

2018

# Effectiveness of a University Bilingual Degree Program Among Overseas Chinese

Sherry Liu  
*Walden University*

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# Walden University

College of Social and Behavioral Sciences

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Sherry Liu

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Walden University  
2018

Abstract

Effectiveness of a University Bilingual Degree Program Among Overseas Chinese

Students

by

Sherry Liu

MPA, Fairleigh Dickinson University, 2003

BS, People's University China, 1982

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

August 2018

## Abstract

The language and communication skills of foreign students have long been a concern in U.S. universities. The majority of U.S. universities require foreign students for whom English is not their native language to take English language proficiency tests such as the Test of English as a Foreign Language (TOEFL) as part of admission requirements. Some universities have included interventions to increase the success of Chinese students against their struggle to understand English course content. One such program is the Gateway to Successful Tomorrow Bilingual Degree Program (GST). The gap to be addressed on this study was that the effectiveness of GST has not been formally evaluated among foreign students particularly overseas Chinese students studying at U.S. universities. The purpose of this study was to examine the effectiveness of the GST among overseas Chinese students studying at U.S. universities as measured through students' grade point averages (GPA) and TOEFL scores. The theoretical framework that guided this study was the Vygotsky's sociocultural theory. The quantitative study used a causal comparative design to gather quantitative data from student achievement records and TOEFL scores. Pearson's correlation analysis and analysis of variance were conducted to predict if underlying relationships exist among variables. Key findings of the analyses showed that GST students had a significantly higher GPA than non-GST student. However, results also indicated that there was no evidence that the GST program significantly improved TOEFL scores. The GST program had an overall positive impact on the international Chinese students' academic performance and with continued research international students stand to gain even more from this program.

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## Chapter 1: Introduction to the Study

### **Background of the Study**

International students face difficulties while adapting to life as a student in the United States (Charles-Toussaint & Crowson, 2010; Crocket & Hays, 2011; Khawaja & Stallman, 2011; Zhou, Frey, & Bang, 2011). Those challenges impact the ease with which an international student adjusts to a new academic environment and they include language difficulty, finances, academics, psychological or emotional adjustment, social connections, and in some cases, hostility (Lin, 2012). Deficiencies with an international student's ability to adapt to the academic culture in the United States affect university retention of those students. English language proficiency is an important factor in the international student's acculturation and it has been examined in this study.

### **Framework of Study**

Utilizing a sociocultural theory developed by Vygotsky in 1978, individuals can be understood in a way that allow for the implementation of new administrative policies for education. In sociocultural theory, it is thought that the mental functioning of humans are organized by cultural concepts, activities, and artifacts (Lantolf, Thorne, & Poehner, 2015). New cultural artifacts are understood over time and are formatted to allow individuals to completely monitor or manage their behavior. The understanding of the developmental process emphasizes research in which to create processes wherein intervention can occur to improve the educational environment of students.

The sociocultural theory incorporates the use of tools, and humans are thought to have a more expanded ability with a contributory tool rather than the natural skills they

are born with (Lantolf et al., 2015). New pedagogical structures and policies can be implemented to assist in the creation of intervention methods for learning new languages (Lantolf et al., 2015). However, tools may limit the users in design. Vygotsky's theory on proximal development analyzes whether there difference occurs between a student who is provided help or tools, and a student who has no access to such provisions. This theory can propose a more investigative framework that allows for new public policy concepts to be identified within the social environment for learning a second language.

Acculturation is "the process of cultural change that occurs when individuals from different cultural backgrounds come into prolonged, continuous, first-hand contact with each other" (Redfield, Linton, & Herskovits, 1936, as cited in Celenk, 2011, p. 146). Individual or group values, attitudes, and cultural identity, as well as characteristics of the receiving environment, will determine the degree to which the acculturation process has been impinged. This study will use acculturation theory to understand how English language proficiency relates to academic achievement, and how the Gateway to Successful Tomorrow (GST) bilingual degree program impacts the student achievement of international students.

Acculturation theory encourages the successful adaptation of international students to to new cultural environments (Berry, 2009). According to Ojeda, Castillo, Meza, and Piña-Watson (2014), the academic performance of international students tends to be better when there is balance between maintaining their own cultural background and adapting to the academic culture of the host educational institution. The criticism of this view is that the context, such as educational institutions, should also play a role in



helping international students adjust academically (Berry, 2009).

Many international students have English as their second or third language (Li et al., 2010). Moreover, international students often overestimate their English language proficiency, which can cause stress once they realize language limitations and difficulties (Terzian & Osborne, 2012). Given that language proficiency can facilitate cultural adjustment (Zhang & Goodson, 2011), it underscores how acculturation through language proficiency can contribute to the increase or decrease of the academic performance of students.

### **Problem Statement**

The problem to be addressed on this study is that there are still insufficient empirical evidences on the relationship of English proficiency and academic performance of foreign students particularly overseas Chinese students studying at U.S. universities (Green, 2015; Martirosyan, Hwang, & Wanjohi, 2015). The language and communication skills of foreign students have long been a concern in U.S. universities. The problem persists in educational institutions geared toward internalization and diversity among students (Butler & Hakuta, 2009; Lin & Zhang, 2014). The majority of U.S. universities require foreign students for whom English is not their native language to take English language proficiency tests such as the Test of English as a Foreign Language (TOEFL) as part of admission requirements. Though most U.S. universities require a score of more than 80 on TOEFL to be admitted, overseas Chinese students still struggle to understand English course content and communicate with peers whose native language is English (Padilla, Fan, Xu, & Silva, 2013; Uchikoshi & Marinova-Todd, 2012). Thus, some

overseas Chinese students fail to meet required grades, struggle to increase grades, or even have difficulty maintaining grades when they are back in their homeland (Li, Chen, & Duanmu, 2010; Orleans, 1988). Upon identifying this problem among Chinese students, some universities have included interventions to increase these students' success. One such program is the GST at North Jersey University. While there is anecdotal data for program success, this program has not been formally evaluated. Without an understanding of the strengths and weaknesses of this program, administrators will not be able to effectively support Chinese students, with those students likely, as a result, to either drop out of school or take more than two years to complete the associate's degree.

### **Purpose of Study**

The purpose of this study is to examine the effectiveness of the GST among overseas Chinese students studying at U.S. universities as measured through student's grade point average (GPA) and TOEFL scores. To address this gap, this study will use a causal comparative design where quantitative data has been gathered. Quantitative data are derived from student achievement records and TOEFL scores. These data have been obtained from historical school documents, official personal records, and proprietary information from federated databases upon the approval of human subject studies by the Institute Review Board (IRB).

The actual study has been based upon classes from which proceed as cohorts, namely students in the Cheng Gong GST at North Jersey University. This program admits Chinese-speaking students with English proficiency levels lower than 79% on

their TOEFL exam. Within the program they both learn English and at the same time earn an associate in arts degree, as they progress through courses at first in English and Chinese to eventually those given exclusively in English. The GST program develops students' English writing and speaking skills through a professional and structured program of study with the objective of earning an associate's degree in two years.

### **Research Questions**

RQ 1: Is there a significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University?

$H_01$ : There is no significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University.

$H_a1$ : There is significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University.

RQ 2: Is there a significant difference in students' GPAs and TOEFL scores before and after their participation in Gateway to Successful Tomorrow (GST) Bilingual Degree Program?

$H_02$ : There is no significant difference in students' GPAs when they start with comparable TOEFL scores due to their participation in Gateway to

Successful Tomorrow (GST) Bilingual Degree Program.

H<sub>a2</sub>: There is a significant difference in students' GPAs when they start with comparable TOEFL scores due to their participation in Gateway to Successful Tomorrow (GST) Bilingual Degree Program.

H<sub>3o</sub>: There is no significant difference in students' starting TOEFL scores when they obtain comparable GPAs due to their participation in GST.

H<sub>3a</sub>: There is significant difference in students' starting TOEFL scores when they obtain comparable GPAs due to their participation in GST.

### **Nature of the Study**

A quantitative causal comparative study will be utilized for this study. The quantitative method is the empirical investigation of the research question using scientific methods. The results gathered are numerical, and therefore, can be analyzed statistically to answer the hypothesis (Creswell, 2013). According to Hopkins (2008), a study utilizing student achievement scores and language proficiency, the quantitative research method is a suitable approach in assessing relationships between the two variables.

A causal comparative research design deals with identifying not only relationships but also the differences between two groups or more on a quantitatively measured dependent variable (Cohen, Manion, & Morrison, 2013). A causal comparative design is appropriate for both the determination of association and causal analysis regarding relationships between study variables and groups (Nimon & Reio, 2011). The purpose of this study is to determine if association and causation exists among the variables and thus both Pearson's correlation analysis and analysis of variance (ANOVA) will be conducted

to predict if underlying relationships exist among variables.

The target population of this study is the overseas Chinese students studying at U.S. universities. Purposive sampling will be conducted to make sure that participants are within the parameters set for the study (Haas, 2012). The inclusion criteria for this study are the following: must be registered as an overseas student, English language is not his/her first language, must come from the Chinese race, must be 18 years old and above, and must have been enrolled and finished the Cheng Gong GST Bilingual Degree Program at North Jersey University.

The sample size for this study was computed using G\*Power based on three factors: effect size, level of significance, and power of test. Effect size denotes the extent or the degree of relationship between the dependent and independent variables (Haas, 2012). According to Haas (2012), effect sizes are commonly categorized per small, medium, and large effect sizes. A medium effect size is normally used for quantitative studies as it balances the restriction of being too lenient and too strict to identify the magnitude of the relationship between variables. The level of significance refers to the probability of rejecting the null hypothesis given that it is true. The level of significance is also referred to as Type I error, which is usually set equal to  $\alpha = .05$  (Hox, 2002). Finally, the power of a statistical test refers to the probability of falsely rejecting a null hypothesis, which is usually set to a value of .80 (Hox, 2002). Using a medium effect size ( $f = 0.30$ ), a significance level of  $\alpha = .05$ , and an 80% power of test, the computed minimum sample sizes required if Pearson's correlation analysis and ANOVA are used are 64 and 128, respectively. Because the use of ANOVA requires larger sample size then

it must be followed. Thus, there should be at least 64 overseas Chinese students in each group whose student and English proficiency records will be collected from the selected university.

As mentioned, this study will employ a quantitative method to address the purpose and research questions stated. Specifically, the descriptive statistics and inferential statistics will be conducted. Descriptive statistics such the frequency distribution and measures of central tendency will be used to characterize the data that have been gathered from the surveys (Hoe & Hoare, 2012). On the other hand, inferential statistics specifically the Pearson's correlation analysis and ANOVA will be used to draw conclusions about the relationship between the English language proficient levels and students' GPA and consequently the effectiveness of GST in the students' academic achievement (Leedy & Ormrod, 2010).

### **Significance of Study**

The theoretical contribution of this study is the expansion of the sociocultural and acculturation theories through a more precise understanding of the relationship between English language proficiency and academic performance of overseas Chinese students. Existing literature focuses on the deep understanding of this theory; however, research on the practical application of these theories was not extensive. International students are exposed to different cultures and environment that they are used to back on their home country once they start schooling in a different country. Like any other foreigner, an individual will experience detachment from the environment because of many factors including language. For students, being an international student is also considered a

stressful situation at first as he or she slowly identifies him or herself on his or her new environment. Such situation can create stress on the student that is usual as a student cope to his or her new environment. Thus, this study is important, as this will specifically examine how the difference in language used affects their school achievement.

This issue is importance to overseas Chinese students because there is an increasing number of Chinese students who pursue their studies in the United States for the past decades. The rising population of Chinese students on American campus underscores the issues related to English proficiency levels and study habits and abilities. This study's results may lead to a reevaluation of policies regarding university acceptance policies and standards and improved support for students with the objective of their success in American higher education. Determining whether a relationship exists between English language proficiency and the academic achievement of overseas Chinese students enrolled in universities in the United States is important to enable development of programs to improve the English language proficiency of international students.

### **Definitions**

The definitions below will be used throughout the study for the terms listed here.

*Acculturation*: Acculturation is defined as the merging of culture because of prolonged and continuous contact (Padilla, Fan, Xu, & Silva, 2013).

*English proficiency*: The ability to write, read, and speak the English language (Lin, 2012).

*Grade point average:* The measure of a student's academic achievement at a college or university based on the total number of grade points divided by the total credits awarded over a given period (Lin, 2012).

*Overseas Chinese student:* This is defined as students who are of Chinese descent who are studying outside of the People's Republic of China (Padilla, Fan, Xu, & Silva, 2013).

*TOEFL score:* The TOEFL score is the result achieved on a standardized test to measure English proficiency for overseas students (Lin, 2012).

### **Assumptions**

Several assumptions will be employed in the study. First, it is assumed that there are sufficient number of overseas Chinese students in North Jersey University. Second, it is assumed that the school administrators readily have the data at hand. It is also assumed that all data are collected accurately. Lastly, it is assumed that school administrators will allow the conduct of the study using samples from their university.

### **Limitations**

Several limitations will also be considered in the study. The definition of the constructs of the study will be limited to how each is defined in existing measures used in school reports. Data other than those available at hand will not be included in the study. The study will also be limited to samples that the administrators are willing to include in the study given the qualifications using the inclusion criteria. Thus, selection of participants will be based on the sampling used by school administrators and not randomly as desired.



### **Delimitations**

The study will be delimited to overseas Chinese students from North Jersey University. Thus, overseas students from other race or other university will not be included in the study. The study will also be delimited to students who have complete set of data based on the variables considered in the study. Overseas Chinese students who have an incomplete set of data will be excluded from the study. Finally, the study will be delimited to the available data in official records of the school. No new data will be collected for the study.

### **Summary**

The problem addressed in this study is that there are still insufficient empirical evidences on the relationship of English proficiency and academic performance of foreign students particularly overseas Chinese students studying at U.S. universities (Green, 2015; Martirosyan, Hwang, & Wanjohi, 2015). The purpose of this study is to examine the effectiveness of GST Bilingual Degree Program among overseas Chinese students studying at North Jersey University as measured through student's grade point GPA and TOEFL scores. A causal comparative design where quantitative data such as student's achievement records and TOEFL scores was obtained from historical school documents, official personal records, and proprietary information from federated databases upon IRB approval. The study will be an expansion of the sociocultural and acculturation theories through providing a more precise understanding of the relationship between English language proficiency and academic performance of overseas Chinese student. Existing literature focuses on the deep understanding of this theory; however,

research on the practical application of these theories was not extensive. International students are exposed to different cultures and environments once they start schooling in a different country. For students, being an international student is stressful situation as he or she slowly identifies him or herself on his or her new environment. Such situations can create stress as the student learns to cope with his or her new environment. Thus, this study is important, as this will specifically examine how the difference in language used affects their school achievement.

## Chapter 2: Literature Review

### **Introduction**

Multiple studies have been conducted over the past decade analyzing the increase of international students in the United States, with emphasis on the surge of students from China (Li et al., 2010; Terzian & Osborne, 2012; Yan & Berliner, 2011). Given that China has the largest number of students studying in the United States this group has received much attention by researchers seeking to understand the adjustment period and acculturation process (Celenk & Van de Vijver, 2011; Lanming & Hanasono, 2016; Lowinger, et al, 2014;). Multiple researchers have exposed a connection between English language proficiency and a student's ability to adjust to their new environment (Butler & Hakuta, 2009; Fass-Holmes & Vaughn, 2014, 2015). According to Bartlett and Fischer (2013), thousands of Chinese applicants are hiring agencies to assist them in applying to and prepping for American universities, indicating that many of the students applying do not understand the application process or comprehend the English application instructions. Considering the various studies analyzing Chinese students' surge into U.S. universities, there is a lack of research available since 2012 that looks at the support systems universities have in place to facilitate international students.

The purpose of this study is to examine the effectiveness of the GST Bilingual Degree Program amongst overseas Chinese students studying at U.S. universities as measured through students' GPA and Test of English as a Foreign Language (TOEFL) scores. To address this gap, I used a causal comparative design to gather quantitative data.. Quantitative data will include students' achievement records and TOEFL scores.

These data will be obtained from historical school documents, official personal records, and proprietary information from federated databases upon IRB approval.

### **Literature Search Strategy**

The following academic search engines were utilized in support of this literary review: Google Scholar, EBSCOhost Online Research Databases, ProQuest, Educational Resource Information Center (ERIC) and JSTOR: Journal Storage. The key search terms and combination of search terms that were input to various online databases included the following: TOEFL Chinese US university 2013, US Chinese students' communication, US students Chinese culture, US Chinese students culture, TOEFL Chinese US university 2014, US Chinese students' language, TOEFL Chinese US university 2015, US Chinese students stress, Chinese students in US Language barrier, and US Chinese students' language proficiency. All the key terms used could yield studies that were relevant to the problem and research questions.

The literature referenced in this review was primary published between 2012-2016. Additional studies written from 2000-2011 were utilized to discuss Chinese cultural norms about education and bilingual proficiency. The combination of the literature used will help to support the need for this study as it shows the gap of research which has failed to evaluate the effectiveness and need for a program like GST.

In this literature review, the researcher will provide an expanded background to the research problem discussed in the earlier chapter. The first section identifies the literature search strategy used to write the literature review. The second section focuses on the theoretical framework of the study, which is the sociocultural and acculturation

theory. The third section focuses on discussing the traditional Chinese view of education and higher learning with an emphasis on English language proficiency in the classroom amongst international students. The fourth section focuses on the psychosocial aspect of acculturation and sociocultural theories. The final section of the literature review focuses on the support systems U.S. universities have in place to help international students adjust to their new environment and obtain academic success. The chapter ends with the summary and conclusions of the literature review.

### **Theoretical Framework**

Vygotsky's sociocultural theory can be employed within the context of bilingual student learning and how it aids in the ability to understand what students are experiencing and whether new policies and school intervention aids their learning processes (Lantolf et al., 2015). When viewed within the framework of proximal development in a sociocultural context, it is possible to understand whether developmental processes employed aid students. It is thought by Lantolf et al. (2015) that a controlled mediation process is how human mental functioning can develop a new talent or skill, rather than through natural talent. This mediated process is structured and created by activities, cultural artifacts, and concepts.

Humans employ existing processes which they use to create new outcomes that can influence and help them manage their behavior (Lantolf, et al. 2015). Additionally, new pedagogical structures can be developed and implemented to give individual students an extensive tool that can be used to aid them in their learning processes. Lantolf et al. (2015) noted that humans learn through tools, and not through their natural

capacity. This can come in the form of programs or interventions, and studies viewed within this framework allows investigators in the field to better understand the outcome of their intervention programs.

Sociocultural theories provide a lens by which it is possible to understand whether programs being employed can be useful both for the students and for pedagogy.

Vygotsky's zone of proximal development defines the difference between what a student learner can amount to without help and what that student can do with aid. This aids in creating more comprehensive pedagogical structures and constructive new policies which can be implemented into a social learning environment. Another theoretical contribution of this study is the expansion of acculturation theory. Acculturation is the adoption of a cultural groups behaviors which are different than one's own culture. There are five types of acculturation, which include assimilation, integration, separation, marginalization, and transmutation. The literary review will give multiple examples of separation being the dominant type of acculturation taking place amongst Chinese international students within the US.

There has been much focus by researchers on the patterns of acculturation by Chinese international students studying in the United States. Berry (2009) observed the behaviors of students and compared his findings against the traditional customs of Chinese culture, concluding that while social environment does hold some merit to having impact most students were governed by their Chinese heritage and established corresponding behaviors. Expanding on the behaviors and adjustment of Chinese students, Bertram et al. (2013) found that learning to speak English was a stressor for

Chinese students that directly influenced their self-confidence and social behavior. Additionally, Fass-Holmes and Vaughn (2015) investigated a correlation between low TOEFL scores and poor academic performance in Chinese international students. Ultimately Fass-Holmes and Vaughn concluded that while many students struggled socially, they could do well academically where text books, group discussion and relaxed teaching styles were utilized by professors. A significant gap in research lay in the construction of a formal support program for Chinese international students that combines social and academic support. Despite Chinese students being the largest number of international students studying in the United States, little evidence is available that indicated if U.S. universities are making special preparations to assist with the adjustment of these students.

Utilizing a causal comparative style, this study aims to evaluate the effectiveness of the GTS program as implemented with Chinese students in the US which includes the comparison of GST participant's academic success and English proficiency to non-GST participants. Causal-comparative designs generally involve the analysis and comparison of pre-existing groups of people. As it traditional for causal comparative style, dependent variables cannot be manipulated to skew results towards a desired outcome (Schenker & Rumrill, 2004). Causal comparative style looks for associations amongst variables and attempts to determine the cause and consequence of existing differences amongst groups.

When conducting causal comparative style research, specific steps must be followed to achieve appropriate results. First, the researchers must formulate the problem by identifying and defining area of interest. Second, two groups to be compared must be

selected and an illustration of how groups differ must be established (Schenker & Rumrill, 2004). Causal-comparative design can have several independent variables, but the defining characteristic of causal-comparative research is that the independent variables must be categorized based on relevance and must never be manipulated, just as dependent variables may not (Schenker & Rumrill, 2004). No limit of instrumentation exists for this style of research (Schenker & Rumrill, 2004).

For this study the two defined groups to be examined are GST participating students and nonparticipating students. Both groups of students are Chinese international students studying in U.S. universities. The grades of both groups will be compared to each other to find if a difference exists between students with a formal school support system in place, which in this case would be GST, and students who do not have a formal school support system in place.

### **Review of Relevant Literature**

The federal policies found in educational programs are highly connected to sociocultural contexts which are important for multi-lingual societies (Beynon, Ilieva, & Larocque, 2005). Ministries and investigators of education are obligated to construct policies, educational programs, and projects for both minority and immigrant students to benefit the nation. Beynon et al. (2005) found that in Canada specifically, many of these programs touch the lives of students from kindergarten to grade twelve, and is useful for the proper integration of French and English bilingual cultures that innervates all aspects of Canadian society. To better understand how equality is found between different cultural groups, by allowing the proper education of language, policy makers must dissect



the complexities of cultural relationships within the context of policy. Beynon et al. (2005) believed that to gain full educational participation of students who are minorities or descended from immigrants, policy makers must create approaches that will de-marginalize cultural groups through solving linguistic problems to promote cultural and racial integration. Sociocultural theories aid research designs by allowing investigators to create approaches that are inclusive of diverse groups by developing appropriate educational strategies. This prevents the labeling of minorities as those who do not have English language proficiency, and the lack of acknowledgement towards unique heritages as well as their cultural lifestyles. Sociocultural examinations of linguistic diversity and integration can allow for policy provisions with aid in the construction of inclusive programs.

Acculturation entails a great deal of factors as it is the process of adjusting to one's new environment after leaving their own culture. Celenk and Van de Vijver (2011) analyzed the most common methods of measure used to evaluate acculturation to determine if these measuring systems were in fact accurate in their assessments. To evaluate the methods, the researchers focused on three aspects of measurement: scale description, psychometric properties and concept and theoretical structure. Scale descriptors were defined as name of the scale, authors, year, target group, age group, subscales, and number of items. Psychometric properties were defined as reliabilities. Conceptual and theoretical structure were defined as acculturation conditions, acculturation orientations, acculturation outcomes, acculturation attitudes, acculturation behaviors, conceptual model and life domain. Celenk and Van de Vijver (2011) found

that most the reviewed acculturation measures were short, single-scale instruments that were directed to specific target groups and these instruments were more specifically useful for assessment of behavioral acculturation outcomes rather than acculturation conditions and orientations. Celenk and Van de Vijver (2011) also found that the most accurate and effective method of measurement was psychometric properties when used to evaluate intercultural relation however cross-cultural validity of the instruments was not determined.

In the U.S today, administrative approaches to bilingual education at the state level tend to create highly polarized policies, where schools have a certain number of programs that allow emergent bilingual children from transitional programs to adopt English expediently (Bybee, Henderson, & Hinojosa, 2014). These approaches are unique to each state, where local policies differ to create dual language programs to create bi-literacy and bi-lingualism. Public policy reflects the ideology that multiple languages utilized in education help to reflect the wider language ideology of linguistic pluralism, which further allowed for native language instruction and bilingual education. Unfortunately, many trans-cultural communities have found that their languages and cultures are systematically segregated, and devalued despite the variances in language and culture. “Inappropriate” English only instruction was found to be a major cause of underachievement in Mexican-origin children, which could also reflect broadly upon other immigrant children (Bybee et al., 2014).

Once the Bilingual Education Act in 1968 was enacted, there was considerably more tolerance towards bilingual education although the funding that backed this law was

not always available for bilingual students (Bybee et al., 2014). In the Supreme Court case *Lau vs. Nichols*, it was stated that educators were obligated to make efforts to provide more attention to the needs of children at a linguistic disadvantage. Educators and policy makers at schools were then obligated to pay better attention to bilingual students. Despite these advances in policy reform regarding bilingual education, and bilingualism in general, the United States still has many conflicting approaches and confusing assimilation policies which don't properly address the population of bilingual students (Bybee et al., 2014). More recently, policy changes that are being developed continue to bring more dynamic alterations which help to empower reform and policy changes concerning biliteracy and bilingualism in schools, along with improved programs to help aid in achieving English proficiency.

Ojeda et al. (2014) examined the multiple dimensions of cultural adjustment and identity in 515 Mexican American college students studying in the United States. For the study Ojeda, et al. (2014) utilized a path analysis model to determine the motivation factors and deterrence's of a successful college experience. Specifically, the researchers looked at life satisfaction influenced by acculturation, enculturation, White marginalization, and Mexican American marginalization. Ultimately the researchers found that many students were motivated by the feeling of white superiority and the expectation of their own failure from their white peers. Moreover, the students also demonstrated a persistent feeling of discrimination in the educational experiences even though these students were American citizens by birth. Despite these feelings of judgement from peers, the students were found to possess a greater drive to be successful.

Also, students were found to grow a stronger bound to their own cultural heritage to establish personal identity (Ojeda, et al, 2014).

To understand more about the performance and experiences of Chinese international students in the United States, Yan and Berliner (2011) studied the struggles international students faced that were associated with adjusting to their new environment. Yan and Berliner (2011) found that despite the large number of Chinese students attending U.S. universities, most students reported that the schools were not prepared or equipped to assist the students. Further, despite the mandatory TOFEL score of 80 that all international students must meet before being considered for candidacy as an international student, Chinese students appear to struggle significantly with the language barrier, specifically understanding context and implication when communicating with a native English speaker. While many students reported having attended an English composition or familiarization course during their first year at the school, most students felt that the schools had failed to learn anything about the normal classroom practices of the Chinese students or prepared the Chinese students for the norms of an US classroom. Moreover, research indicates that Chinese students are more likely to have lower grade point averages and suffer from social isolation (Yan & Berliner, 2011).

Lowinger et al. (2014) examined 264 Chinese international students studying in the US. The researchers sought to identify the role of academic self-efficacy, acculturation difficulties, and language abilities on procrastination behavior. Lowinger et al. (2014) ultimately found significant variances amongst male and female students. Particularly male students struggled significantly more with academic procrastination

which was directly related to homesickness and discrimination from other students. For females, significant correlations with academic procrastination were found for academic self-efficacy, English language ability, and culture shock & stress. For the female students, while the impacts added to the students' stress, the students' grades were not reflective of these variables. Other variables were also evaluated amongst all the students to include age, marital status, undergraduate/graduate status, or length of time in the United States- none of which were shown to have any bearing on the students' performance. Given these findings, gender was the only variable to have any significance.

In a study on 76 young Hong Kong children, Yeung, Siegel, and Chan (2013) discovered what effects a 12-week program had utilizing phonological awareness. These children were learning English as a second language, and were randomly assigned to receive lessons that either had phonological awareness integrated in vocabulary learning activities, or without them. The latter included writing tasks that contained no phonological instructions. Students were tested on phonological awareness on phoneme, rhyme, and syllable levels as well as reading and spelling in English. This was done before and after they participated in Yeung et al.'s (2013) program. It was found that children could perform at impressive levels compared to groups that did not participate in the program; the children who participated performed better in English word spelling, reading, as well as phonological awareness at all levels of vocabulary. Phonological awareness instruction that is integrated in vocabulary learning can be incredibly beneficial to very young children who are learning English. Within the context of

sociocultural theory, this study created a tool that was employed by teachers to enhance the talents of its students, where the phonological instruction program aided kindergartners. The ability for a program to be effective on children at such a young age has great implications for future policy makers of bilingual programs.

Wang et al. (2015) sought to understand the dynamics of an American university classroom regarding group discussion habits when the classes included Chinese international students. Using Hofstede's five cultural dimensions, the researchers examined the factors effecting the Chinese students' performance in the classrooms. Wang et al. (2015) surveyed 138 students from six US universities. After examining the survey results Wang et al. (2015) then chose to interview three selected faculty members amongst the universities, as well as 18 students. The researchers found that 75% of the students struggled with group discussions in their classrooms due to their lack of confidence in their own ability to speak English. Also, it was found that the longer the student had attended the university the more comfortable they became with speaking English, however the standard adaptation time for the students was between one to two semesters of school. Overall students reported that their experiences in school were positive and noted that engaging in social functions with peers and eventually making some friends were very helpful in adjusting to their environment and with gaining confidence speaking English (Wang et al., 2015).

When evaluating acculturation, it is also necessary to consider what type of culture the student originates from. The two relevant types of cultures are individualistic and collectivists. As suggested by the name, individualistic cultures are self-reliant,

basing their decisions from their own thoughts and feelings and not turning to family and friends for guidance or approval. These cultures are more autonomous in characteristic and each person takes care of themselves. In consequence, collectivist cultures are codependent on family and friends and seek the approval of others. These are people that define themselves by the quality of relationships they have with family and friends and place honoring one another over the importance of selfish gain (Sun & Hernandez, 2012). Chinese culture is labeled as collectivists given the amount of emphasis they put on family support, parental involvement and leadership, and the importance of legacy for each family.

### **Traditional Chinese View of Education and ESL**

U.S. education preferred. García, Pujol-Ferran and Reddy (2013) discussed the surge of international students into U.S. universities as it related to the Civil Rights Movement of the 1960s. After the United States' movement to include all genders, races, and nationalities into the learning environment US teachers found themselves facing new challenges as they strived to adjust to an international classroom for the first time. It is noted that many US teachers held resentment towards international students and immigrant college students, treating the students differently than their American peers in the classroom (García, Pujol-Ferran & Reddy, 2013). Despite the frustrations of academia, the international community saw the US educational doors opening as a major opportunity for enhancing their own countrymen. The popular view of American education would grow into the 1980's when the surge of Chinese international students studying in the US would first begin to be recognized (García, Pujol-Ferran & Reddy,

2013). This expansion of shared US educational opportunities came as the Cold War was ending and the new concept of globalism was beginning to reshape the world and education.

The Chinese culture views education as a high priority and the US collegial system is held in high esteem. Chinese families view an American education as a landmark milestone and parents are willing to make serious sacrifices to obtain such an education for their children. Such sacrifices included financial distress to afford such an education, and even immigration to have their children residing in the US for educational priority (Wong-Lo & Bai, 2013).

Beyond the family dynamic, Griner and Sobol (2014) sought the Chinese students' perspective on the concept of studying abroad. The primary question the researchers asked their test survey participants was, is globalization the motivation for studying abroad or is there another reason Chinese students choose to study outside of China (Griner & Sobol, 2014). It was found that the students had multiple motivations for studying abroad which were broken down into five specific categories which included personal dynamic, reverse motivation, parental influence, globalization persuasion, and outlying factors (Griner & Sobol, 2014).

The influx of students is related directly to the variety of programs US universities offer as compared to other countries educational systems. Specifically, an American education is set apart due to the checks and balances and essentially the quality assurance built in by most universities. This includes continued education for professors



with an emphasis on skills for effectively working with international students (DeZure, et al., 2012).

**Desire to learn English.** A vital part of these various programs is the added emphasis by US universities to expand the reach of US education to non-native English speakers. Padilla et al. (2013) purposely sought to compare the Mandarin proficiency of students of Mandarin heritage to those students not of Mandarin heritage. The study found that heritage-based Mandarin speakers tested higher in language proficiency in second and third grade, however, as all children progressed through the grades there was no difference in proficiency between heritage and non-heritage students. Also, students in the immersion program initially tested lower in overall English proficiency in second and third grade, but after a couple years in the program the immersion students tested higher than non-immersion students in all subjects (Padilla et al., 2013). No significant evidence was available comparing the male to female student results. The results of this study are consistent with multiple studies examining the adaptability of children when learning a second language and the impact bilingual fluency holds on overall academic performance long term. Many US universities are seeking to design their programs to facilitate language immersion and strategic teaching to native and non-native speakers (Padilla et al., 2013).

A separate study was conducted in Hong Kong amongst fifth graders to examine their motivations for reading and learning English as a second language. Lin, Wong and McBride-Chang (2012) tested one hundred and four students on reading comprehension and multiple aspects of their self-image in relation to their ability to communicate in both

languages. Surprisingly the researchers found that the students were not motivated by parental approval or school grades regarding advancing their reading comprehension, but rather, the students were motivated specifically by social engagement (Lin, Wong & McBride-Chang, 2012). These findings are relevant for highlighting the impact of English fluency to the students' self-image and self-esteem.

**Application process.** China has been the leader with the greatest number of international students in the US for two decades now and their numbers continue to increase. As of the 2011-2012 school year Chinese students made up 25% of all international students studying in the US, with nearly 50% of them in undergraduate and 50% in graduate programs (Morris & Maxey, 2012). Morris and Maxey (2012) predicted that the number of Chinese international students applying to U.S. doctoral programs would increase by as much as 18% by 2020. Considering how many Chinese students are studying and planning to study in the United States, a U.S. school must determine which students are best qualified.

**Fluency of students.** Given the thousands of international students studying in the US, it is important to consider the need for English fluency when evaluating a candidate for acceptance into a university. Fass-Holmes and Vaughn (2014) looked for a connection between international students who struggled academically and lack of proficiency in English comprehension. Three cohorts of at least 300 Caribbean-national students studying in the US, particularly in Florida universities, were evaluated for overall academic success. Findings showed that most students were required to take a course in English Comprehension, with the average score of the students being below a

“C”. However, students were shown to achieve overall academic success in all classes despite difficulties with the English language. This success was shown to be a result of strong familial and social support, religion, and self-motivation (Fass-Holmes & Vaughn, 2014). Like most Chinese international students in the US, these cohorts were mostly consisting of first generation English-learning students. Also, significant to the Chinese students are the familial connections which includes regular contact with parents and family pride regarding the students bettering themselves through an American education which would ultimately lead to the betterment of the entire family.

Expanding on their 2014 publication looking at the variables that affect international student success in US universities, Fass-Holmes and Vaughn (2015) examined two cohorts of Chinese international students attending California universities with the goal of understanding how students could still perform well academically without gaining true English proficiency. In solving this conundrum, the researchers evaluated the current requirements for English proficiency and sought to determine what type of measuring rubric would be most appropriate for English as a Second Language students at the college level (Fass-Holmes & Vaughn, 2015). It was determined that 260 US universities require international students to pass the TOEFL, preferably with an 80 percent or better, when applying for admission to the schools. Despite the rubric used for acceptable scores, the researchers sought to determine if there was a correlation between lower TOEFL scores and lower academic performance upon admission (Fass-Holmes & Vaughn, 2015). This scale is not permanent though as some schools may have lower standards depending on the students’ country of origin and means of payment. Ultimately

the study revealed that while many students required several months before engaging in regular social events due to feelings of inadequacy with communication in English, many students did fine when they had access to an English text book and the ability to use multiple resources to complete schoolwork.

Whether China is a country that is given exceptions for scores at most schools seems unclear but what is clear is that Chinese applicants are not willing to take the risk of being viewed as ill prepared for school in the US. To avoid rejection and essentially establish the best application possible many Chinese families have turned to hiring private agencies to assist them (Bartlett & Fischer, 2013). These agencies are supposed to assist the student in completing all application requirements including obtaining school transcripts, application essays, and required test scores like the TOEFL. While the concept of an agency to assist, application may sound appealing to some families there are concerns emerging among Chinese families and US admissions offices as to the validity of the applications the agencies are submitting. Why is this a concern? Bartlett and Fischer (2013) gave two glaring examples when a Chinese international student attending an east coast school reported that her parents had received an extensive bill from the agency they hired which included billing the family for creating transcripts. The student reported that when her parents considered the charges on the bill they found that the students high school transcripts had been forged by the agency, rather than submitting her actual official transcripts. Another example of fraud was uncovered when Bartlett & Fischer (2013) spoke with a college admissions counselor from a southern US university. The admissions counselor reported that at one time he had received a packet of 15

applications that were all identical to each other, with the only difference being the students' names.

**Indicators of language learning ability.** Min (2013) studied phonological awareness as it effects a person's ability to learn a new language. A direct link between one's phonological awareness of their first language was found to correspond with one's ability to understand an additional language. Phonological awareness relates to one's ability to recognize specific sound and letter sequences within one's native alphabet. This includes understanding rhythms and syllables of a spoken language. This connection supports the necessity of bilingual programs which helps student to expand their native and second language comprehension and communication skills (Min, 2013).

To approach cross-cultural learning from a more unconventional angle, while also working with the concept of phonological awareness as it relates to understanding language, Ward (2014) looked at the incorporation of Western music into Chinese dominant classrooms. While the expected result was that the students would perform better in their classrooms with the introduction of Western music, instead the researchers found something very different. The presence of the music did interest the international students. The need for incorporating English discussion into the musical environment was necessary to facilitate the students picking up on the rhythm of the English language. Additionally, the presence of the music in the classroom helped the students maintain their focus and interact socially with their peers (Ward, 2014).

The establishment of rhythm and syllable relevance in language learning continues to emerge. After studying immigrated Chinese students participating in a

bilingual program in Canada, Hipfner-Boucher, Lam and Xi (2014) found a direct link between Chinese phonological awareness and a student's ability to read English. This finding again relates to a students' ability recognize patterns and rhythms within a language.

**Gender.** Many factors have been found to play a role in Chinese students' ability to learn and understand English. Of these factors of gender has been found to be a distinctive factor. More specifically, female students were found to excel at English much quicker than their male peers (Green, 2015). Green (2015) also found that male students were more likely to avoid social engagement and isolate themselves from their classmates. Female students, however, were more likely to engage with their American classmates and made regular attempts to speak English in and out of the classroom. In addition, males and females were found to have different approaches to how they undertook communication and its impact on their educational experience. Lowinger et al. (2014) found that female students possessed a significant trait of academic procrastination which directly impacted the female students' self-efficacy, English language ability, and culture shock and stress. Despite this trait for procrastination in academic preparing, the female students were found to have no negative evident negative impact on their overall grades. The realization that female students can procrastinate and keep up their performance with their male peers implies that with more structure in their academic studies the female students may be capable of outperforming and exceeding their male peers in overall grades.

English language proficiency and gender were also found to be important to

international students studying outside the US. Zhu (2016) conducted a survey of 201 Chinese students studying in South Korea evaluated the students' ability to achieve academic success in their new environment. Students fluent in English and Korean had higher success rates than those who struggled with language proficiency. Also, much like Green's (2015) findings of females being more likely to succeed in bilingual environments, the same was also found to be true amongst female Chinese studying in South Korean universities (Zhu, 2016).

**English as a Second Language (ESL) students of all age.** While teaching ESL, Lee (2015) discovered valuable approaches that are necessary for tutoring ESL in his program. One being that having cultural sensitivity was incredibly important when implementing his work. Being aware of the students' unique backgrounds provided intuitive knowledge that aided in the interaction between teachers and students. Additionally, interactive learning communities are valuable when traditional lecture teaching styles are employed. Lastly, student teacher relationships were incredibly key, and necessary for students to learn from Lee (2015). Sociocultural theory employed within ESL classes aided in creating an educational approach that can incorporate the unique cultural differences of students who are involved. This theory is beneficial because it incorporates cultural involvement, social interaction, as well as the main tenets of teaching and the educational environment.

In Lee's (2015) study on adult learners in an ESL tutoring service, he found that ESL teachers who attended classroom sessions benefited from a sociocultural approach. These students came from low socioeconomic backgrounds and were made up of many

diverse ethnicities. These two characteristics of participants were major concerns for Lee's (2015) ESL programs, where students tended to discontinue their education or were discouraged due to external factors. Lee (2015) found that bilingual teachers were more influential and provided enhanced teaching in comparison to monolingual teachers, because bilingual instructors had a medium of past and present culture to draw from. Lee (2015) also found that interactive learning communities were far more useful than traditional lectures. This teaching style included creating group workshops and paired activities where teachers oversaw student activity. Some of the benefits of this teaching style included enhanced social interactions, deeper and more successful relationships, as well as greater confidence in the ability to communicate.

Lee (2015) discovered that being cultural sensitive was critical to the happiness of his students and their ability to learn. The teachers' ability to immerse curriculum material in culture allowed students to better relate to teachers. The ability of teachers to employ sociocultural theory enhanced that of the student experiences.

While this research project is specifically related to Chinese international college students, it is significant to first consider the educational values and stress of the Chinese people for children of all age. Given the level of involvement and the expectation of success, Chinese parents commonly institute an environment of homeschooling in addition to their children's regular school attendance. This includes giving their children additional schoolwork and lessons in their home. For this reason, it is especially important for American teachers to give feedback about both successes and failures to aid in the families not solely focusing on the child's struggles (Wong-Lo & Bai, 2013).



Butler and Hakuta (2009) evaluated 61 fourth graders of both English as a first language (EFL) and English as a second language (ESL) finding that EFL students had no variance in reading and auditory comprehension but ESL students struggled significantly. Butler and Hakuta (2009) also found that the ESL students were from lower socioeconomic households, as well as first generation English speakers. Li, Li and Niu (2016) found that Chinese-American immigrant students struggled significantly with adjusting to their classrooms and teachers in all grades K-12 due to the lack of experience the teachers possessed in cross-cultural communication. Students felt that teachers did not understand what they were saying. Moreover, students were often treated as though they did not understand a lesson or needed re-teaching due to the teachers' difficulty in understanding the students' English (Li, Li & Niu, 2016).

As Qiaoya and Xiaoning (2015) found, the most basic of teaching processes can be impactful for beginning English learners. An evaluation of 31 Chinese-English bilingual children's books was conducted which evaluated the books abilities to promote bilingual and multicultural learning amongst children. While many of the books were found to be inconsistent with the suggested subject matter of the title and actual content within the pages, and several books also contained stereotyped illustrations of activities, overall the books were found to promote multiculturalism amongst children. Researchers offered suggestions on ways to improve the quality of bilingual children's books to better benefit children, however, the researchers do support the introduction of bilingual, illustrated children's books to young learners (Qiaoya & Xiaoning, 2015).

Hu, Torr and Whiteman (2014) conducted a study in which five Chinese families living in Australia participated in a home study that evaluated their pre-school aged children. All children in the study came from Chinese as a first language homes and were bilingual with English as a second language. The relationships between the parents and children and the attitudes of the parents towards the concept of their children being bilingual was evaluated. The findings showed that the parents were pragmatic in their opinions of their bilingual children, recognizing the educational and future professional advantages that the bilingual status offered the children (Hu, Torr and Whiteman, 2014).

Researchers Uchikoshi and Marinova-Todd (2012) utilized the multiple regression analysis as they studied the literacy skills of 113 kindergarteners across the US and Canada that specifically spoke Cantonese as a first language and were learning English as a second language. In their research Uchikoshi and Marinova-Todd (2012) found that students who spoke Cantonese as their first language struggled with English vocabulary however, these same students had considerably higher scores in Cantonese letter recognition. As the researcher first suspected, the English dominant group performed significantly higher on English vocabulary and English decoding than the Cantonese dominant group. Likewise, the Cantonese dominant group performed significantly higher on Cantonese vocabulary and Cantonese word reading than the English dominant group. Given their application of the multiple regression analysis, Uchikoshi and Marinova-Todd (2012) found that both groups were equally successful in recognizing Cantonese symbols and memorizing their meanings. Overall the researchers

found that whether the children came from Cantonese dominant or English dominant homes, all the children were capable of character recognition in both languages.

Tong (2014) evaluated the acculturation of Chinese immigrant high school students residing in the US. Tong (2014) found that students exhibited five sociocultural adaptation strategies to adjust to their new environment. These strategies included detailed discussion with their American teachers, creating friendships with their American peers, the utilization of available technology to assist in academic success as well as social advancement, active discussion with teachers and classmates about the cultural differences between China and the US, and being open to the concept of globalism instead of reclosing their opinions to what would be acceptable in their native homeland (Tong, 2014). Given the students' abilities to balance their new environment and maintain their relationship with their homeland they could develop a strong sense of cross-cultural identity which gave the students' the ability to balance their cultures and maintain their sense of self (Tong, 2014).

**Learning English in China.** The Survey of Language Situation in China was conducted in 1997 with the participation of 475,000 Chinese citizens. One of the largest populous surveys ever conducted, one of the primary focuses of the survey was the acceptance and use of English across the Chinese population. Wei and Su (2015) utilized the data from the study to analyze the support of English usage in elementary and secondary educational environments. After much evaluation of socioeconomic class, industrial and professional statures, and age and gender breakdown, Wei and Su (2015) found that foreign language led classes were supported across China and was not

influenced by any significant factors amongst the population. In general, the whole of the Chinese population support foreign language education and exclusively preferred English language instruction over other language alternatives (Wei & Su, 2015).

Qi (2016) evaluated the use of English education in secondary schools across China. Qi (2016) noted that the Chinese Ministry of Education instituted English education into the standard curriculum but school administrators placed less emphasis on English education and a primary focus on Chinese and mathematics. In the research Qi (2016) found that Chinese students placed a great deal of importance on their own English education, specifically pointing out the need for introduction to English education as early as possible.

Mok, Bo and Donghui (2015) evaluated fluency against accent comprehension. 89 Cantonese-English speaking students and 89 Mandarin-English speaking students on their ability to recognize and comprehend English spoken in non-American accents (Mok, Bo & Donghui, 2015). The findings found that the students were more likely to understand English spoken within their own native accents as opposed to understanding English spoken in an accent outside of their own, to include difficulty understanding the American accent (Mok, Bo & Donghui, 2015).

**Communication with Professors.** Bai, Millwater and Hudson (2012) evaluated the perceptions of Chinese professors' in relation to the instruction of the English language within Chinese secondary and post-secondary schools. Bai, Millwater and Hudson (2012) found that the participating professors expressed concerns about the requirement of changing the standard Chinese teaching style to effectively incorporate

English into regular instruction. This concern of how to incorporate English instruction into the Chinese classroom environment parallels many of the feelings US professors have expressed about the accommodation of Chinese students in US classrooms.

Given the hurdles young Chinese immigrant students have faced with the US public education systems, it makes it more understandable that the international college students also have adjustment difficulty when adapting to a US university. For example, Chinese students are often stereotyped in US classrooms as being passive or disengaged due to their frequent lack of classroom discussion participation (Wong-Lo & Bai, 2013). However, when Chinese students were asked why they do not participate, there are two definitive reasons. Firstly, most Chinese students do not feel comfortable speaking English out loud in front of an audience due to lack of self-confidence in their ability to properly speak. Secondly, Chinese classrooms do not engage in discussions, but rather the teacher dictates what is to be learned, which is a significant difference and adjustment for many students who have never been asked to form their own opinions in a classroom previously (Wong-Lo & Bai, 2013).

Lin and Zhang (2014) found that the older ESL students are, the more difficulty they have adopting English comprehension. After interviewing several international students, many of the issues the students have relate back to a language and a cultural barrier. Lin and Zhang (2014) evaluated the US public school system, K-12<sup>th</sup> grade, to evaluate the rating systems in place that evaluate student performance in language primarily, but also other academic disciplines. Extensive data was collected from language experts and English as a Second Language specialists who participated in 20

correspondence studies with over 500 reviewers. These reviewers oversaw evaluating the grammatical, spoken language, and comprehension of written and auditory language. Lin and Zhang (2014) used generalizability theory to evaluate reviewer reliability and standard errors of measurement in their ratings with respect to the number of reviewers. The study found that testing such a group required multiple test reviewers and additional testing specifically in mathematics and science evaluations was needed. Despite the overwhelming amount of work the researchers found themselves looking through, they ultimately did find significant results amongst pre-school and kindergarten students. The overall results showed that the most consistent findings as to reviewer ratings and the child's actual academic performance, were in prekindergarten and kindergarten students. Also, the older the children the larger the variance in findings for both math and science.

Examples of this include professors who use slang or that speak too fast during lectures, the lack of formality in the classroom by professors which in turn conveys a lack of leadership and competence in Asian cultures, the absence of recapping main points after a lecture to ensure that all students understand the main points, and forced eye contact and aggressive posturing towards students which can undermine a nurturing and welcoming learning environment (Roy, 2013).

Valdez (2015) evaluated 15 Chinese undergraduate students attending US universities. The purpose of the study was to compare Chinese classroom practices with US classroom practices. Overall the findings indicated that the students preferred the open discussion that US classrooms encourage rather than the "spoon-feeding" of the Chinese teachers who micromanage the students' actions (Valdez, 2015). However,

despite the praise of classroom discussion, the students also noted that they did not like having their ability to speak English or participate in mandatory public speaking in English, as part of their grade due to many students' lacking self-confidence in their own ability to clearly speak English (Valdez, 2015). It is also worth considering for a moment the opposite approach of Chinese spoon-feeding in which Chinese teachers in the US attempt to teach Chinese as a second language (CSL) to American students. The most common results are that American students would rather give up on learning Chinese and perceive learning to read and write in Chinese as an impossible task (Wang & Tian, 2013). This recognized frustration amongst ESL and CSL students' points to a shared desire to understand both cultures but illuminates the learning challenges that students face on both sides.

Kramsch (2014) discussed the growing communication in global classrooms which is contributed to the introduction of regularly used technology. Thanks to ever-expanding technology, the gap between cultures and foreign education options is closing at a rapid pace allowing students to remain in their native homelands and still virtually attend school in other international locations (Kramsch, 2014). However, while this globalization is a positive influence amongst students, it also presents a new obstacle for teachers as they struggle to know how or what to prepare their students for as they step out into the professional arena (Kramsch, 2014). It also increases pressure on international teachers as they strive to determine acceptable standards of language proficiency given the subject and chosen medium of communication within a classroom (Kramsch, 2014).

**Dynamics of non-white faculty.** Regarding the need for support systems and the desire for acceptance and tolerance towards international students on US campuses, it is necessary to also examine the relationships and experiences of the international teachers and teaching-assistants on US campuses. Recognizing a need to examine this very subject of faculty diversity and acceptance Monzó and SooHoo sought to promote an environment of acceptance and understanding amongst faculty which promoted the recognition of cultural diversity and emphasized the importance of each professor being culturally diverse from one another. Their primary premise was, if professors were already struggling to build relationships with their culturally diverse peers, how can they effectively educate and build relationships with their international students who not only have a cultural barrier to navigate, but also a language barrier (Monzó & SooHoo, 2014)?

With reference, back to the concept of a Chinese national teaching CSL students in the US it is also important to look at how culture impacts Chinese and US classroom operational practices. Most the instructors teaching Mandarin within the US are Chinese-nationals who immigrated to the US as adults. These instructors tend towards their native teaching style of concrete learning without room for discussion or creativity (Wang & Tian, 2013). This of course is the opposite style of teaching that most US instructors promote and therefore creates a situational culture shock for American students participating in the Mandarin classes.

Hebbani and Hendrix (2014) evaluated the comfort level of international teaching assistants (ITA) in the US who were speaking English as the primary language in the classroom. Not only were some of the participant's Chinese natives, but several other



Asian and European nations were represented. Hebbani and Hendrix (2014) evaluated 25 ITAs who were either leading master's level or doctoral level courses. They found that the priority of the master's ITAs was a focus on their own ability to confidently speak English in front of their students to help validate their ability to lead the classroom. Conversely, the doctoral ITAs had less concern with their own public speaking ability and were more focused on producing quality content for their students to learn from that was grammatically and contextually correct (2014). The findings are relevant to this study due to the indication of the necessity of acculturation and self-confidence despite established professional and academic achievement.

Another study evaluating the experiences of ITAs was conducted by Chiang (2016), which sought to determine why stereotypes continue to be present within US classrooms towards ITAs despite their fluency in English. Chiang (2016) found that while ITAs were capable of affectively communicating in English, ITAs were frequently doubted by students simply due to their foreign accents. The presence of their accents undermined the students' ability to trust that the ITAs were trustworthy instructors and deterred students from seeking the assistance of the ITAs (Chiang, 2016).

**U.S. expectations in the classroom.** There is also evidence of overt discrimination within US classrooms towards international students. Valdez (2016) reviewed 15 previous studies that evaluated international students' experiences within US classrooms. Collectively the studies illustrated an environment of exclusion within the classrooms, leaving international students struggling to find their own means of succeeding academically. Common practices amongst the professors included

unstructured class discussions, lack of guidance from the professor to the students, overt shunning of the students; voiced international perspectives on subjects, a focus placed on international students speaking only English in the classroom, and an expected presentation of “whiteness” while participating in the classroom (Valdez, 2016).

Mott-Smith (2013) published a paper looking at the experiences of two college writing professors and their experiences working with Chinese international students at US universities. In the paper, Mott-Smith (2013) discussed two incidents in which students struggled to understand the difference between reusing text from a source, and the completion of a writing test. Mott-Smith (2013) illustrated the need for teachers to have a solid understanding of the cultural impacts facing international students and the students culture of origin. Mott-Smith (2013) established the concept of transformative internationalization, which promoted a learning environment for both the student and the teachers. The relationship development aided the students in building stronger English proficiency and written language skills. Additionally, the teachers reported a sense of self-improvement as they too learned about another culture and established an understanding as to why some students struggle with certain concepts more than others. Overall the findings supported that an important part of acculturation is building a relationship and support system.

Cheng (2012) noted the difficulty Chinese international students have in US classrooms adjusting to discussion based learning, which differs from Chinese classrooms where the focus rests on memorization. Zheng and Park (2013) sought to determine the specific types of grammatical errors made by Chinese and Korean

university students when writing in English. In their research, Zheng & Park reviewed 168 essays written by Chinese and Korean students in English. After reviewing the essays Zheng and Park (2013) found that the most frequent grammatical errors involved the use of the comma. It was determined that comma usage is especially frustrating to Chinese students due to the multiple uses of the comma in Chinese. The second most common mistake in the papers was run-on sentences which was partially contributed again to the confusion of comma usage. Another common mistake involved the usage of 's' when making something plural. Moreover, Zheng and Park (2013) utilized contrastive analysis hypothesis to evaluate the effects of these errors on the students' abilities to learn English. While many of the students continued to feel more confident speaking English over time, several students continued to struggle with recurrent mistakes in their writing.

Hong and Jianqiang (2013) interviewed 100 Chinese international students studying in one US university. The interviewees were asked to honestly explain their feelings and perceptions of the support they receive from the school and peers in regards to understanding and effectively communicating in English. What was found was that there were limited classes offered to the students that allowed them to speak in their native language and most students felt that they did not understand or communicate in English well despite receiving passing grades in their college English comprehension courses. Instead of learning English, the study found that the Chinese students were passing their courses due to their own personal learning strategies instituted in them during their adolescent schooling in China, persistent attitudes towards required success,

and the skill of referencing their native language for an accurate translation of a concept from English (Hong & Jianqiang, 2013).

Another interesting study that looked at the learning strategies and classroom experiences of Chinese students was conducted by You and You (2013) who evaluated nine US teachers' experiences working with Chinese students in English-medium classes in Shanghai. The teachers observed that though their students were assessed as fluent in English before being eligible to take the courses, many students had serious struggles in English comprehension and the ability to converse in English. To work around this glaring obstacle, the teachers chose to change their own teaching strategies to accommodate the students' language comprehension while also ensuring that the students received the intended lesson plan and knowledge. This was accomplished by allowing students to hold group discussions in their native language, instead of English, adjusting assignments in English to be short and specific, holding extensive workshops and group projects to complete lengthy assignments, and creating an environment of open communication where students felt comfortable asking for help when they needed it (You & You, 2013). While the change in teaching structure was a substantial shift for the students' as it completely differed from a traditional Chinese classroom concept, the students showed significant improvement in their grades and confidence.

### **Psychosocial Aspect of Acculturation and Sociocultural**

**Isolation.** Emerging importance for the need of evaluation of the psychosocial aspects of students' adjustments to their education environment has been noted Berry (2009) discussed the research current at the time of his study that had been presented to

analyze the process of acculturation. Berry (2009) advocated for a dual approach to acculturation, to include the natural sciences and cultural sciences due to their vast impact on human behavior. This included analyzing the person's original environment and the norms they were accepted as their own. Berry (2009) advocated for the dismissal of the positivist traditions of the natural sciences, and urged that they be replaced with social constructionist concepts and methods. Berry viewed the positivist traditions as a regressive step towards the search to improve the understanding of acculturation. Berry (2009) also argued that there was little literary evidence available that aided in the advancements of knowledge and understanding of acculturation. This lack of available literature limited any use of existing literature to be used towards the applications for the betterment of acculturation regarding individuals and groups.

Glass, Gomez, and Urzua (2014) looked at the connection between the nationality of international students and the ability to form friendships amongst US classmates. Studies found that students from European nations had a significant advantage over students from Asian countries, in forming relationships with peers and professors. Additionally, students from Southern Asia, the Middle East and North Africa were more successful at building relationships than the students who originated from Eastern and Southeastern Asia. Moreover, students who were of non-European countries felt more disconnected from their environments, dealt with chosen isolation from their peers, and reported no emotional connection to their school environment (Glass, Gomez, & Urzua, 2014).

Given that Taiwan has continued to gain attraction as a global tourism destination, Wu (2014) looked at the impact the English language held on the Taiwanese culture. More specifically it was established that Taiwanese parents placed a large emphasis on the necessity of their children to learn English. To achieve this parents commonly sent their children to English immersion schools within Taiwan or to study in the US. However, despite the weighted importance of English fluency presented by parents, Wu (2014) found that students studying within the US frequently avoided the use of the English language and failed to become fluent. Moreover, it was found that Taiwanese students in the US purposely isolated themselves to focused interactions solely with other Taiwanese students and avoided assimilation to American culture or establishment of friendships with US peers (Wu, 2014).

**Anxiety related to speaking English.** Bertram et al. (2014) conducted their study to determine if there was a link between social support and acculturation amongst Chinese international students in US universities. During their research that they found that all but one of the 30 students interviewed stressed personal struggles related to difficulties understanding and speaking English. These difficulties included understanding spoken English and particularly slang or jokes, and feeling comfortable speaking English out loud, especially in front of a group. The students interviewed explained that being expected to communicate exclusively in English caused them a great deal of social anxiety and stress. This social anxiety resulted in most students isolating themselves from other students and purposely avoiding social engagements. Moreover, the students' frustrations with English seemed to detour them from any desire to become

fluent in English, with only four of the students reporting that fluency in English was a long-term goal for them. This social isolation had a direct effect on the students' ability to adapt to American culture and feel comfortable in their new surroundings (Bertram et al., 2014).

Schonert-Reichl et al. (2015) discovered that the being aware of the emotional well-being of students aided in developing their ability to learn in a study on social and emotional learning programs. His program was created to enhance stress reduction, prosociality, wellbeing, cognitive control, and better academic performance in elementary school students. A group of 99 4<sup>th</sup> and 5<sup>th</sup> graders were assigned social and emotional learning programs, as opposed to the regular social responsibility program. Items investigated includes math grades, stress physiology identified through salivary cortisol, self-reports on wellbeing, measurement of executive functions, prosociality, and peer acceptance. Overall, students who attended the social and emotional learning program had greater emotional control, optimism, empathy, mindfulness, and perspectives. Additionally, they had better stress physiology and cognitive control, as well as a greater decrease in depression and peer-rated aggression. Peers rated these students as more prosocial and culturally acceptable. Social and emotional learning programs were successful in attending to children who had problems in their education. This can be applied to students who are maladjusted, and have difficulty or reduced chances and greater risks of performing well at school.

Wei et al. (2015) sought to determine if a connection existed between an international students' self-image and confidence and the students' ability to adjust to

new surrounds while effectively managing possible discrimination in the classroom and related anxiety. For the study, Wei et al. (2015) received a total of 201 Chinese international participants. The participants filled out an online survey which asked specific questions related to feelings about self-image and experiences with social anxiety or depression. The researchers utilized three hierarchical regressions to examine the 2-way interaction effects, as in how the interactions speaking English effected the students. In their findings, Wei et al. reported that students with higher self-esteem also had less negative feelings about their interactions with English-speaking students and were therefore less impacted with anxiety or stress. Also, students that were active in routes of staying in communication with their friends and family, whether it be via social media or other methods, were less effected by depression, though these students did still suffer from anxiety and some from posttraumatic stress related to social anxiety. Third, students with strong relationships and self-confidence were the most successful (Wei, et al., 2015).

Zhang and Goodson (2011) sought to determine what factors, if any, played key roles in international students' abilities to adjust to their life in the United States. Zhang and Goodson examined 64 studies published in peer-review journals from 1990 to 2009. In their analysis of the articles, the researchers looked for any commonalities that related back to acculturation of the students. This adjustment to their new environment is referred to a psychosocial adjustment. Zhang and Goodson grouped their findings based on the types of symptoms or stressors the other studies reported. To evaluate the data, Zhang and Goodson then utilized an 11-point grading criteria, assessing the employment of theoretical framework, reporting of data's validity and reliability, study design, and



analytic techniques. The overall findings indicated that the keys to students' successful transitions in their new environments rested with the students' self-confidence and feelings about speaking English in public, was related to the students' social interactions and if they made friends, and the support or lack of, offered by their professors and teaching assistance (Zhang & Goodson, 2011).

The emotional motivation of learning English as a foreign language was evaluated by Tang (2015). Tang (2015) evaluated Chinese students' abilities to converse in English and convey appropriate emotional responses and social nuances when speaking in English. Tang (2015) found that the greater the students' confidence with English and the stronger social connections the students possessed with English-speaking peers, the more likely they were to produce appropriate spoken emotional responses. The ability to appropriately convey emotion and content are two major factors in a students' ability to control their own social anxiety when required to speak English in front of groups.

**Social media.** Citing the four modes of adaptation to a host country (assimilation, integration, marginalization and separation) Chen and Hanasono (2016) compared the usage of social media sites Facebook and its Chinese equivalent Renren amongst Chinese students in the US. Chen and Hanasono established that socio-cultural adjustment difficulties and psychological distress were negatively associated with both adaptations to a host culture and identification with one's home culture, but thanks to the development of social media students are struggling less with self-identity and engagement with their peers. The social media outlets were used as tools to gradually adjust to the student's distance from home and keeping in contact with friends and loved ones, while also using

social media to learn more about their American peers and gradually communicate with them more regularly. Chen and Hanasono established a connection between Chinese students' usage of Facebook over Renren and their acculturation to the United States. The more frequent the students' usage of Facebook the more physically social students became with their American peers and the more likely they were to engage.

Sandel (2014) looked at the impact of social media on 24 college students studying abroad, which included American and other international students. Prior to social media it was common knowledge that many international students struggled with separation from family and friends and experienced feelings of loneliness and depression. However, Sandel found that students utilizing social media could adjust to their new environment and greatly reduce feelings of loneliness by being able to maintain contact with family and friends via social media. Moreover, Sandel also found that students who frequently utilized social media as a means of connecting with their classmates were more likely to engage in social events, advance their comfort speaking a nonnative language, and felt more comfortable in their new surroundings quicker. Also, an interesting finding showed that most students preferred to use separate social media platforms to communicate with family members than the platform they used to communicate with friends. Overall social media use greatly reduced stress for the students and helped them to adjust to their surroundings quicker.

The utility of social media in establishing support systems within one's native language has also been established by Li and Zhu (2013) who evaluated Chinese students studying in Great Britain. Through their research they found that students commonly

chose to establish multilingual, multicultural networks for personal, social and professional fulfillment. These networks included use of multiple social media methods, engaging in educational opportunities which allowed the students to utilize their native and locational language skills, and the exploration of globalization as it impacts their individual experiences (Li & Zhu, 2013).

Feng and Nzai (2014) examined the relationship between social media and current event updating amongst Chinese and Mexican international students studying in the US. The researchers found that Chinese students were prone to spend twice as many hours a day viewing social mediums than their Mexican counterparts. Secondly, Mexican students were prone to turn to radio, news, and movies for identification with their culture while outside of their homeland. However, Chinese students were more likely to exclusively utilize the internet for all their media needs (Feng & Nzai, 2014).

### **Support Systems in US Universities**

Bertram et al. (2014) conducted a study to determine if there was a link between social support and acculturation amongst Chinese international students in US universities. Who did they study, what was the research design method used? During their research, they found that all but one of the 30 students interviewed stressed personal struggles related to difficulties understanding and speaking English. These difficulties included understanding spoken English and particularly slang or jokes, and feeling comfortable speaking English out loud, especially in front of a group. The students interviewed explained that being expected to communicate exclusively in English caused them a great deal of social anxiety and stress. This social anxiety resulted in most

students isolating themselves from other students and purposely avoiding social engagements. Moreover, the students' frustrations with English seemed to deter them from any desire to become fluent in English, with only four of the students reporting that fluency in English was a long-term goal for them. This complete lack of support system had a direct effect on the students' ability to adapt to American culture and feel comfortable in their new surroundings.

Cui et al. (2015) evaluated a bilingual peer-supported program for Chinese students studying in Australia. The researchers found two positive but very different assessments between students and teachers. The students found that the program helped them to develop relationships with their peers and build social identities. The teachers reported their own perception that the students were benefited by conceptual learning as opposed to concrete institutionalized memorization as is common within the Chinese learning system (Cui, et al. 2015). Overall, English language proficiency was found to increase amongst all students and acculturation was perceived to be a smooth transition for participants.

Some US colleges have explored alternative options to bilingual support programs for their students. Baker (2015) released a study which evaluated the experience of 24 non-native English speaking students at a community college on the US east coast. These students were specifically given a text-to-speech software which allowed them to more readily translate their assignments. While participating in the study the students were responsible for maintaining monthly journal entries expressing their comfort level with the software, their experiences in the classroom, and how they felt the software was

helping and hurting them academically, as well as in their understanding of English.

Ultimately, the findings showed that while the software did help the students succeed academically, the students did not feel that they gained any help in their ability to speak English or socialize with their English-speaking peers. These findings illustrate the necessity of the social aspect in learning the English language to effectively communicate outside of the classroom (Baker, 2015).

Dyson et al. (2013) also illustrated the necessity of family involvement. Pointing to the strong presence of parents in traditional Chinese families, and specifically to the need to honor one's father and mother in the most respectful ways possible, it is noted that academic success is a form of bringing honor to one's family. Fass-Holmes and Vaughn (2014) found a direct link to academic success was shown to be a result of strong familial and social support, religion, and self-motivation. Green (2015) found that anyone who is identified as having a lower English language proficiency should receive extra support from their university. Li, Chen and Duanmu (2010) correlated family values and importance of education, the students' competency in English grammar for written purposes (such as writing papers), and the students willingness to engage socially with their American classmates, all played a significant role in the students' ability to succeed academically and adjust to their American surroundings. Li et al. sought to utilize multiple regression theory as a means of analyzing the influences on international students' academic performance while studying in the US. Additionally, the researchers investigated the differences between Chinese and non-Chinese cultural groups and leads to the identification of the key predictors of their academic performance. The overall

findings correlated family values and importance of education, the students' competency in English grammar for written purposes (such as writing papers), and the students willingness to engage socially with their American classmates, all played a significant role in the students' ability to succeed academically and adjust to their American surroundings. It is important to note that Chinese students were the predominant group in this study and had specific characteristics related to their study habits that set them apart from the other students. Specifically, the Chinese students were observed to take a less active approach to their education, taking less hours to study and research, however, this disengagement from their studies was shown to have no impact on their academic success.

Dyson et al. (2013) found that family and social support was especially vital to new immigrants. In their study of Chinese immigrant families to Canada they found that new immigrants struggled with adjustments to their new society and sought out other Chinese immigrants for support, or chose to isolate themselves from their new neighbors. However, Dyson et al. also found that this need for social bonds amongst other Chinese immigrants lessened the longer the immigrants were in their new country. With time the need to conform to Chinese traditions and customs subsided and the families adopted the habits of their new countrymen.

**Self-Awareness.** Chang (2013) researched the connection between acculturation, social interaction and mindfulness. Mindfulness is meant to represent all actions and decisions people make that effect their ability to function in society. This mindfulness includes cultural awareness and sensitivity, self-awareness, self-motivation, linguistics

and much more. Chang (2013) evaluated the relationships based on the intercultural communication theory. The study revealed that the most successful interactions between people were not necessarily between participants who had strong English skills as the majority were not fluent in English. However, despite strong linguistic skills, those who were mindless had poor interactions. Chang (2013) concluded that mindfulness required communicators to manage their negative emotions so that they would can turn their negative feelings into a means of creating a positive interaction. Thus, Chang (2013) recommended that students be taught a standard curriculum which stresses mindfulness and helps them to develop the skill which will aid them in future interactions.

While extensive research has been conducted evaluating the status of identity as it relates to international students already studying outside of their native land, Dong et al., (2015) sought to evaluate students who had not left their homeland to see if there were any significant differences in cultural identity. Dong et al., (2015) evaluated 342 Chinese students who were studying at a university in China. The students underwent a series of personality tests which evaluated their attitudes towards nationalism and their own self-esteem and identity. The study found that acculturation was significantly related to a students' self-esteem and to their sense of nationality. Students that felt a deep bond to their homeland, and to family, reported a stronger sense of self and openness to learning about other cultures (Dong, et al., 2015).

Santibañez and Zárate (2014) illustrated the value of students maintaining a bilingual status, wherein they continue their fluency in their native language while also establishing fluency in English. Their findings show that international students greatly

benefit from the ability to use both of their languages within the classroom and social setting. Also, bilingual students have a larger, more diverse network of peers available to them which goes on to support their ability to be successful in the professional environment (Santibañez, & Zárate, 2014). Ultimately, this vast reach of network contributes to a greater sense of self-confidence and enhanced the students' ability to continue to adapt and adjust to their changing environments.

Martirosyan, Hwang & Wanjohi, (2015) sought to determine if a correlation existed between international student's proficiency in the English language and their academic success while studying in the US. The researchers had 59 Chinese international students' complete surveys to evaluate their confidence related to understanding the English language. The participating students were also evaluated by academic performance based on their school transcripts. The study revealed that the students with the highest GPAs also rated themselves as having the highest confidence in their own ability to understand the English language (Martirosyan, Hwang & Wanjohi, 2015). Also, the students who reported the lowest English proficiency still managed to pass their courses but were also found to isolate themselves from peers to limit the necessity of speaking English. Both findings are relevant in suggesting a connection between student success and fluency in English also being related to social engagement and ultimately acculturation.

Roy (2013) discussed the need for heightened self-awareness and self-regulation by US professors who have international students in the classroom, particularly students from China, Japan and Korea. After interviewing several Asian international students,



many of the struggles the students faced related back to a language barrier effecting their performance in the classroom. Also, students felt there was a significant cultural barrier in the classroom that negatively impacted their ability to learn. The students were particularly concerned about professors who use slang or that speak too fast during lectures. Also, as fitting with leadership expectations in Asian culture, the lack of formality in the classroom by professors effected the students' ability to follow their instructors which in turn conveyed a lack of leadership and competence. Additionally, the absence of recapping main points after a lecture to ensure that all students understand the main points students undermined a nurturing and welcoming learning environment.

Yue (2012) sought to understand first language attrition by studying Chinese international students and their own perceived changes in behavior and language proficiency of their native tongue as they adapted to American culture. Yue (2012) interviewed Chinese international students at universities across the US, though the number of students interviewed is not specifically noted in the text. Yue (2012) found that the effects of learning a complex language such as English directly affected a students' ability to maintain their appropriate grammatical and traditional language in their native tongue. Yue (2012) contributed this difficulty to the many aspects of American culture, from every day slang, to American only holiday observations, and to the changing dynamics of America's youth. Yue (2012) found that as students became more comfortable and familiar with US culture multiple students' also felt more disconnected or out of touch with their native China. Yue (2012) also determined that

very few students took an active role in preserving their own Chinese habits as they adjusted to American culture.

### **Summary and Conclusion**

Understanding the need for bilingual education and support in the US has been the emphasis of multiple studies. Coderre, Van Heuven and Conklin (2013) support bilingual education amongst children of all ages and positively correlate bilingualism to higher cognitive function. However, it is also found that for fluency to be achieved and higher cognitive function attained, students must be immersed in the language and culture they are learning, require repetitive instruction, and need conversational and contextual experience to fully learn a language and gain the benefits of bilingualism (Coderre, Van Heuven, & Conklin, 2013).

As linguistics expert Lasagabaster (2013) noted, students need a complex understanding as to why language fluency is important. In this understanding students of all cultures desire an established connection with the country of origin for the language they are studying, which includes social interaction, emotional relationships, scholarly and political influences (Lasagabaster, 2013). Multiple studies like that of García, Pujol-Ferran, and Reddy, (2013) have established the motivations for the surge of Chinese students to US universities following the 1960s Civil Rights Movement. Extensive research has been conducted observing the fluency of English in Chinese students studying in their homeland and within the US.

Lee (2015) found that within the context of sociocultural theory, teachers who employed ESL programs that had more awareness of the cultural backgrounds of their

students could have more rewarding experiences. The programs employed were successful because they had interactive learning environments that were accepting of cultural differences. Bilingual teachers were more useful in the inclusiveness of their students, and enhanced relationships between teachers and students were incredibly important to student advancement. Traditional lecture teaching styles were not as useful despite their cultural inclusiveness.

Given the studies of Coderre, Van Heuven and Conklin (2013) and Lasagabaster (2013) it is proven that student's must have a 360-degree bilingual program to help ensure their success in school. These studies specifically highlight the need for a bilingual immersion program that provides scholastic, social, emotional and cultural support for international students. However, what all referenced material illustrates is the lack knowledge about what, if any, bilingual programs are effective for international students studying at the post-secondary level.

An emerging gap in research exists in the instituting of support systems for Chinese students. Terzian and Osbourne (2012) reviewed multiple studies discussing the acculturation and academic success and failures of international students. They noted in their findings that no specific reason for adjustment difficulty was noted, nor could they find any existing data that compared the adjustment of US-born college students to internationally students studying in the US. The researchers found no particular factors that set the American student apart from the other international students in regards to coping mechanisms when studying abroad but did note that all students reported a lack of formal support systems from their hosting universities (Terzian & Osbourne, 2012).

As Bertram et al (2013) discussed the chosen social isolation on Chinese students studying within the US, the main reason for this isolation was determined to be related to the avoidance of speaking English aloud. Students purposely avoided social interactions and classroom discussion participation to not have to speak English in front of their American peers and professors for fear of judgement. Chinese international students frequently report feeling stereotyped in US classrooms as being passive or disengaged due to their frequent lack of classroom discussion participation (Wong-Lo & Bai, 2013). However, when Chinese students were asked why they do not participate, they convey that they do not feel comfortable speaking English out loud in front of an audience due to lack of self-confidence in their ability to properly speak. Also, Chinese international students explained that in their native Chinese classrooms teachers do not engage students in discussion, but rather the teacher dictates what is to be learned, which is a significant difference and adjustment for many students who have never been asked to form their own opinions in a classroom previously (Wong-Lo & Bai, 2013).

Bertram et al (2013) also reported that students did not feel comfortable in their US classrooms due to the professors use of slang and non-formal English when teaching. This connection can directly correlate to Mok, Bo and Donghui (2015) findings which discussed English- fluent students' difficulties with understanding English spoken in accents outside of their own.

Overall, the multiple studies discussed in this review illustrate a need for a sociocultural support system within US universities for under-graduate and graduate international students. The current lack of support for international students is continuing

to contribute to the overt isolation of international students, creates a more difficult learning environment and experience for international students, and takes away from the social value of cultural immersion when studying abroad. A more in-depth analysis of a bilingual support system within US universities is needed to establish the benefits of such a system for international students academically, social, and regarding policy making.

Chapter 3 will provide details of the method on how to achieve the purpose and address the gap established in this chapter.

## Chapter 3: Methodology

### **Introduction**

The purpose of this study is to examine the effectiveness of GST Bilingual Degree Program among overseas Chinese students studying at U.S. universities as measured through student's GPA and TOEFL scores. To address this gap, I will use a causal comparative design to gather quantitative data. Quantitative data included student's achievement records and TOEFL scores. These data have been obtained from historical school documents, official personal records, and proprietary information from federated databases upon IRB approval.

### **Research Design and Appropriateness**

A quantitative causal comparative study has been utilized for this study. The quantitative method is the empirical investigation of the research question using scientific methods. The results gathered are numerical, and therefore, can be analyzed statistically to answer the hypothesis (Creswell, 2013). Quantitative researchers aim to discover the objective truth even though there may be multiple interpretations of the survey questions. According to Hopkins (2008), for this type of study, student achievement score and language proficiency, the quantitative research method is a suitable approach in assessing relationships between the two variables instead of the qualitative research method. A quantitative method will provide the descriptive statistics to determine the effectiveness of GST and how language proficiency affects overseas Chinese students' academic achievement.

Qualitative studies, on the other hand, focus on developing and investigating case human observations, personal experiences, and case studies from a conceptual and constructivist view (Sinkovics & Alfoldi, 2012). Because of the conceptual view of things, qualitative studies allow researchers to interpret perceptions, experiences, behaviors, and attitudes of subjects more accurately than quantitative studies (Ibanez-Gonzalez et al., 2014). However, the accurateness in the interpretation of data makes qualitative studies more time consuming as compared to quantitative studies. Though qualitative method allows for accurateness of interpretation of data, the method is however, not an appropriate method to be employed for this study. The primary reason being is that a qualitative study is inductive nature that does not require identifying variables and hypotheses beforehand, whereas a quantitative study is deductive nature that requires defining variables and hypotheses before conducting the research (Simon, 2011). Quantitative method allows its findings to be generalized to a larger population, whereas qualitative method only allows its findings to be contextualized on a specific case or phenomenon. Furthermore, another method that could have been used is the mixed method—a combination of qualitative and quantitative methods that allows the researcher to explain data both subjectively and objectively (Yardley & Bishop, 2015). Though mixed methods combine the advantages of both qualitative and quantitative methods, it is however not appropriate for the study as the study only involves testing hypothesis and not interpreting information gathered from observations or interviews (Yardley & Bishop, 2015).

Furthermore, a causal comparative research design deals with identifying not only relationships but also the differences between two groups or more on a quantitatively measured dependent variable (Cohen, Manion, & Morrison, 2013). A causal comparative design is appropriate for both the determination of association and causal analysis regarding relationships between study variables and groups (Nimon & Reio, 2011). The purpose of this study is to determine if association and causation exists among the variables and thus both Pearson's correlation analysis and analysis of variance (ANOVA) has been conducted to predict if underlying relationships exist among variables.

An experimental design is not deemed appropriate because it requires for certain variables to be controlled making the analysis of variables look like in an artificial environment. The researcher of this study will not control any variables and would like to make the analysis in natural settings as possible. Moreover, a correlation design is not appropriate because it only involves the examination of association between variables and does not involve groups that this study has (Hoe & Hoare, 2012). As such, this study will adhere to a quantitative causal comparative research design and utilize the student record database which, GPA and TOEFL test scores has been collected, for the data collection and the SPSS for data analysis.

### **Instrumentation**

The data that will be used in the study include the Trait TOEFL total test score, high school and college GPA, English proficiency scale of international students, and Trait of international students (Chinese). The scores will be obtained from the reports of the North Jersey University.



## Research Questions

Specifically, the following research questions and hypotheses will guide the methodology of this study:

RQ1: Is there a significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University?

H1<sub>0</sub>: There is no significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University.

H1<sub>a</sub>: There is significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University.

RQ2: Is there a significant difference in students' GPAs and TOEFL scores before and after their participation in Gateway to Successful Tomorrow (GST) Bilingual Degree Program?

H2<sub>0</sub>: There is no significant difference in students' GPAs when they start with comparable TOEFL scores due to their participation in Gateway to Successful Tomorrow (GST) Bilingual Degree Program.

H2<sub>a</sub>: There is a significant difference in students' GPAs when they start with comparable TOEFL scores due to their participation in Gateway to

Successful Tomorrow (GST) Bilingual Degree Program.

H30: There is no significant difference in students' starting TOEFL scores when they obtain comparable GPAs due to their participation in GST.

H3a: There is significant difference in students' starting TOEFL scores when they obtain comparable GPAs due to their participation in GST.

### **Target Population and Sampling Procedures**

The target population of this study is the overseas Chinese students studying at U.S. universities. Purposive sampling has been conducted to make sure that participants are within the parameters set for the study (Haas, 2012). The inclusion criteria for this study are the following: must be registered as an overseas student, English language is not his/her first language, must come from the Chinese race, must be 18 years old and above, and must have been enrolled and finished the Cheng Gong- GST Bilingual Degree Program at North Jersey University.

The sample size for this study was computed using G\*Power based on three factors: effect size, level of significance, and power of test. Effect size denotes the extent or the degree of relationship between the dependent and independent variables (Haas, 2012). According to Haas (2012), effect sizes are commonly categorized according to small, medium, and large effect sizes (Haas, 2012). A medium effect size is normally used for quantitative studies as it balances the restriction of being too lenient and too strict to identify the magnitude of the relationship between variables. The level of significance refers to the probability of rejecting the null hypothesis given that it is true. The level of significance is also referred to as Type I error, which is usually set equal to  $\alpha$

= .05 (Hox, 2002). Finally, the power of a statistical test refers to the probability of falsely rejecting a null hypothesis, which is usually set to a value of .80 (Hox, 2002). Using a medium effect size ( $f = 0.30$ ), a significance level of  $\alpha = .05$ , and an 80% power of test, the computed minimum sample sizes required if Pearson's correlation analysis and ANOVA are used are 64 and 128, respectively. Since the use of ANOVA requires larger sample size then it must be followed. Thus, there should be at least 128 overseas Chinese students whose student and English proficiency records has been collected from the selected university.

### **Data Collection Procedures**

To recruit samples for the study, approval from the Institutional Review Board (IRB) will be sought to ensure that the procedures used in the study adhere to ethical standards. Permission will also be obtained from North Jersey University. A formal letter will be sent to North Jersey University to gather data from their reports. The formal letter will include the background of the study as well as the purpose and the data necessary for the study. The letter will also include data security measures that will be used to ensure that the samples are protected for confidentiality and anonymity. After obtaining approval, a list of potential samples will be obtained from university administrators. Existing data from school reports will be used in the study. The inclusion criteria for this study are the following: must be registered as an overseas student, English language is not his/her first language, must come from the Chinese race, must be 18 years old and above, and must have been enrolled and finished the Cheng Gong- GST Bilingual Degree Program at North Jersey University. The Trait TOEFL total test score, high school and

college GPA, English proficiency scale of international students, and Trait of international students

(Chinese) will be obtained from school reports. After data collection, data will be transferred to SPSS to prepare for analysis.

### **Data Analysis Procedures**

This study will employ a quantitative method to address the purpose and research questions stated. Specifically, the descriptive statistics and inferential statistics has been conducted. Descriptive statistics such the frequency distribution and measures of central tendency have been used to characterize the data that have been gathered from the surveys (Hoe & Hoare, 2012). On the other hand, inferential statistics specifically the Pearson's correlation analysis and ANOVA has been used to draw conclusions about the relationship between the English language proficient levels and students' GPA and consequently the effectiveness of GST in the students' academic achievement (Leedy & Ormrod, 2010). Hoe and Hoare (2012) differentiated descriptive statistics over inferential statistics in that the former simply describes what the data set displays whereas the latter draws conclusions about the population from the sample statistics.

All quantitative analysis for this study has been conducted using statistical software called SPSS. SPSS is statistical software that can address the preparation of data, data calculation, and reporting and is user-friendly (McLeod, 2008). To determine the relationship between the variables, a Pearson's correlation analysis will be conducted. Pearson's correlation analysis is a parametric technique that focuses in the determination of the association between variables, that is, it gives information the magnitude and

behavior of the relationship between variables (Hilbe, 2011). According to Denzin and Lincoln (2011), Pearson's Correlation Coefficient ( $r$ ) is the most commonly used type of correlation coefficient for quantitative studies having data that follows normality. The correlation coefficient  $r$  denotes the linear relationship between variables where a positive value indicates positive relationship and a negative value indicates negative relationship. A positive relationship means that two related variables increase/decrease in the same way, that is, as one variable goes up in value the other variable does as well and vice versa. A negative relationship, on the other hand, means that two related variables moves in the opposite direction, that is, as one variable goes up the other related variable goes down in value. The value of the correlation coefficient  $r$  ranges from +1 to -1.

Furthermore, the ANOVA is a test that compares means taken from two or more independent groups to determine if there is a significant difference between the two groups (Tabachnick & Fidell, 2012). Therefore, the ANOVA can be used to determine if there has been a difference in the students' GPA and TOEFL scores before and after their participation in the GST program. The reason why the ANOVA may be used for these variables is that the groupings are dichotomous variable, while the GPA and TOEFL scores are continuous variables. The significance of the relationship between the variables has been determined by an  $F$ -statistic. If the test statistic exceeds a critical value at the .05 level of significance, then it has been concluded that there is a significant difference.

### **Ethical Procedures**

The study will involve data from human participants, thus, it is necessary to ensure

confidentiality and anonymity. All data will be collected from school reports. Data collected will not include any identifiable information from participants. Data will be obtained from school administrators who handle school reports. Therefore, data collected in the study will focus on the study variables considered in the study. An informed consent form is not necessary since participants will not be asked to participate in the study. A confidentiality agreement will be signed by the researcher to ensure that all data will solely be used for the study. Moreover, the confidentiality agreement will ensure that only the researcher will have access to the data collected in the study. It will also be stated that only aggregate data will be presented in the results section of this study.

### **Summary and Conclusion**

The purpose of this study is to examine the effectiveness of Gateway to Successful Tomorrow Bilingual Degree Program among overseas Chinese students studying at U.S. universities as measured through student's grade point average (GPA) and TOEFL scores. A causal comparative design where quantitative data such as student's achievement records and TOEFL scores will be obtained from historical school documents, official personal records, and proprietary information from federated databases upon the approval of human subject studies by institute review board (IRB). The target population of this study is the overseas Chinese students studying at U.S. universities. Purposive sampling has been conducted to make sure that participants are within the parameters set for the study (Haas, 2012). The inclusion criteria for this study are the following: must be registered as an overseas student, English language is not his/her first language, must come from the Chinese race, must be 18 years old and above,

and must have been enrolled and finished the Cheng Gong- GST Bilingual Degree Program at North Jersey University. At least 128 samples will be gathered for the study. Descriptive statistics as well as inferential statistics such as Pearson's correlation analysis and ANOVA will be used to test the hypotheses of the study. All statistical analyses will consider a significance level of .05.

## Chapter 4: Results

### Introduction

The purpose of this study is to examine academic achievement and English proficiency of Chinese students studying in the US and enrolled in the Gateway to a Successful Tomorrow (GST) Bilingual degree program at North Jersey University. With a formal evaluation of the program, it may be possible to better understand the strengths and weaknesses of GST and potentially equip administrators to better support Chinese students.

The following research questions and hypotheses guided the analyses for this study.

#### Research Question 1

RQ1: Is there a significant difference in GPA between GST versus non-GST students?

H<sub>10</sub>: There is no significant difference between the average GPA of GST students and the average GPA of non GST students

H<sub>1a</sub>: There is a significant difference between the average GPA of GST students and the average GPA of non GST students.

#### Research Question 2

RQ2: For GST students that completed the program, is there a significant relationship between their GPA and their TOEFL score obtained two years after program completion?

H<sub>10</sub>: There is no significant relationship between GPA and TOEFL score for GST students that completed the program.



H1<sub>a</sub>: There is a significant relationship between GPA and TOEFL score for GST students that completed the program.

### **Research Question 3**

RQ3: Is the TOEFL score obtained by GST students two years after program completion significantly higher or lower than 79?

H1<sub>0</sub>: The average TOEFL score obtained by GST students after program completion is not significantly different from 79.

H1<sub>a</sub>: The average TOEFL score obtained by GST students after program completion is significantly higher or lower than 79.

### **Research Question 4**

RQ4: Is there a significant difference in the academic success, as measured by GPA, between male and female GST and non-GST students?

H1<sub>0</sub>: There is no significant effect between gender and GST status on GPA.

H1<sub>a</sub>: There is a significant interaction effect between gender and GST status on GPA.

### **Research Question 5**

RQ5: Is there a significant difference in the academic success, as measured by GPA, between college-typically aged (age 19-22) and older (23 and older) GST and non GST students?

H1<sub>0</sub>: There is a no significant interaction effect between age and GST status on GPA.

H1<sub>a</sub>: There is a significant interaction effect between age and GST status on GPA.

### **Research Question 6**

RQ6: Is there a significant difference in GST program efficacy, as measured by TOEFL score obtained two years after program completion, between male and female GST students?

H1<sub>0</sub>: There is no significant difference in TOEFL score between male and female GST students.

H1<sub>a</sub>: There is a significant difference in TOEFL score between male and female GST students.

### **Research Question 7**

RQ7: Is there a significant difference in GST program efficacy, as measured by TOEFL score obtained two years after program completion, between college-typically aged (age 19-22) and older (23 and older) GST students?

H1<sub>0</sub>: There is no significant difference in TOEFL score between college-typically aged and older GST students.

H1<sub>a</sub>: There is a significant difference in TOEFL score between college-typically aged and older GST students.

Research question one compared the academic proficiency of GST and non GST students. An independent samples T-test was used (Student, 1908) to compare the average GPA of GST and non-GST students. Research question two investigated the relationship between English proficiency and academic achievement for GST students

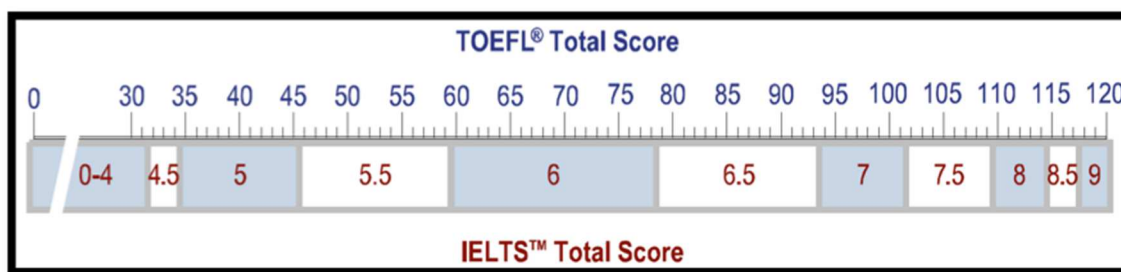
who successfully completed the GST program using a Pearson product-moment correlation (Galton, 1886). Research question three compared the English proficiency of GST students two years after completing the GST program with the non GST students. This was accomplished by comparing the GST student's TOEFL score against a known TOEFL score cut-off for non-GST students, 79. Research question four examined the effect of gender and the GST program on academic success as measured by GPA using an ANOVA (Fisher, 1925). For research question five, students were classified as either typically-college aged (19 to 22 years) or older-college aged (23 years and over). An ANOVA was then employed to explore the effect of age and the GST program on academic success. Research question six used an independent samples T-test to investigate if the GST program was more or less successful for male or female GST students. Here, success was measured by a student's TOEFL score obtained two years after their completion of the GST program. Finally, research question seven also used an independent sample  $t$  test to test the effect of age on the success of the GST program by comparing the TOEFL score of typically-college aged or older-college aged GST students.

This chapter will first review sample characteristics and descriptive statistics. Next, appropriate assumptions for each statistical test used will be evaluated. Then results of statistical analyses for each research question will be reported, followed by a brief summary of the significant results. Discussion of the statistical results will continue in more depth in chapter five.

### Sample Descriptive

Data was collected from 127 Chinese students studying at North Jersey University, 62 of which were enrolled in the Gateway to a Successful Tomorrow (GST) Bilingual degree program. The remaining 65 students were not enrolled in the GST program. GPA data was obtained from all students; those enrolled in the GST program and those not enrolled in the GST program.

Exact TOEFL scores for students who were never enrolled in the GST program were not able to be obtained, though all scores were over 79. Students enrolled in the GST program were not English-proficient when they began the program, however, IELTS and TOEFL scores were obtained from the students after two years of study in GST. IELTS were converted to TOEFL scores using the ranges established by Educational Testing Service (ETS, 2010). For a side by side comparison of TOEFL and IELTS scores, please view figure one. Frequency statistics for GST status and gender are presented in tables one and two and figures two and three.



*Figure 1.* TOEFL and IELTS comparison ranges established by the ETS. IELTS scores were converted to TOEFL scores by taking the midpoint or average TOEFL score in the IELTS range.

Table 1.

*Frequencies for GST Status*

	Frequency	Percent
GST Students	62	48.8
NonGST Students	65	51.2
Total	127	100.0

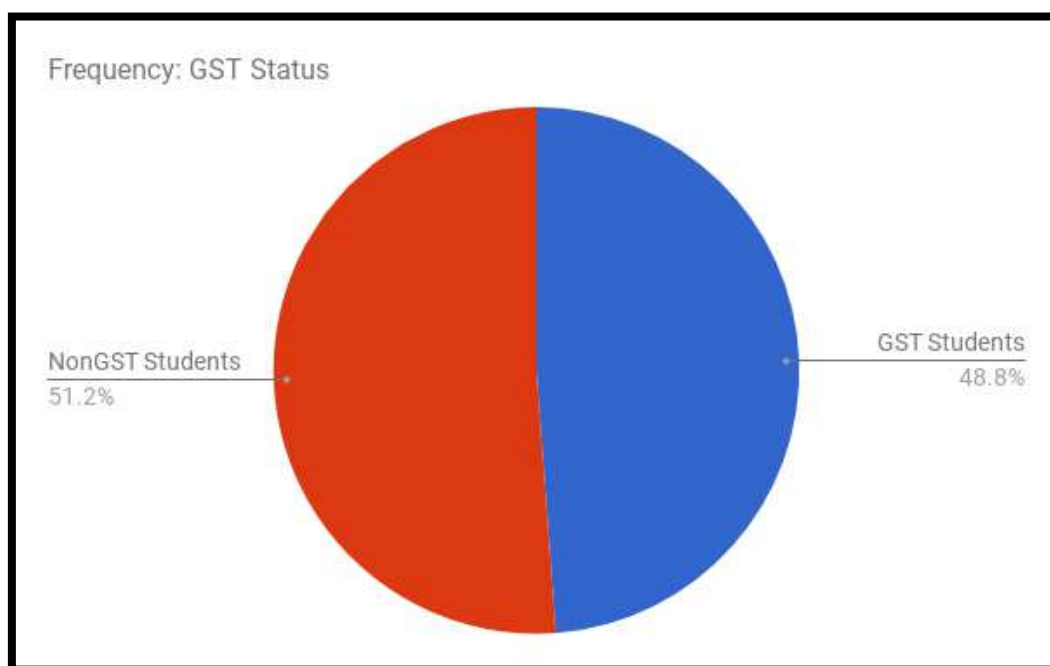
*Figure 2. Frequencies for GST status*

Table 2.

*Frequencies for Gender*

	Frequency	Percent
Male	70	55.1
Female	52	41.7
Missing	4	3.1
Total	127	100.0

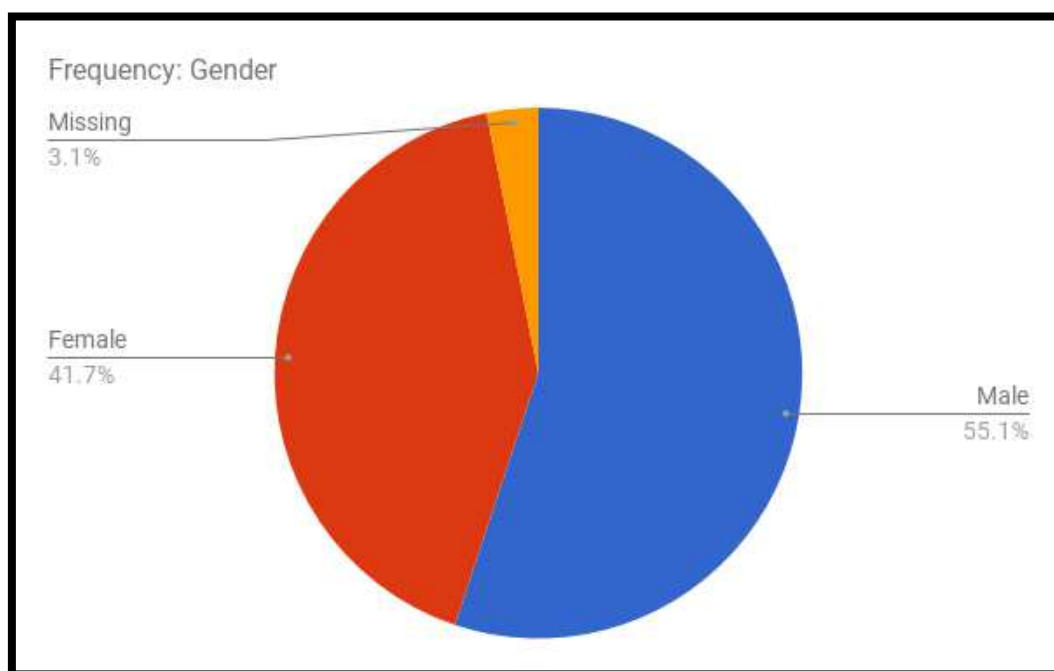
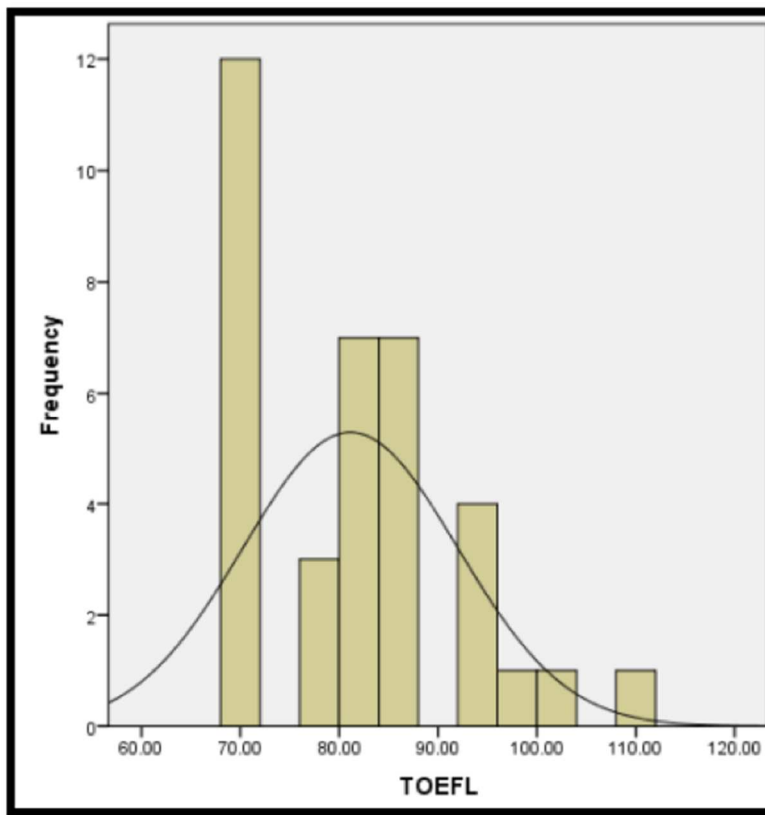


Figure 3. Frequencies for Gender

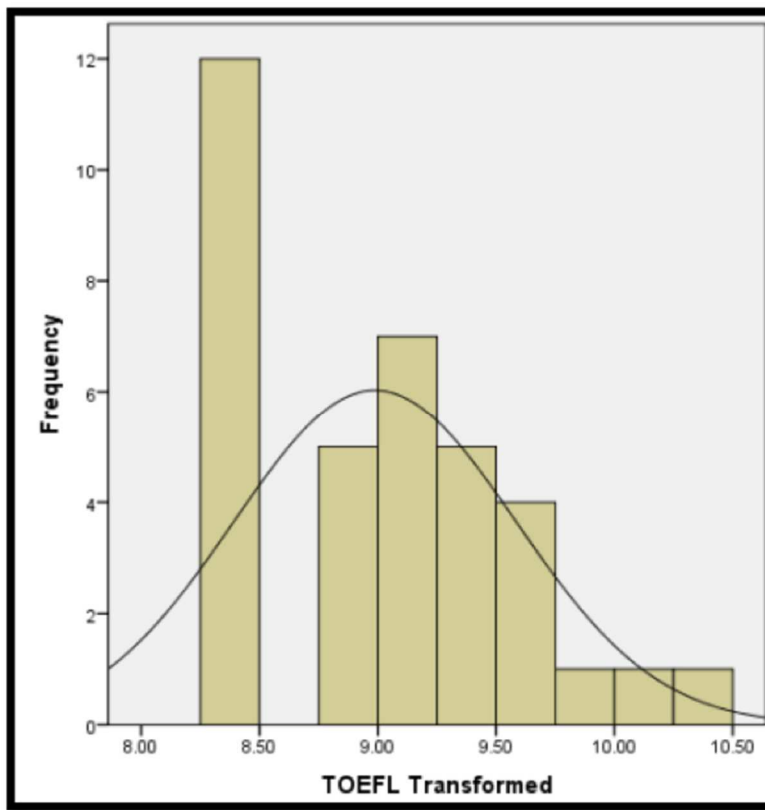
As can be gleaned from viewing these tables and charts, the sample consists of slightly more GST than non-GST students and slightly more male than female students

Since the research questions require the use of parametric tests, histograms of continuous variables were observed for normality and to check for the presence of outliers. For a visual representation of the distribution of TOEFL scores in the sample, after the conversion of IELTS scores, please view figure three.

TOEFL scores were clustered to the left, resulting in a positive skew. A square root transformation was applied to TOEFL scores to reduce the skew and aid in normalizing the distribution (IBM support, 2013). To view the distribution shape of TOEFL after the square root transformation, please view figure four.



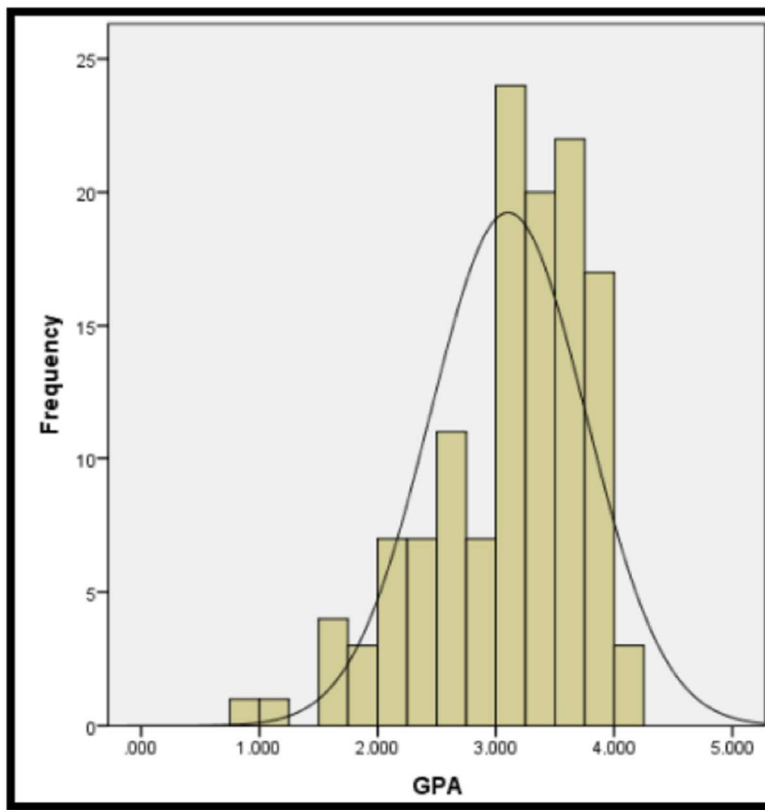
*Figure 4.* Frequency distribution of the non-transformed TOEFL values. TOEFL scores are clustered to the left, resulting in a negative skew. The appropriate shape for a normal distribution is superimposed on the graph for comparison.



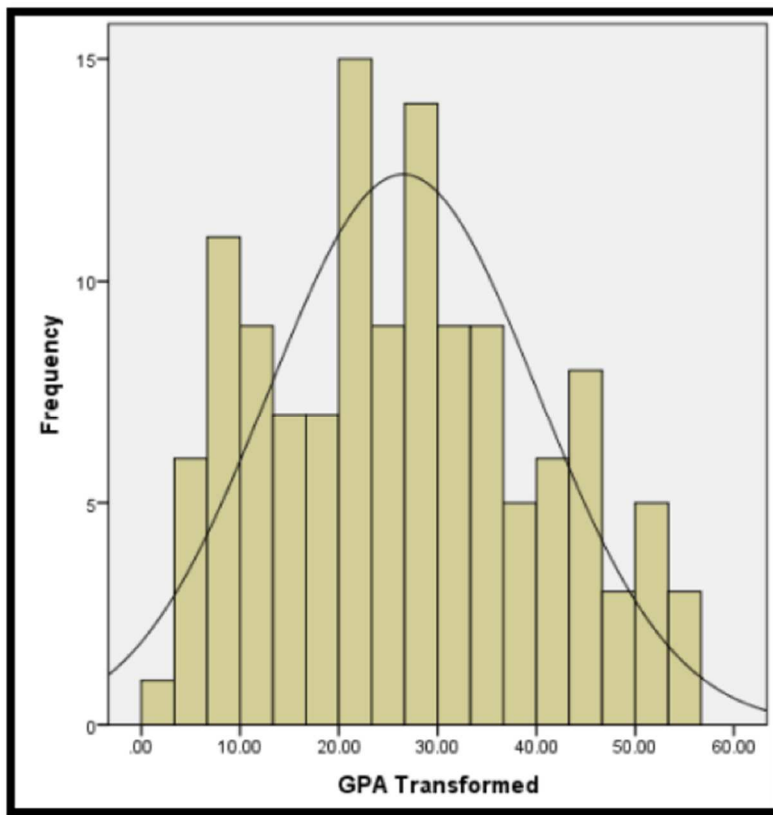
*Figure 5.* Frequency distribution of the transformed TOEFL values. The square root of each TOEFL value was taken to reduce positive skew. The appropriate shape for a normal distribution is superimposed on the graph.

Due generally high academic achievement in the sample, GPA was highly negatively skewed. An exponential transformation was applied on GPA to reduce the skew and normalize the distribution (IBM support, 2013). To view the distribution shape of GPA before and after the exponential transformation, please view figures five and six.





*Figure 6.* Frequency distribution of the non-transformed GPA values. Due to higher achievement, GPA scores are clustered to the right, resulting in a positive skew. The appropriate shape for a normal distribution is superimposed on the graph for comparison.



*Figure 7.* Frequency distribution of the transformed GPA values. Each GPA value was raised exponentially by the power of two to reduce negative skew. The appropriate shape for a normal distribution is superimposed on the graph.

For a visual representation of the distribution of age in the sample, please view

Figure 8.

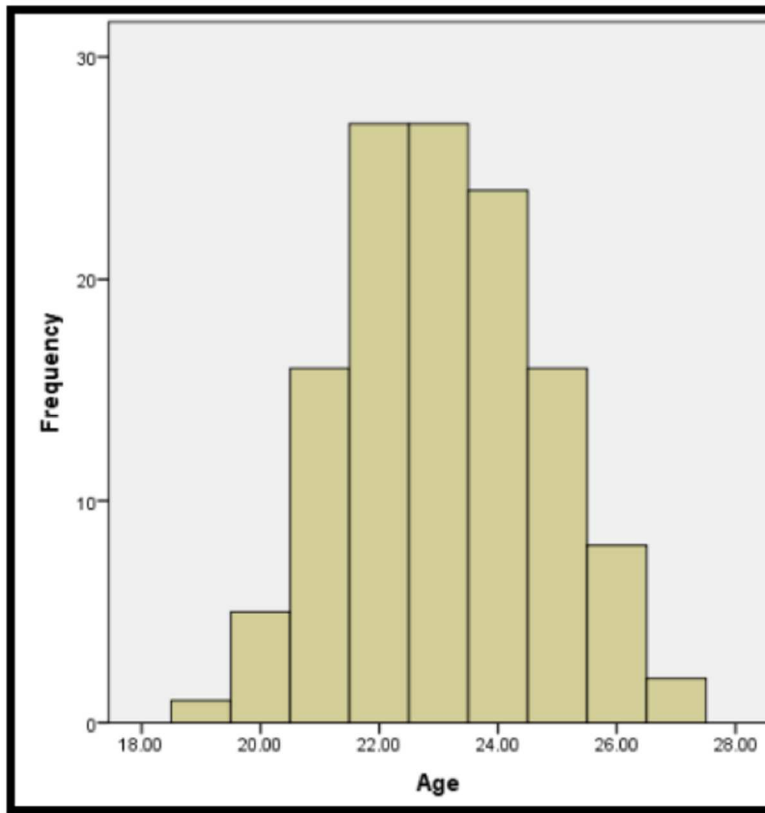


Figure 8. Frequency distribution by age.

Below in Table 3 are the descriptive statistics for GPA, TOEFL scores (including converted IELTS scores) and age.

Table 3.

*Descriptive Statistics for GPA, TOEFL Score, and Age*

	N	Min	Max	Mean	Std. Dev
GPA	127	0.90	4.00	3.10	0.66
TOEFL	36	69.00	110.00	81.13	10.87
Age	127	19.00	27.00	23.08	1.66

In addition to histograms, scatter plots of residual statistics were also observed for correlation analyses to check for outliers and non-normal error distributions. To ensure

independence of error variance for the independent samples  $t$  test, a Levene's test for equality of variances was also calculated. All statistics were considered significant at an alpha level of  $p < .05$  and all tests were performed in SPSS (version 22).

## Results

### Research Question 1

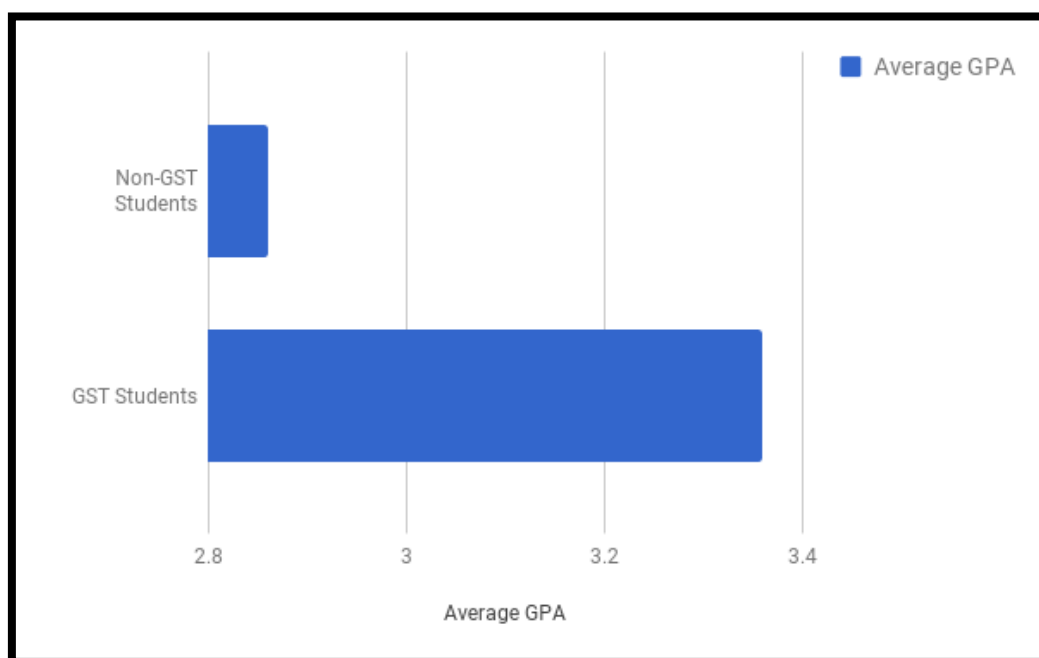
For research question one, the average GPA for GST students was compared to the average GPA of the non GST students using a  $t$  test. The exponentially transformed GPA variable was used. GST students ( $M = 31.87$ ,  $SD = 12.84$ ) had a significantly higher GPA than non-GST students ( $M = 21.39$ ,  $SD = 12.38$ ), on average ( $T(125) = -4.89$ ,  $p < .000001$ ). Levene's test for equality of error variances was non-significant, indicating that the assumption of error variance independence for an independent samples T-Test was not violated.

For descriptive statistics of GPA in the original metric, please see table four. For a visual representation of the difference in average GPA between GST and non-GST students, please view figure nine.

Table 4.

*Descriptive Statistics for GPA for GST and Non-GST Students*

	N	Mean	Std. Deviation
Non-GST Students	65	2.86	0.70
GST Students	62	3.36	0.50



*Figure 9.* Difference in GST and non-GST students' average GPA.

Based on these results, it is very clear that Chinese students in this sample enrolled in the GST program significantly outperformed the students not enrolled in the GST program. This supports the idea that the Gateway to a Successful tomorrow program does help Chinese students perform better academically and obtain a higher GPA.

### **Research Question 2**

For research question two, the relationship between GPA and TOEFL for students who completed the GST program was investigated. A Pearson correlation coefficient was calculated using exponentially transformed GPA and TOEFL scores that were obtained two years after starting the GST, for students that completed the GST program. Residuals from the relationship between GPA and TOEFL scores were inspected to ensure that error variance was normally distributed across GPA values.

There was no significant relationship between GPA and TOEFL score in this sample ( $N=36$ ,  $r = -.131$ ,  $p = .446$ ). For a visual representation of the non-significant relationship between TOEFL score and GPA for GST students, please view figure ten.

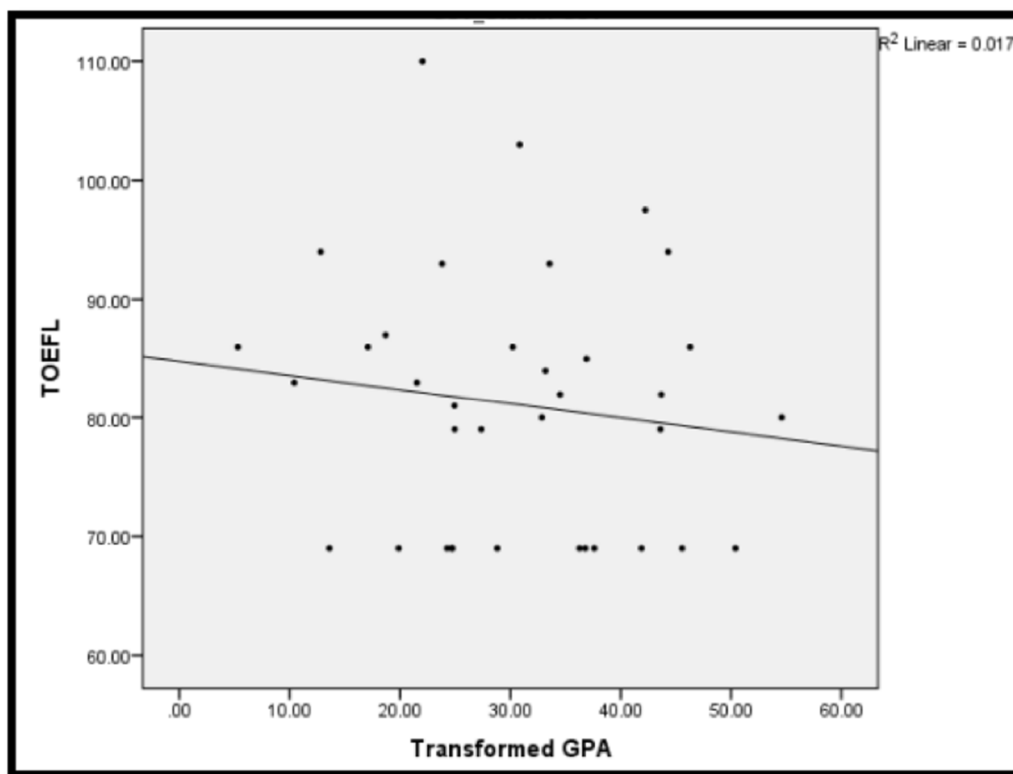
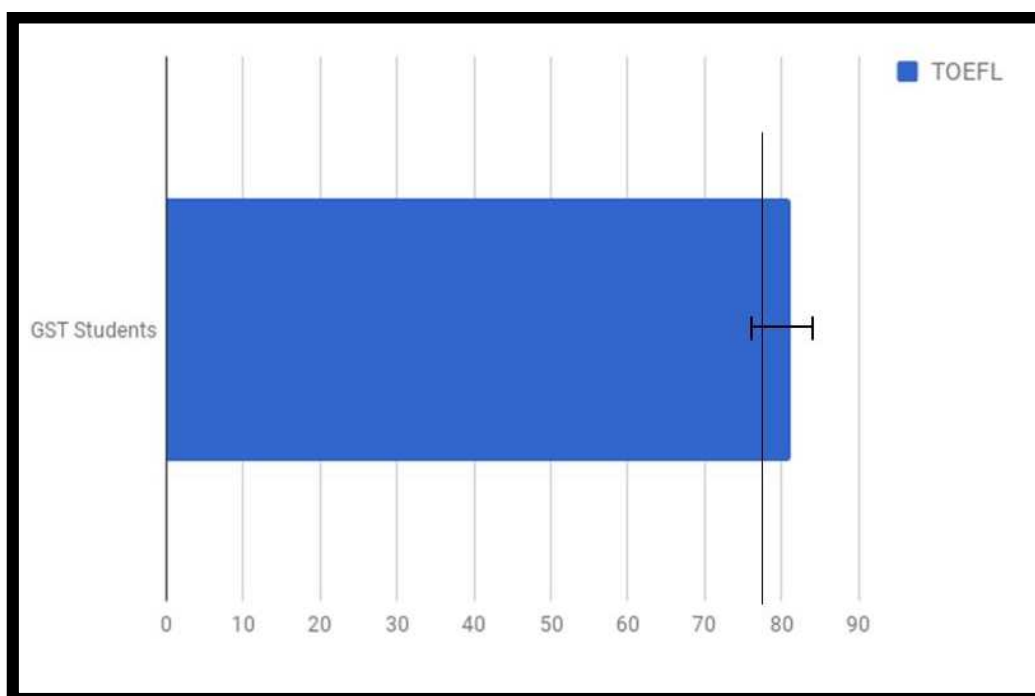


Figure 10. Relationship between TOEFL score and GPA for GST students.

### Research Question 3

Research question three examined TOEFL scores from GST students after two years of participation in GST. A single sample T-test was used to compare the TOEFL score of the GST students to the known cutoff value of non-GST students, which was a 79. The average TOEFL score for GST students ( $M = 81.13$ ,  $SD = 10.87$ ), while slightly higher than 79, was not significantly different from 79 ( $T(35) = 1.17$ ,  $p = .249$ ). The 95 %

confidence interval indicated that the average TOEFL score for students in the GST program was between 77.5 and 84.8. While 79 does fall on the lower end of this interval, it is still in the interval and thus the results are non-significant. For a visual representation of the average TOEFL scores for GST students and the 95% confidence interval for those scores, please view figure eleven.



*Figure 11.* Average TOEFL score for GST student. The long vertical black line corresponds to the test value of 79. The error bar indicates the range of values where we are 95% confident that the "true value" of the average TOEFL score of GST students lies.

The results of research questions two and three indicate that while GST students perform better academically than non GST students, achieving a higher GPA does not necessarily translate into also achieving a higher TOEFL score. Results also imply that while the GST program may help improve GPA, there is no evidence that it improves TOEFL scores.

#### Research Question 4

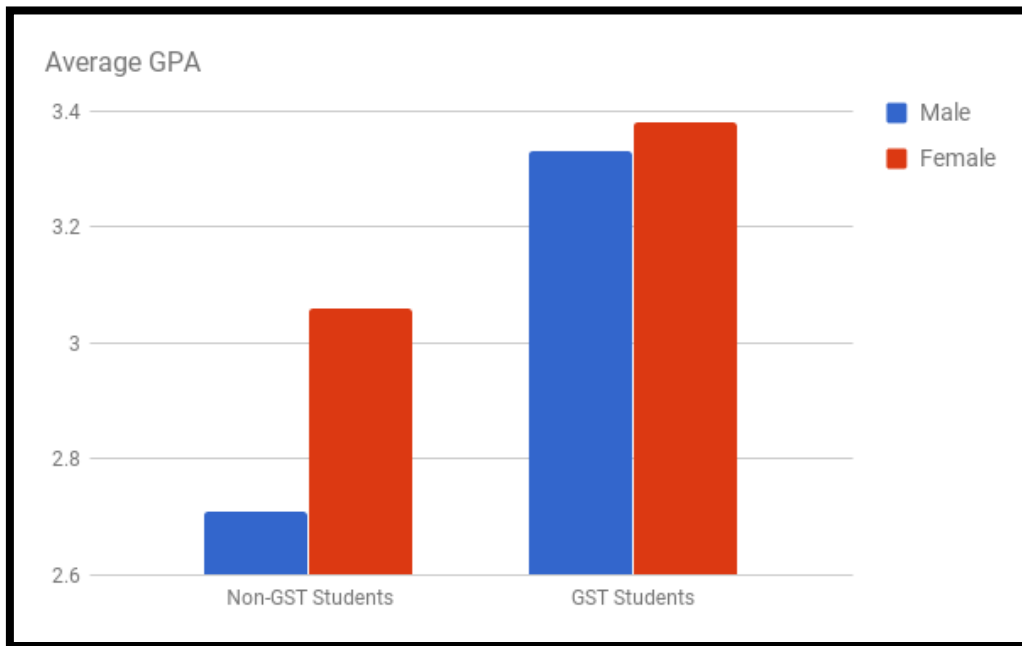
Research question four further explores the relationship between GST status and GPA by examining this effect for both male and female students. A two-way ANOVA was calculated to determine the effect of gender (male, female), the GST program (GST, non-GST) and their interaction on academic achievement as measured by GPA. As previously noted, there was a significant effect of GST status on GPA, on average across GPA ( $F(1,119)=19.21, p=.00003, \eta^2=.14$ ). There was no significant difference in GPA between male and female students, regardless of whether or not they were in the GST program ( $F(1,119)=1.18, p=.379, \eta^2=.01$ ). There was no significant interaction effect between gender and GST program status on GPA ( $F(1,119)=0.35, p=.554, \eta^2=.003$ ). For the average GPA for male and female GST and non-GST students, please view table five. For a visual representation of average GPA for male and female GST and non-GST students please view figure 12.

Table 5.

*Descriptive Statistics for GPA for Male and Female GST and Non-GST Students*

	Male		Female	
	Mean	Std. Deviation	Mean	Std. Deviation
Non-GST Students	2.71	0.79	3.06	0.50
GST Students	3.33	0.53	3.38	0.50





*Figure 12.* Average GPA for male and female GST and non-GST students.

### **Research Question 5**

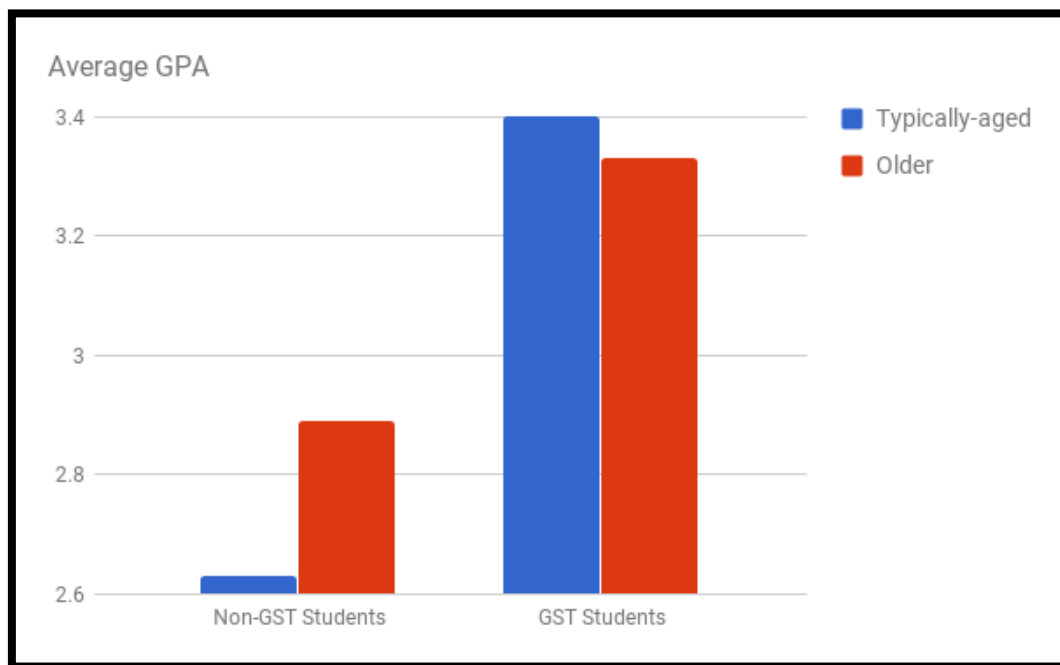
Research question five continued to explore the relationship between GST status and GPA by examining this effect for typically-aged and older college students. Students were classified as either typically-college aged (19 to 22) or older-college aged (23 and over). A two-way ANOVA was calculated to determine the effect of age (typically-aged, older), the GST program (GST, non-GST) and their interaction on academic achievement as measured by GPA. There was a significant effect of GST status on GPA, on average across GPA ( $F(1,122)=13.98, p=.00003, \eta^2=.10$ ). There was no significant difference in GPA between typically-aged and older students, regardless of whether or not they were in the GST program ( $F(1,122)=0.57, p=.812, \eta^2<.0001$ ). There was no significant interaction effect between age and GST program status on GPA ( $F(1,122)=1.56, p=.213$ ,

$\eta^2=.013$ ). For the average GPA for typically-aged and older GST and non-GST students, please view table six. For a visual representation of average GPA for typically-aged and older GST and non-GST students please view figure 13.

Table 6.

*Descriptive Statistics for GPA for Typically-Aged and Older GST and Non-GST Students*

	Typically-aged		Older	
	Mean	Std. Deviation	Mean	Std. Deviation
Non-GST Students	2.63	0.89	2.89	0.67
GST Students	3.40	0.49	3.33	0.51



*Figure 13. Average GPA for male typically-aged and older GST and non-GST students*

Research questions four and five indicate that the increase in GPA observed in GST students remains consistent for male and female and older and younger students. An

implication of these results is that the GST program is beneficial for students of all ages and both genders.

### Research Question 6

Research question six looked at TOEFL scores for male and female GST students. The average TOEFL score for male students was compared to the average TOEFL score of female students using a T-test. The square-root transformed TOEFL score was used. There was no significant difference in the TOEFL score between male ( $M=8.95$ ,  $SD=0.65$ ) and female GST students ( $M=9.09$ ,  $SD=0.53$ ), on average ( $T(31) = -0.585$ ,  $p=.563$ ). Levene's test for equality of error variances was non-significant, indicating that the assumption of error variance independence was not violated.

Descriptive statistics of TOEFL scores for male and female students in the original metric please see table seven. For a visual representation of the difference in average TOEFL between male and female students, please view figure 14.

Table 7.

*TOEFL Score Descriptives for Male and Female GST Students*

	N	Mean	Std. Deviation
Male	22	80.57	11.90
Female	11	82.82	9.94

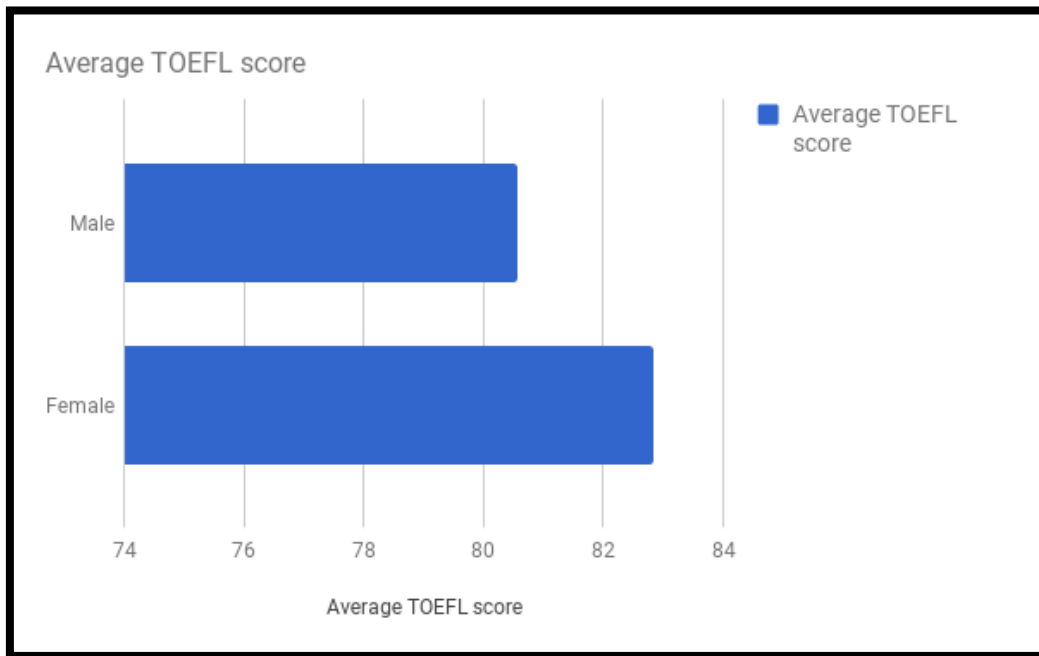


Figure 14. Difference in male and female students' average TOEFL score.

### Research Question 7

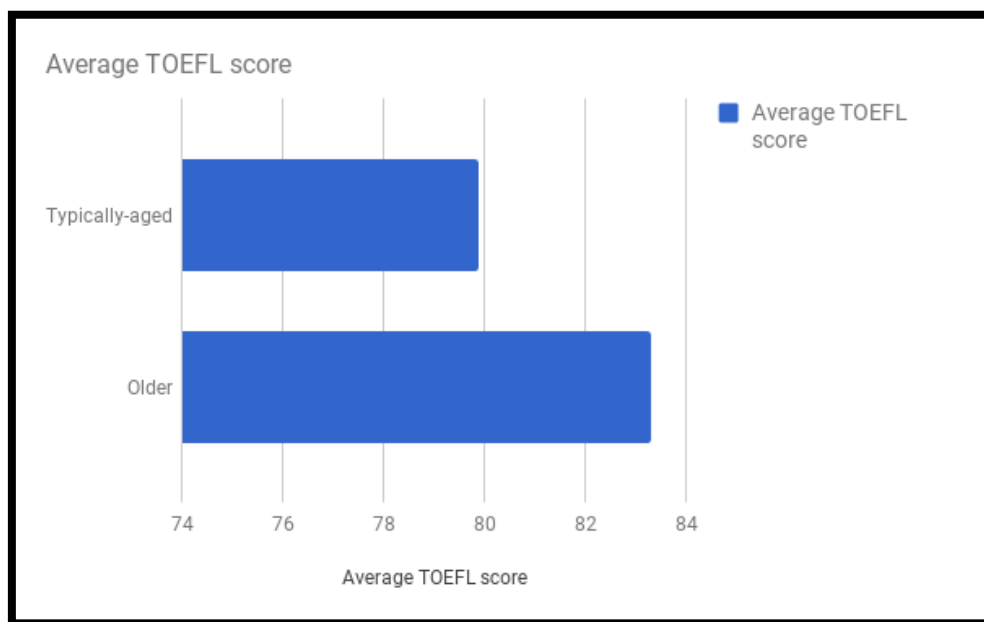
Research question seven further examined TOEFL scores by comparing the average TOEFL score of typically-aged and older GST students. There was no significant difference in the TOEFL score between typically-aged ( $M=8.92$ ,  $SD=0.60$ ) and older GST students ( $M=9.11$ ,  $SD=0.63$ ), on average ( $T(33)=-0.89$ ,  $p=.378$ ). Levene's test for equality of error variances was non-significant, indicating that the assumption of error variance independence was not violated.

Descriptive statistics of TOEFL scores for typically-aged and older students in the original metric please see table eight. A visual representation of the difference in average TOEFL between typically-aged and older GST students is presented in figure 15.

Table 8.

*TOEFL Score Descriptives for Typically-Aged and Older GST Students*

	N	Mean	Std. Deviation
Typically-aged	22	79.89	10.84
Older	13	83.31	11.44

Figure 15. *Difference in typically-aged and older students' average TOEFL score*

Research questions six and seven indicate that neither age nor gender has an effect on TOEFL score for GST students. Older students and female students tended to have higher TOEFL scores than typically-aged or male students, though those differences were not statistically significant.

### Summary

T-tests, ANOVAs and a correlation were calculated to address three research questions regarding the efficacy of the Gateway to a Successful Tomorrow (GST) Bilingual degree program.

Research question one compared the academic proficiency of GST and non-GST students. In accordance with our hypotheses, GST students had a higher GPA than non-GST students. Research question two examined the relationship between GPA and TOEFL scores for GST students, but contrary to our hypothesis no significant relationship was observed. English proficiency between GST and non-GST students was examined in research question three by comparing the average GST TOEFL score to an *a priori* cut-off TOEFL score of 79 for non-GST students. While the data trended toward GST TOEFL being higher than 79, the average GST TOEFL score was not statistically different from 79. Research questions four and five indicated that the effect of the GST program on GPA was neither stronger nor weaker for female versus male, typically-aged versus older, college students. Research questions six and seven compared the average TOEFL score between male and female and typically aged and older GST students using independent samples T tests. There was no difference in the average TOEFL score based on gender or age.

Results indicate that while there is no evidence that the GST program significantly improved TOEFL scores in this sample, students in the GST program did have a significantly higher GPA on average than students not enrolled in the GST program. None of these findings were affected by the gender or age of the student. This provides formal evidence that the GST program may contribute to higher achievement of bilingual Chinese students in US universities. Further discussion of these results and their implications continues in chapter 5.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The purpose of this study was to examine the effectiveness of Gateway to Successful Tomorrow Bilingual Degree Program among overseas Chinese students studying at United States universities as measured through student's grade point average (GPA) and TOEFL scores. Being an international student brings several challenges apart from achieving well at school. Challenges that international students face include student life in the United States (Charles-Toussaint & Crowson, 2010; Crocket & Hays, 2011; Khawaja & Stallman, 2011; Zhou, Frey, & Bang, 2011), negotiating finances, academics, psychological or emotional adjustment, social connections, in some cases, hostility, and on top of that having to use a new language (Lin, 2012). English language proficiency is an important factor in the international student's acculturation and it was examined in this study.

International students need to achieve scores of more than 80 on TOEFL to be admitted in United States universities. Despite such requirements overseas Chinese students still struggle in communicating with their English home language peers and understanding concepts delivered in English (Padilla, Fan, Xu, & Silva, 2013; Uchikoshi & Marinova-Todd, 2012). As a result, some overseas Chinese students fail to meet required grades and has been observed to struggle to increase their grades or even maintain the grades obtained in their homeland (Li, Chen, & Duanmu, 2010; Orleans, 1988). Identifying this problem among Chinese students, some universities have included interventions to increase these students' success. One such program is the Gateway to

successful Tomorrow Bilingual Degree Program at North Jersey University. While there is anecdotal data to this program's success, the program has not been formally evaluated.

To address this gap, this study used a causal comparative design where quantitative data had been gathered. Quantitative data was students' achievement records and TOEFL scores. Such raw data were obtained from historical school documents, official personal records, and proprietary information from federated databases upon the approval of human subject studies by the institute review board (IRB). Data were collected from 127 Chinese students studying at North Jersey University, 62 of which were enrolled in the GST Bilingual degree program. The remaining 65 students were not enrolled in the GST program. In keeping with the gender ratio enrolled at the university, 51% GST students and 51.1% non-GST students of the samples were male and the rest female.

### **Summary of Key Findings**

The following seven research questions were formulated to guide this study:

- RQ1: Is there a significant relationship between English proficiency levels, as measured by TOEFL score, and academic achievement, as measured by GPA, among overseas Chinese students enrolled at North Jersey University?
- RQ2: Is there a significant difference in students' GPAs and TOEFL scores before and after their participation in Gateway to Successful Tomorrow (GST) Bilingual Degree Program?



- RQ3: Is the TOEFL score obtained by GST students two years after program completion significantly higher or lower than 79?
- RQ4: Is there a significant difference in the academic success, as measured by GPA, between male and female GST and non-GST students?
- RQ5: Is there a significant difference in the academic success, as measured by GPA, between college-typically aged (age 19-22) and older (23 and older) GST and non-GST students?
- RQ6: Is there a significant difference in GST program efficacy, as measured by TOEFL score obtained two years after program completion, between male and female GST students?
- RQ7: Is there a significant difference in GST program efficacy, as measured by TOEFL score obtained two years after program completion, between college-typically aged (age 19-22) and older (23 and older) GST students?

### **Research Question 1**

The average GPA for GST students was compared to the average GPA of the non-GST students using a T-test. GST students ( $M=31.87$ ,  $SD=12.84$ ) had a significantly higher GPA compared to non-GST students ( $M=21.39$ ,  $SD=12.38$ ), on average ( $T(125) = -4.89$ ,  $p<.000001$ ). The Chinese students in this sample enrolled in the GST program significantly outperformed the students not enrolled in the GST program. GST students on average obtained a GPA 0.5 unit better than non-GST students. This supports the idea that the Gateway to a Successful Tomorrow program does help Chinese students perform better academically and obtain a higher GPA.

**Research Question 2**

Only students who completed the GST program were investigated. The relationship between GPA and TOEFL scores, obtained two years after the students completed the GST program, was compared using a Pearson correlation coefficient. No significant relationship between GPA and TOEFL score in this sample ( $N=36$ ,  $r = -.131$ ,  $p = .446$ ) was found. There is therefore no evidence that students with higher TOEFL scores perform better academically (as measured by GPA) in this sample.

**Research Question 3**

Research question three examined TOEFL scores from GST students after two years of participation in GST using a single sample T-test was to compare the TOEFL score of the GST students to the known cutoff value of non-GST students, which was a 79. The average TOEFL score for GST students ( $M = 81.13$ ,  $SD = 10.87$ ), was slightly higher than 79, but it was not significantly different from 79 ( $T(35) = 1.17$ ,  $p = .249$ ). The 95 % confidence interval indicated that the average TOEFL score for students in the GST program was between 77.5 and 84.8. While 79 does fall on the lower end of this interval, it is still in the interval and thus the results are non-significant. There is no evidence in this sample that GST students perform better on the TOEFL exam than non-GST students, thus there is no evidence that the GST program increases TOEFL score.

**Research Question 4**

This question represented a further exploration of the relationship between GST status and GPA by examining this effect for both male and female students. A two-way ANOVA was calculated to determine the effect of gender (male, female), the GST

program (GST, non-GST) and their interaction on academic achievement as measured by GPA. The average GPA for male non-GST students was 2.71 and the average GPA for female non-GST students was 3.06; female non-GST students had an average GPA that was 0.35 points higher than male non-GST students. The average GPA for male GST students was 3.33 and the average GPA for female GST students was 3.38; female GST students had an average GPA that was 0.05 points higher than male GST students. There was no statistically significant difference in GPA between male and female students. The effect of GST status on GPA was not significantly different for male versus female students, however, the data trended in such a way indicating that the effect of the GST program on GPA was larger for male students compared to female students. As expected from the analysis of the main effect of GST status on GPA, the simple effects for both male ( $F(1,68) = 12.614, p = .001$ ) and female ( $F(1,51) = 7.711, p = .008$ ) students' GPA was significantly higher for those enrolled versus not enrolled in the GST program. The positive effect of the GST program on GPA trended towards being slightly stronger for male compared to female students.

### **Research Question 5**

Research question five continued to explore the relationship between GST status and GPA by examining this effect for typically-aged (19-22 years) and older college students (23+ years). The two-way ANOVA did not indicate a statistically significant difference in GPA between typically-aged and older students, regardless of whether or not they were in the GST program ( $F(1,122) = 0.57, p = .812, \eta^2 < .0001$ ). There was no

significant interaction effect between age and GST program status on GPA ( $F(1,122) = 1.56, p = .213, \eta^2 = .013$ ).

The effect of GST status on GPA was not found to be significantly different for typically-aged versus older students, however, the data trended in such a way that indicated that the effect of the GST program on GPA was larger for typically aged students than for older students. As expected from the analysis of the main effect of GST status on GPA, the simple effects for both typically-aged ( $F(1,47) = 8.120, p = .006$ ) and older ( $F(1,75) = 5.209, p = .025$ ) students' GPA was significantly higher for those enrolled versus not enrolled in the GST program. The effect of the GST program on GPA was significant but small for older students, whereas there was a medium-sized effect of the GST program on GPA for the typically-aged students. The positive effect of the GST program on GPA trended towards being stronger for typically aged compared to older students.

### **Research Question 6**

The average TOEFL score for male students was compared to the average TOEFL score of female students using a T-test. There was no significant difference in the TOEFL score between male ( $M=8.95, SD=0.65$ ) and female GST students ( $M=9.09, SD=0.53$ ), on average ( $T(31) = -0.585, p = .563$ ). Therefore, gender had no significant effect on the TOEFL scores of the students.

### **Research Question 7**

This research question compared the average TOEFL score of typically-aged and older GST students. There was no statistically significant difference in the TOEFL score

between typically-aged ( $M=8.92$ ,  $SD=0.60$ ) and older GST students ( $M=9.11$ ,  $SD=0.63$ ), on average ( $T(33) = -0.89$ ,  $p=.378$ ). Therefore, age had no significant effect on the TOEFL scores of the students.

### **Interpretation of the Findings**

Due to their similarity the following questions will be discussed together: two and three, four and five, as well as questions six and seven.

#### **Question 1**

For the first research question, the average GPA for GST students was compared to the average GPA of the non-GST students. As was expected, Chinese students in this sample enrolled in the GST program significantly outperformed the students not enrolled in the GST program. This finding is supported by other researchers as Martirosyan, Hwang, and Wanjohi (2015) reported that several researchers found a positive relationship between English proficiency and GPA in studying international students attending American universities. This finding supports that of Coderre et al., (2013) who found that bilingual education amongst children of all ages positively impact on their higher cognitive function.

Researchers such as Fass-Holmes studied the link between proficiency in English comprehension and academic achievement. Interestingly, students were shown to achieve overall academic success in all classes despite difficulties with the English language. This success was shown to be a result of strong familial and social support, religion, and self-motivation (Fass-Holmes & Vaughn, 2014). Familial pride, support, and regular contact with parents are significant to the Chinese students. Chinese international students in the

United States lack this close contact and support of their families and need social structures to make up for this somewhat. The communicative interaction and interpersonal warmth of the GST classes might provide some of this much needed emotional support.

### **Questions 2 and 3**

The results of research questions two and three indicate that while GST students perform better academically than non-GST students, achieving a higher GPA does not necessarily translate into also achieving a higher TOEFL score. Results also imply that while the GST program may help improve GPA, there is no evidence that it improves TOEFL scores.

Martirosyan et al. (2015) asserted that researchers found a positive relationship between English proficiency and academic performance of international students but that there was not consensus that TOEFL was the best predictor of academic success for these students. The authors mentioned that several factors are responsible for international students' academic success and language proficiency is one of them. In the light of this one could argue that successful completion of the GST program could impact positively on any number of factors and not exclusively on English proficiency. This combination of factors may be the reason why GST students had better GPA scores but not necessarily better TOEFL scores.

In a study aimed at exploring the reason for students' academic achievement in spite of a lack of English proficiency, Fass-Holmes and Vaughn (2015) found that Chinese students relied strongly on text books to complete their studies successfully. It

seems like a paradox that their communicative English language proficiency does not impact much on their academic success. The answer might lie in the fact that Chinese academic culture does not elicit and support communicative interaction but rather encourages students to learn and accept what the teacher presents (Bai et al., 2012; Wong-Lo & Bai, 2013). Chinese students therefore seem to rely more on reading and writing skills as opposed to interpersonal communication skills.

A closer analysis of the GST program and the type of English proficiency gained may shed light on the reasons for the GST Chinese students' superior academic performance as opposed to the non-GST students. Similarly, a correlational study of TOEFL test items and GST program outcomes might shed light on the correlation, if any, between the two.

#### **Questions 4 and 5**

The results of questions four and five indicate that the increase in GPA observed in GST students remains statistically consistent for male and female as well as older and younger students. An implication of these results is that the GST program is beneficial for students of all ages and both genders.

Gender differences were found to be distinctive in English acquisition of Chinese students. Female students were found to excel at English much quicker than their male peers (Green, 2015). Green (2015) found that male students tend to avoid social engagement and isolated themselves from their classmates. In contrast, female students engaged with their American classmates and made regular attempts to speak English in and out of the classroom which benefitted both their language acquisition and

acculturation. A study by Zhu (2016) confirmed the notion that female Chinese students interacted more socially with their American peers compared to their male counterparts.

In a study of 264 Chinese international students in the United States, Lowinger et al. (2014) found significant variances amongst male and female students. Particularly male students struggled significantly more with academic procrastination which was directly related to homesickness and discrimination from other students. For females, significant correlations with academic procrastination were found for academic self-efficacy, English language ability, and culture shock and stress.

These findings may explain the differences between achievements of male and female students in the current study where males benefited slightly more from the GST program. This could be ascribed to the more meaningful interaction between the students and lecturer that could facilitate a feeling of inclusion and warmth which could counteract the male students' homesickness. This possibility should be explored further by means of qualitative research as it could have implications for future program development which is aimed at increased English proficiency and acculturation of Chinese foreign students.

### **Questions 6 and 7**

The results of questions six and seven indicate that neither age nor gender have an effect on TOEFL score for GST students. Older students and female students tended to have higher TOEFL scores than typically-aged or male students, though those differences were not statistically significant. This finding did not confirm previous knowledge on the relationship between TOEFL scores and age and gender as Green and Foster (1986)



found that while males had slightly higher TOEFL scores, females had slightly GPA scores. This finding is similar to the finding of the current study, the scores were not significantly different in either study.

The correlation between GST and TOEFL has not yet been determined. As previously discussed both age and gender have none too little impact on TOEFL scores of Chinese students. This might indicate that the reasons for score differences could be found outside the parameters of age and gender. Wang, Wei, and Chen (2015) asserted that factors such as high levels of self-esteem and problem-solving abilities, and low levels of maladaptive meticulousness preceding acculturation were better predictions of successful adjustment. Findings from another study indicated that students with perceived control over their stress levels and displayed less neurotic behavior about school success performed better irrespective of their TOEFL scores (Hirai, Frazier, & Syed, 2015). These factors within the learner might be more valuable in determining factors that influence TOEFL scores than age and gender.

The theoretical framework of this study is the sociocultural learning theory of Vygotsky (1978) which can be used within the context of bilingual student learning and understanding whether new policies and school intervention aids in bilingual students' learning processes (Lantolf, et al. 2015). It is thought that the mental functioning of humans is organized by cultural concepts, activities and artifacts (Lantolf et al., 2015). Lantolf et al. (2015) noted that humans learn through tools, and not through their natural capacity. This can come in the form of programs or interventions, such as GST, and viewing studies within this framework allows investigators to better understand the

outcome of their intervention programs. The sociocultural theory together with the zone of proximal development postulated by Vygotsky did not seek to differentiate between different age groups and gender as it focused more on the universal phenomenon of learning per se. Investigation of factors within the learner—such as stress control—might illuminate differences between different age groups and gender when it comes to learning English as a second language. The fact that students benefitted from the GST program may be an indication that the program facilitated improvement regardless of gender and age.

### **Limitations of the Study**

The following limitations were identified in the study. Data other than those available at hand were not included in the study. It could be possible that TOEFL test results might show greater difference when individual subtests were to be compared, for example the listening test could give an indication of how the student might perform in the lecture situation. Similarly, instead of a GPA average for all subjects, it might be more beneficial to compare the average scores of the students' subjects individually or compare students of different courses such as STEM instead of comparing students from STEM subjects with students studying humanities.

The study was limited to samples that the administrators were willing to include in the study given the qualifications using the inclusion criteria. Thus, selection of participants was based on the sampling used by school administrators and not randomly as desired. Furthermore, the size of the sample is relatively small for qualitative studies and a larger sample might provide results that are more significant. For example, when

comparing students according to gender or age groups restrictions of the sample size the results might have impacted on the findings.

The purpose of this study was not to gather in-depth results that could be gathered in a qualitative study. By using a mixed method design insight from the students about what activities they found hard or suggestions of training needed might be beneficial in adapting the current GST program.

Lastly, it is not clear whether other situations and experiences contributed to the students' acculturation and what percentage of their experiences outside university intervention was responsible for the improvement in their GPA. Addressing the contribution of Chinese students' interaction with peers and its contribution to the Chinese students' acculturation might not be easy without first conducting an explorative qualitative study to determine themes from which to design a survey that could be used on a larger sample Chinese student.

### **Recommendations**

The findings of this study were not conclusive and further study to determine the effect of the GST on Chinese students' English language proficiency and academic performance is needed. However, there was a significant increase in GPA scores of the GST students which is an indication that this program benefitted the Chinese students attending the program. To determine what aspects of the program benefitted the students most from the students' perspective, it is recommended that a qualitative study be conducted. The findings of such a study could be used to further enhance the GST program, making it even more beneficial to the Chinese international students.

Seeing that language is only part of culture, the acculturation process of international students, needs to be addressed in terms of the GST program. Previous researchers found that cultural issues such as differences in the educational system, and the student-lecturer relationship impact on the student's academic achievement (Martirisyan et al., 2015). It is important to determine to what extent the GST program addresses these identified acculturation factors with a view to identify those areas that would be beneficial to address.

The GST program offers various subject areas to students, it would be interesting to determine which of those benefit the international Chinese students most in terms of academic success (GPA), language proficiency, and acculturation. A further analysis of the similarities and differences between the programs could identify those areas that the students find beneficial to both their studies and acculturation process.

Pertaining to the benefits of the GST program and English proficiency as measured on the TOEFL, a study needs to be conducted to determine in which ways the GST program develops students' English language proficiency. Given the contradictory results of studies that aimed to determine the ability of TOEFL to predict academic outcomes, a conclusion might be that another assessment of language proficiency is needed or that TOEFL should be adapted to contain more accurate predictive value.

### **Summary of the Recommendations for Further Study**

It is recommended that further study be conducted to (a) determine what aspects of the GST program benefitted the students most from the students' perspective, by utilizing a qualitative study design, (b) determine to what extent the GST program

addresses identified acculturation factors with a view to identify those areas that would be beneficial to address within the GST program, (c) determine which of the subject areas covered within the GST program benefit the international Chinese students most in terms of academic success (GPA), language proficiency, and acculturation, (d) analyze the similarities and differences between the GST and TOEFL programs to identify those areas that the students find beneficial to both their studies and the acculturation process, and (e) determine in which ways the GST program develops students' English language proficiency and in effect their GPA. It is furthermore recommended that a large empirical study be conducted on the usefulness of TOEFL test scores in determining students' eligibility for admission at universities in the United States.

### **Recommendations for Policy Change**

Given the success of the GST program in the Chinese students' academic performance it is recommended that the North Jersey University continues to offer the GST program to Chinese students. It is furthermore recommended that the Cheng Gong-Gateway to Successful Tomorrow (GST) Bilingual Degree Program at Fairleigh Dickinson University be extended to include other foreign students with low TOEFL test scores. Such a policy change may have implications for lecturing staff as integration of other foreign students in the Chinese group might not be feasible as it could alter the dynamics of the group and impact on the success of the program. The policy to use TOEFL test scores to determine students' eligibility and possible success at university should be reconsidered. There are currently questions about the usefulness of TOEFL test scores in predicting student success, until a more appropriate version of the TOEFL is

found by its researchers, the North Jersey University might find exposing its foreign students to a shorter GST version more beneficial in improving their academic achievements. The University's administrators responsible for foreign students together with the curriculum committee should embark on designing a shorter version of the GST which could be made compulsory to all foreign students. Seeing that there are financial and staff implications to such a policy change, the financial and personnel departments of the University should also be included.

### **Implications**

This study contributes to research and knowledge of developing English language proficiency of international Chinese students. In particular the study explored the impact of the GST program offered by North Jersey University. I explored the relationship between students who attended the GST program and their academic performance. I furthermore compared these results with that of non-GST students. In addition, I compared the GPA scores of GST students with their TOEFL scores after they attended the GST program for two years. The results were further divided in gender and age groups (19-22 years and 23 years or older) to determine if there were any significant differences. The results of this study can benefit the Fairleigh North Jersey University faculty to further develop and refine the GST program and to conduct more specific research that would benefit the current GST program and international students even more.

**Social Change**

Language proficiency forms part of acculturation, as language is both a product and contributor of culture. Foreign students participate in class and social activities by using English which is foreign to them. Their participation can therefore only be as involved as their English proficiency allows. Based on the findings of this study it can be stated that the GST program offered valuable opportunities to the international Chinese students to improve their language proficiency to such extent that their GPA scores were significantly higher than the non-GST cohort. The GST program has the ability to facilitate better social integration of Chinese students which could lead to better integration of the different student groups at the University. Increased integration could address the experiences of isolation and homesickness of especially the male Chinese students leading to improved academic achievement and student retention beyond graduation.

Limited English proficiency may lead to limited acculturation opportunities and benefits thereof as students might not often participate in peer related activities or suffer limited benefit due to their language limitations. According to research this could lead to (a) feelings of estrangement leading to less frequent interaction, (b) social isolation which could lead to emotional and / or physical illness and even less interaction, (c) keeping company with either one's own cultural group or other foreign students which would provide even less opportunities for acculturation. A social implication is that university administrators should find a way to further facilitate acculturation and integration into the English home language peer group to facilitate improving English skills and experiencing

the new culture first hand. The results of this study indicated that the GTS program is successful in improving the student's GPA scores, irrespective of gender and age. Further research is however needed to find out exactly how and why the program is successful and how it could be adapted or extend to further benefit Chinese and other international students.

Based on the findings of this research the Chinese male students seemed to have benefitted slightly more from the GST program than their female counterparts. This is significant in itself since previous studies indicated that Chinese males tend to isolate themselves leading to less opportunities to participate in student activities which could break through their feelings of loneliness and homesickness. An implication is that the activities utilized in the GST program could be duplicated in other study programs to increase other international students' academic success and social integration.

### **Practical Change**

The indications from literature consulted in this research is that international Chinese students—especially males—do not participate in classroom discussions because they do not feel comfortable about their spoken English abilities. This leaves the wrong impression that they are either not interested, passive, or unwilling to fit in with the group. The findings of this research indicated that international Chinese male students who attended the GST program scored slightly better on English proficiency compared to their female peers. It can be inferred that the activities and offerings of the GST program particularly benefit the male Chinese students. Social integration can only be accomplished by partaking in social activities and communicating with the group.



Chinese female students have been found to socialize more with their American peers and this may be the reason for their higher GPA scores (Hirai et al., 2015). One way to bridge the socialization gap and increase the international Chinese students' confidence to communicate in English is to establish a buddy system with American peers. By having at least one native English-speaking peer with whom the international Chinese student can relate and talk to it is foreseen that the student will gain confidence and start participating more. A more welcoming environment where the international student is befriended and included in peer activities may facilitate feelings of increased comfort and break through the isolation and loneliness of the international Chinese student (Hirai et al., 2015).

### **Conclusion**

Empirical studies indicated that English proficiency play a significant role in the academic success of international students in the United States (Martirosyan et al., 2015). With the influx of international students the need for programs that facilitate international students' acculturation and language proficiency remains high. The GST program which formed part of this research showed promising results as GST students' GPA scores were significantly higher than non-GST students' scores. Several factors contribute to the acculturation and academic success of international students in the United States, of which English language proficiency is an important aspect. This study explored the gains made by students who attended the GST program compared to non-GST students. Findings indicated that the GST students' GPA scores were significantly higher compared to the non-GST cohort. This supports the idea that the Gateway to a Successful

Tomorrow program does help Chinese students perform better academically and obtain a higher GPA. The positive results of the GST program remained consistent across the different age levels and gender which indicates that this program benefits the foreign Chinese students irrespective of age and gender. While GST students performed better academically than non-GST students, achieving a higher GPA did not necessarily translate into achieving a higher TOEFL score. Results also imply that while the GST program may help improve GPA, there is no evidence that it improves TOEFL scores. This supports the notion that TOEFL scores do not accurately predict academic success as found by previous researchers.

A study by Martirosyan et al. (2015) showed that higher achieving international students in their study indicated on their self-ratings that they are confident about capacity to understand English. Even though the GST students in the current study did not score significantly better on their second TOEFL assessments their GPAs increased significantly due to the GST program. One could infer that they also perceive their ability to use English in an academic context to be better than before thus gaining confidence in using English. The GST program had an overall positive impact on the international Chinese students' academic performance and with continued research international students stand to gain even more from this program.

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