and social support is less important for older students who have families, may be likely to work and have less time to socialize on campus

(Metzner & Bean, 1987). Therefore, as Dennis, Calvillo and Gonzalez (2008) suggest peer support may be an important predictor for young students (18-25 years old) and not of central importance for more mature students.

In my sample, measures of secondary education and program of study, but not age, were strong confounding variables of the association between academic success and campus climate. The potential effect of other two variables, ethnicity and first language, due to the very small sample size, could not be estimated, as both variables could not be collapsed into meaningful binary or at the most tri-valued categories.

The type of secondary education attended by students was found to be statistically significantly associated with their perception of academic success (p -value=0.01). The adjusted OR=0.01 confirms that an inverse relationship exists between overseas trained students' perception of campus climate and their perception of academic success, when compared to the reference group (New Zealand trained ESOL students). I have knowledge of few other studies, which have attempted to explore the relationship between the type of secondary education and academic success. Mills et al. (2008), in an Australian study, found that students who attended governmental secondary school are more likely to be more successful at the university comparative with students who attended non-governmental secondary schools. However, my approach was different, I attempted to investigate if there is a relationship between the place (i.e. New Zealand or overseas) where the participant attended secondary school and academic success. Juhong and Maloney (2006) in a New Zealand study explored the connection between business students' ethnicity and academic success (in terms of GPA scores) and found that overseas-trained students, and especially Asian students, have higher GPA scores than New Zealand trained Asian students.

I presumed that students already "exposed" to New Zealand secondary education will feel more confident in dealing with possible challenges encountered in tertiary education. Being more adjusted to the dominant culture has its advantages. It means being more aware of what support systems are in place at the university and generally speaking feeling more "at home" in an educational institution. I found that overseas-trained students are less likely than ESOL students who have previously studied in New Zealand to agree with the academic success scale. This means that these students do not perceive their academic performance as successful. However, Juhong and Maloney

(2006) in a New Zealand study explored the connection between business students' ethnicity and academic success (in terms of GPA scores) and found that overseas-trained students, and especially Asian students, have higher GPA scores than New Zealand trained Asian students.

The type of degree was also found statistically significant associated with academic success (p -value=0.03). The adjusted OR=0.10 shows an inverse relationship between ESOL students' (who have specified their program of study) perception of campus climate and their perception of academic success. Based on this result I can reason that the relationship between campus climate and academic success is stronger for those students enrolled in a specific program of study. According to Mills et al. (2008), there are few studies, which attempted to measure the importance of degree type on academic success. In an Australian study, Mills et al. (2008) looked at the type of degree in terms of student degree preference (i.e. student who has received a first preference or not). The authors found that the type of degree was not associated with academic performance or retention. In my study I aimed at finding or not significant differences between students', enrolled in different health undergraduate programs, perceptions of campus climate, academic success, and peer and faculty support.

However, due to the small sample size, I had to use a different classification. The program of study was dichotomized into "specified" and "unspecified" program of study seeking to answer to the question if there is a difference in students' perception of academic success between groups. I attempted to ascertain if students enrolled in a specific health program have a different perception of academic success than those without a specific pathway of study. At AUT, a student enrolled in the Bachelor of Health Science degree is often a first year student who has not decided yet what specialization he/she wants to pursue, or a student who did not received an offer of place in the desired program, due to the limited number of places. Unfortunately, because the study was entirely conducted online, to ensure the participants anonymity, I was unable to ascertain if the answers received to the program of study question were all accurate. I cannot disregard the possibility that some participants who answered to my question with the name of the degree instead the name of their program specialization did not feel comfortable to do so. One of the students did answer to my question that he/she is not comfortable answering to the question. Therefore, being also

aware of the study's small sample size, I cannot offer a possible explanation for the results obtained in regard to the program of study.

Lastly, I did not find a statistically significant relationship between participants' age and academic success. Mills et al. (2008) affirms that the relationship is inconclusive in the literature. However, Dennis et al. (2005) consider the age plays an important role in students' perceptions of peer support, especially for younger students.

Interpretation of findings for the Open-ended Question

The answers received to the open-ended question of the academic success scale, "What would be the primary reason you might leave school before obtaining your degree?" revealed that most respondents (39%) never considered leaving university before obtaining the degree. Only 17% of respondents mentioned, as possible main reason for leaving the course before graduation, the lack of encouragement and support from the faculty and staff. This result supports Burns (1991) research on international students, giving the general impression that students regard the faculty staff as being to some extent "uncaring and not interested in their students" (p. 67).

Other reasons for students' possible dropout are the family and part-time work responsibilities on top of study workload and, as well as, travelling, homesickness and major illness. Manageable workload was also found as an important or major reason for leaving the course by a fifth of the respondents considering withdrawal in a New Zealand study. Furthermore, a third of the students interviewed in the study left because of the heavy workload, while three fifth of students who never considered withdrawal gave the ability to manage the workload as an important reason (Zepke, Leach, & Prebble, 2005).

Homesickness, as a dropout reason, was mentioned before in other studies (Burns, 1991), however I have no knowledge of other studies reporting major illness or a desire for travelling as grounds for withdrawing from the course. Last but not least I found encouraging the fact that 39% of respondents never thought to leave the faculty.

2. Strengths of Study

The present study had three notable strengths: the web design chosen to “communicate” with the study participants, the choice of GEE and principal component analyses used to explore the data, and the standardized instrument employed to collect data. Firstly, the web-based survey was one of the study strengths as it saved considerable time for researchers. Online survey as suggested by Wright (2005, April) save time by allowing researchers to collect data while working on other projects. Moreover, responses to online surveys can be more easily exported to statistical software packages. Last but not least, online survey circumvent costs which, even when using a relatively small sample can be enormous (Wright, 2005, April). Turner et al. (2009) advocate for the use of web-based recruitment and data collection, especially in large longitudinal studies. The authors advise that “traditional mechanisms of data elicitation” are becoming less inviting for robust epidemiological studies and they advocate other for embracing this new technology (p. 56).

As already mentioned, the low response rate also influenced the statistical analysis chosen (GEE) to test the study hypothesis. However, I consider the use of GEE one of this study’s strengths. According to Lee et al. (2007), correct inferences in studies in which correlation within each participant is expected cannot be obtained without taking into account this within-participant correlation. If the correlation of data within each participant is ignored, it may result in incorrect standard errors, invalid hypothesis tests and confidence intervals (Lee et al., 2007).

Finally, the survey instrument was specifically designed to address ESOL undergraduate students’, studying on AUT Akoranga campus, particular concerns with the overall campus climate and the peer and faculty support offered on campus. The instrument reliability was tested prior to data analysis and the results showed a Cronbach’s alpha calculated for the overall instrument of 0.91. Moreover, the questionnaire was specially designed to be administered online taking into account the fact that some students may not have home Internet access or broadband/wireless connection. Therefore, I tried to limit the number of questions in my survey making

possible for all eligible students to complete it.

3. Limitations of Study

There are several limitations to this study worth mentioning. First, the sample size was too small diminishing the statistical power of the study. This was due to the inappropriate sampling technique, which proved to be inadequate leading to a much smaller sample than envisioned at the beginning of the study. Additionally, the sampling technique was not random and a non-probability sampling technique may be more difficult to generalize the present findings to all ESOL health undergraduate students. Self-selection was also a limitation of the study, as a very high percentage of the study population was not represented (ESOL students who met the inclusion criteria but chose not to complete the survey). The sample, therefore, may be lacking representation from many culturally diverse groups, which could have had influence on the result of the regression analysis. Moreover, any study with a low response rate can be criticised because it can miss significant differences in the responders and non-responders. All interpretations were thereby limited in their representativeness and generalizability.

Moreover, the limited sample size was not conducive to the statistical examination of specific ethnic perspectives of diversity. Given the small sample size of some of the ethnic groups, some statistical procedures were not appropriate. Because of the low number of participants recruited, I reduced the number of levels of agreement of each scale from five to only two. This data reduction technique is recommended by the STROBE initiative to strengthen the reporting of observational studies. However, it may also reduce the study statistical power, leading at loss of information (Vandenbroucke et al., 2007). The cut-point for grouping (dichotomization) was also arbitrarily chosen. However, Vandenbroucke et al. (2007) suggests that researchers may chose cut-points for groupings for practicality, based on values that are relevant for outcome. More insight may be gained on the association between the dichotomized variable and the outcome by choosing more extreme outer group(s) and having the middle group larger than the outer group(s) (Vandenbroucke et al., 2007). Because of this recommendation, I chose to group the study participants into “under 30 years old” and “over 30 years

old”. Lastly, the limitations in the sample may have contributed to some of the inconsistencies between the study's findings and previous research.

Beside the inadequate sampling technique, I suggest that the low response rate has several other possible explanations. Firstly, ESOL students had serious concerns regarding the anonymity and privacy stipulated in the study invitation. Since the Internet is a public domain, data may be intercepted, causing a threat to confidentiality (Wright, 2005, April). To reduce this risk I used a security-encrypted website, but many participants were not aware of this fact. Two ESOL students who wished to clarify some aspects of the study expressed these concerns verbally to the author of this study. One of them said that he/she needed more assurance that his/her survey will not be made available to other faculty members. Secondly, another possible explanation is that the term of ESOL, for some students, has a different meaning. Students from culturally diverse background who have been living in New Zealand for a long time, but borne overseas, do not consider themselves ESOL students. Most of these students mentioned above have a very good command of English language. In fact, English language is considered by many of them as their first language, irrespective of the language spoken at home.

Another limitation of the study was that it was administered to students in a variety of study levels during the second semester of the academic year. Depending on the time spent on the campus, students may react to the questions differently. Levels of academic success could fluctuate between years in tertiary education; however, I did not control for this aspect in the analyses.

In addition, among the limitations is included the fact that all predictor and outcome variables were based on self-perceived measures. There was no information regarding the outcome variables collected from official records. I used as proxy for academic success the student self-perception of academic achievement. However, as Sedlacek and colleagues suggest (Dennis et al., 2005; Fuertes & Sedlacek, 1995; Fuertes, Sedlacek, & Liu, 1994; Wawrzynski & Sedlacek, 2003) variables related to students perceptions can sometimes be more important than traditional measures of cognitive skills (i.e. GPA score) in predicting student academic success.

4. Suggestions for Future Research

The findings from this research are at this point tentative and in need of further exploration. The present study has validated some of the existing research that investigates the academic consequences of students' satisfaction with the campus environment. Moreover, my study has attempted to disaggregate, as suggested by Wise et al. (2008, August 14), the components of students' satisfaction with the learning environment and investigate the impact of these components (i.e. peer and faculty support and campus climate) on academic success. However, due to the small sample size I was unable to identify and explore specific components of campus climate and peer and faculty support. Therefore, a first suggestion will be to replicate the present study on a much larger sample size.

This study showed that students' perceptions of faculty and peer support are moderately correlated with their perceptions of campus climate. It also enhanced the existing research in regards to the relationship between ESOL students' perceptions of campus climate and academic success. The GEE multivariable analysis showed that for the present study the ESOL students' perception of campus climate is associated with self-perceived academic success. For this reason, future research should continue to explore potential indicators of ESOL students' academic success, especially the potential confounding effect of participants' ethnicity and first language, which could not be explored in this study.

As already mentioned, most of the campus climate, and faculty and peer support research was conducted on nursing and oral health students. Future research should continue to explore the impact of these factors on other groups of ESOL health undergraduate and postgraduate students.

Participant age, another variable explored in this study, due to the small sample size was not significantly associated with students' perception of academic success. According to Towles, Ellis and Spencer (1993), Tinto's model was derived from studies of full-time students who recently graduated from high school. This is in contrast with the case of adult learners who attend part time, are employed and have family

commitments. Therefore, I suggest that more studies, which take into account certain characteristics of health undergraduate students, such as age, ethnicity, first language and secondary education will enrich the current literature on students' retention and particularly on students' perception of academic success.

The low response rate suggests that maybe other sampling techniques should be employed to enhance students' participation in research. However, a review of surveys literature shows that this is the case with all type of surveys, not only web-based questionnaires (Cook, Heath, & Thompson, 2000; Krosnick, 1999; Wright, 2005, April). Moreover, according to these authors the response rates are less important than the sample representativeness. Cook et al. (2000) suggests that 1% of the study population can be more representative than 50-60% of target population. In web-based research, Query and Wright (2003) consider that this problem can be overcome using both online and traditional paper surveys to evaluate whether the participants responding online have systematically different perception than those who complete the paper survey.

From this point of view and based on data retrieved from AUT students records database - ARION - I considered that my study sample described fairly accurate the AUT's ESOL student population. However, many statistical procedures require an adequate number of representants of the studied population. Therefore, I have some suggestion to make to improve students' recruitment in future web-based surveys.

Wright (2005, April) suggests using if possible email lists to reach as many as possible participants. I think that using email list could improve students' participation. In my study, because of the ethic concerns I chose not to email my invitation to participate in research to all ESOL health undergraduate students. Consequently, it is my belief that many eligible students were not aware of my study. However, as Cohen, Manion and Morrison (2007) suggest, email list can still be used as long as participants are directed to a secured web site rather than using email correspondence. Moreover, advice on using non-traceable connections to access and return the survey (e.g. AUT library or café) enhances the chances of having more respondents. L. Cohen et al (2007) advise also to encourage participants to print and return anonymously the survey.

Employing various researchers - target population communication methods could improve the recruitment rates according to L. Cohen et al. (2007). The authors suggest overcoming non-response and volunteer bias by utilizing follow-up messages and electronic discussion groups. Other important suggestion refers to incomplete answers as opposed to “all-or-nothing” type of survey employed in my study. L. Cohen et al. (2007) suggest that some respondents may answer to some questions but not others. I considered that this may be the case for some students and especially for ESOL students, therefore I suggest taking into account this possibility when designing future questionnaire. A “one-item-per-screen” technique may also solve the dropout problem due to the respondents losing interest after a while and abandoning the survey. A device for indicating the respondent progress at the bottom of the screen can be also useful (L. Cohen et al., 2007).

Finally, the last recommendation concerns the New Zealand tertiary education sector which must not only encourage ESOL students, but also assist universities in providing sufficient services to assist these students. Furthermore, as some studies signalled (Rolleston & Anderson, 2004; Zepke & Leach, 2007; Zepke et al., 2005) the real problem is not that adequate support services are not available for ESOL students, but that they are underutilized by these students. Therefore, I suggest that future research should focus on issues concerning the low utilization of student support services by ESOL students. I also recommend a more in-depth analysis of the role of ethnicity, language spoken at home, secondary education and program of study on student academic success and to some degree on their decision to complete or withdraw from the course. My study failed to answer to some questions related to ESOL students’ retention, especially to the question regarding the role of faculty and peer support. Consequently, it is my belief that a more powerful study and a larger number of participants will establish without doubt that there is a significant relationship between academic success and student support.

5. Conclusion

Health professionals from a variety of cultures and ethnicities are needed in order to meet the health care demands of a multicultural and multilingual society. Many tertiary institutions in New Zealand and elsewhere have identified the need for assistance in working with ESOL students. The high retention rates of ESOL students results in frustration for faculty and students, costs to both students and faculties and loss of educated health professionals. The literature strongly suggests that coordinated support services to be made available to both faculty and ESOL students (Jalili-Grenier & Chase, 1997).

The purpose of the study was to determine if there is a relationship between ESOL student perception of academic success and the role of campus climate, and peer and faculty support in encouraging this perception. The research question formulated for this study was “Is there a relationship between campus climate, faculty and peer social support and ESOL students’ academic success?”. Based on the statistical analyses performed on my study sample, the answer to the research question is that while there was a moderate correlation between campus climate and peer and faculty support, only campus climate was statistically significant a weak predictor of academic success. The reason peer and faculty support was not statistically significant associated with academic success was likely due to the lack of statistical power.

Moreover, the two confounders explored, secondary education and program of study, have even a stronger influence on the students’ perceptions of academic success. The fact that for ESOL students who have completed their secondary education overseas, campus climate is more likely to have an influence on their perceptions of academic success is not suprising. Other studies showed that, especially for international students, the perception of campus climate and peer and faculty support changes over time. However, I have no knowledge of any studies that found the program of study as having a confounding effect on estimating the ESOL students’ perceived academic success.

To conclude, this study identified that campus climate could have an influence on students' perception of academic success, however, the role of peer and faculty support factor on academic success and furthermore on students retention in tertiary education needs more investigation. I suggest that the information provided in this study could be used to improve the academic success and retention of ESOL undergraduates health students, enhancing the quality of the learning experience provided in health academic institutions. This research challenges health academics and administrators to view health students not only from a broad multicultural context, but from multi-ethnic health practitioner perspectives.

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Glossary of Terms

Several terms used in this study are subject to interpretation, but are important to the understanding of the research methods and findings. These definitions are intended to facilitate a common understanding.

Academic Staff

The term "academic staff" refers to employees of the institution having a teaching, research, administrative and managerial role. Sometimes they engage in entrepreneurial activities, marketing of courses, responding to new initiatives and preparing business plans, for example (Brew & Boud, 1996).

Academic Success

Academic success represents the successful continuation in, and completion of, an academic program (Laguardia, 1999). In this study, academic success was defined as academic achievement.

Allied Staff

The term "allied staff" refers to employees of the institution charged with a wide range of key tasks. The group includes: librarians, technicians, administrators, caterers, secretaries, public relation, human resources and so on (Doidge, Hardwick, & Wilkinson, 1998).

Attrition

Attrition is defined as leaving the school, irrespective of reason, without completing the degree requirements (Wells, 2003).

Climate

The concept of climate emanates from social psychology and studies of organizational behaviour. Climate is considered the "atmosphere" of an institution and focuses on the attitudes and behaviours of individuals that are likely to be influenced by change. For the purposes of this study, campus climate is defined as consisting of the academic, social, and interpersonal comfort level of racial and ethnic minority students on campus (Orozco, 2003).

Culture/ Ethnicity

The concept of culture emanates from anthropology and sociology. Culture describes the embedded values and persistent pattern of norms, values, beliefs, and assumptions that shape the behavior of individuals in an institution (Milestone, 2005). Many sociologists define *culture* as the beliefs, values, behavior, and material objects that define a people's way of life (Escotet & Alvarez, 2000). It includes what people think, how they act, and what they own. However, culture is also a bridge linking the past, the present, and the future. Nobles (1991) described *culture* as an active growth process operating at two levels. One level is related to who and how educators are as persons. The other level is focused on why they are as they are and reflects the past as well as the present and the sources of their practices, beliefs, or characteristics (St. Juste, 2006).

Williams and Calvillo (2002) suggest that culture is often seen as only ethnicity, race and language. However, the cultural diversity encompasses much more, such as place of birth, immigration status, age, gender, life style, and educational and career backgrounds. For instance, according to Williams and Calvillo (2002), younger students hold different beliefs and values than older, more mature students.

Diversity

Diversity represents the presence of different racial, ethnic, and cultural populations within the context of higher education (Roy-Woods, 2007). The Association of American Colleges and Universities (1995) developed an operational definition for diversity that is now commonly used in higher education realms: "The variety created in any society (and within any individual) by the presence of different points of view and ways of making meaning which generally flow from the influence of different cultural and religious heritages, from the differences in how we socialize women and men, and from the differences that emerge from class, age, and developed ability" (p. xx). In other words, diversity involves the participation and not merely the presence of people who are different in culture, religion, gender, class, age and ability (Roy-Woods, 2007).

ESOL Students

ESOL is an acronym for **English for Speakers of Other Languages** or **English as a Second or Other Language**. **ESL** (English as a second language), **ESOL** (English

for speakers of other languages), and **EFL** (English as a foreign language) all refer to the use or study of English by speakers with a different native language. Frequently, these terms are used in relation to teaching and learning English, but they may also be used in relation to demographic information (English as a Second Language, 2009).

Student Persistence

Persistence is used typically in reference to the actions of the student. It mirrors the student's desires and it leads to completion and immediate and long-term benefits for individual. Student retention and persistence are not transposable but they are synonymous in many research papers because increasing retention at the institutional level means increasing students' persistence (Tinto, 2005).

Student Retention

Retention refers to whether a student continues to study until completion (Ministry of Education, 2007). Retention is typically used in reference to the actions and responsibilities of the institution. Increasing retention has economic benefits for the institution, if not the society generally (Tinto, 2005).

Appendices

Invitation to Participate in “ESOL students and academic success: The role of campus climate, faculty and peer support” Research

Dear potential participant,

This is an invitation for undergraduate ESOL students enrolled with the Faculty of Health and Environmental Sciences to participate in research being conducted by Claudia Zagreanu under the supervision of Dr Anita Bamford-Wade at the AUT University, Akoranga Campus.

This study explores the perception of ESOL students of campus climate, and faculty and peer social support and seeks to determine whether or not there is a relationship between these factors and ESOL students’ academic success. Your participation will contribute to the current research on an important topic for ESOL students. This research may help campus administrators understand the needs and concerns facing undergraduate ESOL students. The research will also result in a thesis as part of my Master’s of Health Science degree.

Participation in the study involves the completion of an online questionnaire as well as the provision of some background information. The questionnaire covers areas such as: perceived campus climate, faculty and peer social support and perceived academic success. The questionnaire package should take approximately 15-20 minutes to complete.

Participation in this study is anonymous and completely voluntary. The completion of the survey’s questionnaire will be taken as indicating your consent to participate in this research.

The data collection will start on the 11th of August 2008 and will continue until the 15th of September 2008.

If you would like to participate, please follow the link below to access the survey. If you have difficulty accessing the website or completing the survey, please contact myself by phone (09) 921 9999 extn 7674 or email claudia.zagreanu@aut.ac.nz.

<http://zclaudia.awardspace.com>

If you have queries about this study, please contact myself by phone: (09) 921 9999 extn 7674 or email: claudia.zagreanu@aut.ac.nz, or the project supervisor: Dr Anita Bamford-Wade, phone: (09) 921 9999 extn 9391, email anita.bamford-wade@aut.ac.nz.

If you have concerns regarding the conduct of the research you should notify the Executive Secretary, AUTEK, Madeline Banda, madeline.banda@aut.ac.nz, phone: (09) 921 9999 ext 8044. Thank you in advance for considering participating in the present study.

Claudia Zagreanu

Dr Anita Bamford-Wade

Claudia Zagreanu

Anita Bamford-Wade

Participant Information Sheet

Project Title: “ESOL students and academic success: The role of campus climate, faculty and peer support”

Invitation

You are invited to participate in a research project, which is being conducted by Dr Anita Bamford-Wade of the School of Nursing (supervisor) and myself, Claudia Zagreanu (Master student) of the School of Public Health and Psychosocial Studies. Please be advised that your participation in this study is entirely voluntary. The research will result in a thesis as part of a Master’s degree.

What is the purpose of the study?

The study explores ESOL students’ perception of campus climate, and faculty and peer social support and seeks to determine whether or not there is a relationship between these factors and ESOL students’ academic success. A web-based survey research is proposed to investigate ESOL undergraduate students’ insights.

How are people chosen to be in the study?

All undergraduate ESOL students enrolled with the Faculty of Health and Environmental Sciences are eligible to participate in this study. An invitation to participate in this study is posted on Student Noticeboard and printed copies are distributed across the Faculty of Health and Environmental Sciences.

What happens in the study?

You will be asked to complete an anonymous online questionnaire. The completion of the survey’s questionnaire will be taken as indicating your consent to participate in this research.

What are the discomforts and risks?

There are no risks associated with this study. Some questions may trigger emotions and/or evoke personal reactions. If you are feeling distressed at any time

following the completion of the questionnaire, counselling support is available by contacting Health Counselling and Wellbeing Centre, Akoranga Campus, Ph: (09) 921 9998.

What are the benefits?

Your participation will contribute to the current research on an important topic for ESOL students. This research may help campus administrators understand the needs and concerns facing undergraduate ESOL students. The research will also result in a thesis as part of my Master's of Health Science degree.

How will my privacy be protected?

Your participation in this study will be anonymous. You do not have to disclose your name, student ID or contact details to participate in the research.

What are the costs of participating?

The completion of the survey will require approximately 15-20 minutes of your time.

Opportunity to consider invitation

- The data collection will start on the 11th of August 2008 and will continue until the 5th of September 2008.
- You can ask any time for more information. My contact details are listed below.
- Participation is entirely voluntary.
- You can withdraw anytime without any adverse consequences of any kind. Once you complete the questionnaire, you will receive a reference number. I advise all participants to write-down the reference number in case they decide to withdraw from this study, prior to data analysis completion (before the 30th of October).
- A brief description of the final report will be made available to you through the Student Noticeboard online.

How do I join the study?

If you wish to participate in this study, please click the "CONTINUE" button below. You will be redirected to the questionnaire page. If you have difficulty accessing the survey, please contact me, Claudia Zagreanu on 921 9999 extn 7674 or claudia.zagreanu@aut.ac.nz.

Queries and Concerns

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor - Dr Anita Bamford-Wade, phone 921 9999 extn 9391, and email: anita.bamford-wade@aut.ac.nz.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEK, Madeline Banda, madeline.banda@aut.ac.nz, 921 9999 ext 8044.

Researcher Contact Details:

Claudia Zagreanu, phone 921 9999 extn 7674, email: claudia.zagreanu@aut.ac.nz.

Project Supervisor Contact Details

Dr Anita Bamford-Wade, phone 921 9999 extn 9391, email: anita.bamford-wade@aut.ac.nz

Approved by the Auckland University of Technology Ethics Committee on 07 August 2008.

AUTEK Reference number 08/118

CONTINUE

Thank you for participating in this study!

All the information we collected in this study will be kept confidential. We are not interested in individual responses; rather, we want to look at the general patterns that emerge when all of the participants' responses are put together.

If you have any questions about the study or would like to learn about the results of the study, you may contact me, Claudia Zagreanu on (09) 921 9999 extn 7674 or the project supervisor: Dr Anita Bamford-Wade on (09) 921 9999 extn 9391.

If participation in the study caused you any concern, anxiety, or distress, you may contact Health Counseling and Wellbeing Centre, Akoranga Campus, phone: (09) 921 9998.

Claudia Zagreanu

Dr Anita Bamford-Wade

Appendix D

By completing this questionnaire, you are indicating your consent to participate in this research.

Survey title: ESOL students and academic success: The role of campus climate, faculty and peer support.

Peer and Faculty Social Support Scale

Please indicate your level of agreement or disagreement with the following statements, by ticking the appropriate box:

1. I feel comfortable with and accepted by most of the students.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I have many friends among the campus' students.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Most of the students I know on campus would be willing to listen to me and help me if I had a personal problem.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I feel comfortable with and accepted by most of the academic staff on the campus.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. I feel comfortable with and accepted by most of the allied staff on the campus.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Academic staff on the campus are always warm and friendly.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Allied staff on the campus are always warm and friendly.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Faculty students and staff give me the moral support I need to continue my education.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Campus Climate Scale

Please indicate your level of agreement or disagreement with the following statements, by ticking the appropriate box:

1. I feel that I belong to the campus community.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. There are many people on the campus who care about me personally.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. At the campus ESOL students are valued and respected.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. My teachers have a positive attitude towards undergraduate ESOL students studying at the campus.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. The campus seems like a warm and caring place to me.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Many of the faculty members are sympathetic to the needs of ESOL students.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. My own culture is recognized and respected on this campus.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Faculty students and staff are genuinely interested in my point of view.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. The campus climate has a positive influence on my personal growth, attitudes and values.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. ESOL students prefer to be with other students from a similar ethnic / cultural background.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. The campus provides an environment for free and open expression of ideas, opinions and beliefs regardless of ethnicity and /or culture.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Academic Success Scale

Please indicate your level of agreement or disagreement with the following statements, by ticking the appropriate box:

1. I am satisfied with my academic performance.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I feel confident that I can deal in a satisfactory manner with future academic challenges.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I think my teachers are satisfied with my results.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Overall, I consider my educational experience a rewarding one.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. I think I will complete my degree within the expected time-frame.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. I will not leave AUT until I complete my degree.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

7. What would be the primary reason you might leave school before obtaining your degree? Please write your answer below.

Background Information

1. What is your age?

Under 20

21 to 30

31 to 40

41 to 50

51 or older

2. What is your ethnicity and/or culture?

3. What is your first language?

4. Where did you attend high school? Please tick the box that applies.

New Zealand

Overseas

5. Which undergraduate program are you enrolled in?

M E M O R A N D U M

Auckland University of Technology Ethics Committee (AUTEC)

To: Anita Bamford-Wade

From: **Madeline Banda** Executive Secretary, AUTEC

Date: 7 August 2008

Subject: Ethics Application Number 08/118 **ESOL students and academic success: the role of campus climate, faculty and peer support.**

Dear Anita

Thank you for providing written evidence as requested. I am pleased to advise that it satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC) at their meeting on 16 June 2008 and that I have approved your ethics application. This delegated approval is made in accordance with section 5.3.2.3 of AUTEC's *Applying for Ethics Approval: Guidelines and Procedures* and is subject to endorsement at AUTEC's meeting on 8 September 2008.

Your ethics application is approved for a period of three years until 7 August 2011.

I advise that as part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through <http://www.aut.ac.nz/about/ethics>. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 7 August 2011;

- A brief report on the status of the project using form EA3, which is available online through <http://www.aut.ac.nz/about/ethics>. This report is to be submitted either when the approval expires on 7 August 2011 or on completion of the project, whichever comes sooner;

It is a condition of approval that AUTEK is notified of any adverse events or if the research does not commence. AUTEK approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are reminded that, as applicant, you are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

Please note that AUTEK grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to make the arrangements necessary to obtain this.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact Charles Grinter, Ethics Coordinator, by email at charles.grinter@aut.ac.nz or by telephone on 921 9999 at extension 8860.

On behalf of the AUTEK and myself, I wish you success with your research and look forward to reading about it in your reports.

Yours sincerely



Madeline Banda

Executive Secretary

Auckland University of Technology Ethics Committee



MEMORANDUM

To Claudia Zagreanu
CC
FROM Stella McFarlane
SUBJECT AUT Counselling services for research participants
DATE 12th August 2008

Dear Claudia

As manager of AUT Health Counselling and Wellbeing, I would like to confirm that we are able to offer confidential counselling support for the participants in your AUT research project entitled: *re "Esol students and academic success: The role of campus, faculty and peer support"*.

The free counselling will be provided by our professional counsellors for a maximum of three sessions and must be in relation to issues arising from their participation in your research project.

Please inform your participants:

- They will need to drop into our centres at WB219 or AS104 or phone 921 9992 City Campus or 921 9998 North Shore campus to make an appointment
- They will need to let the receptionist know that they are a research participant
- They will need to provide your contact details to confirm this
- They can find out more information about our counsellors and the option of online counselling on our website

http://www.aut.ac.nz/students/student_services/health_counselling_and_wellbeing

If any of your participants are current AUT students, they are also entitled to see us re any of their counselling issues.

Yours sincerely

Stella McFarlane

Manager

Health, Counselling and Wellbeing