Language Proficiency and Academic Performance

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Language proficiency is one of the most important factors in international students' success or failure of academic performance. To ensure that incoming international students possess adequate English proficiency, most universities in the United States have gate-keeping procedures. Prior to admission, international applicants must either achieve a passing score on an English proficiency test or complete the institutional intensive English as a Second Language (ESL) program. The purpose of this study is to investigate the research question as to whether or not international freshmen are better prepared to study in a postsecondary program in an American university if they pass the Test of English as a Foreign Language (TOEFL) or if they complete an ESL program.

This study comprises 712 subjects who were admitted to a large state university in the United States from fall 1997 to fall 2003 and had successfully completed their freshman year. These subjects are originally from Japan, South Korea, China, Taiwan, Kuwait, Saudi Arabia, and the United Arab Emirates, whose primary languages are Japanese, Korean, Chinese, and Arabic. All data were coded and analyzed using the Statistical Package for Social Science (SPSS). T-tests with significance level .05 were performed to test the differences in the first-year Grade Point Average (GPA) between admission groups, and further between admission groups under each language group.

The findings indicate that neither TOEFL takers nor ESL completers had a higher first-year GPA whereas ESL completers performed significantly better than non-ESL completers in the first year of study. Specifically, the largest gap was between Japanese ESL completers and Japanese ESL non-completers. However, this phenomenon of ESL completers outperforming ESL non-completers was not uniform through the other language groups. Further research is needed in order to explain this inconsistent finding among different language groups.

1. Introduction

In the 2003 to 2004 academic year, 572,509 international students were enrolled in U.S. universities and colleges (Open Door, 2004). They not only have become an important financial resource for U.S. higher education institutes but also have contributed to U.S research development. Such an influx has inevitably raised researchers' interest in international students' academic performance and adjustment problems. Scholars have studied possible factors associated with foreign students' academic achievement. Specifically, language has been proven to be one of the most important factors in international students' academic performance. For instance, According to the statistical results, Spaulding and Flake (1976) argue that English proficiency is the variable that correlates the most prominently with academic success. Xu (1990) also point out that English proficiency enables international students to adjust to academic programs in the United States and overcome adjustment difficulties. Because of its importance, language proficiency is always an admission requirement for international applicants who seek to study in the United States. The differences are the degree of

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proficiency, which varies across universities and disciplines, and the way to prove the required language proficiency.

The two most common requirements of language proficiency evidence are 1) to pass a cut-off score on an English language proficiency examination and 2) to successfully complete a university-bound English as a Second Language (ESL) program prior to admission.

At a large state university in the United States, international undergraduate applicants who had never been a student at a U.S. high school, college or university must get a score of 500 on the Test of English as a Foreign Language (TOEFL) to be eligible for admission consideration. The TOEFL is administered by the Educational Testing Service (ETS) and is designed to examine non English native speakers academic English competence in listening, grammar, writing, and reading. The TOEFL score is the most widely used English proficiency evidence in North America (Yan, 1995). According to Stoynoff (1991), TOEFL is adopted to determine international applicants' English proficiency in more than 2500 colleges and universities in North America. International applicants who seek to study in a postsecondary program must therefore take TOEFL to meet the requirements for admission to U.S. universities.

In the state university involved in this study, the TOEFL score was not the only way for international applicants to show their English proficiency. International applicants could choose to study at the ESL program in the university. As long as the international students successfully completed the highest level of the ESL program with a grade of B or above, the students' language proficiency was considered to be equivalent to 500 on TOEFL; as a result, TOEFL requirement was waived for admission.

These two routes to language proficiency are very different and both have been criticized. The degree of language proficiency, measured by TOEFL, is determined by scores on the test. Students can drill on textbook written for TOEFL test to achieve the cutoff score university requires. TOEFL as a result has been criticized as artificial language and fails to measure the competence to function in both American society and the academic environment (Yan, 1995). Even though international students can score over 500 on TOEFL, it does not necessarily mean that they have no problems in written and verbal communication with their academic colleagues.

On the other hand, an ESL program places students in an environment where the instruction is in English by which international students are able to get accustomed to English in the real world. However, to complete the curriculum of an ESL program does not guarantee international students' English proficiency being sufficient enough to undertake coursework in a postsecondary program. Pearson (1981) clearly points out the deficiency of curriculum in ESL program in which academic English preparation will not be delivered to students until a higher level so that international students are not able to fully acquire those academic skills.

Either the TOEFL or completion of an ESL program is acceptable and also controversial in its effectiveness. Previous research examining the relationship between the TOEFL and academic performance has produced inconclusive and contradictory findings. Some concluded that the TOEFL can be a predictor of academic success with median to high degree accuracy (Burgess & Greis, 1970; Abadzi, 1976; Ayers & Peters, 1977; Stover, 1982; Perry, 1988; Stoynoff, 1990; Hu, 1991), but others found that predictability of TOEFL is questionable, or even not at all (Chase & Stallings, 1966; Martin, 1971; Dizney & Hwang, 1970s; Pack, 1972; Shay, 1975; Andalib, 1976; Odunze, 1982; Chang, 1983; Light, 1987; Sarudin, 1994; Lo, 2002). The contradictory findings are also found in research on the effectiveness of ESL programs. Some propose the appealing advantages of studying in a ESL program (Burns & Scofield, 1996; Bostic, 1987) but others argue against their finding (Mason, 1971; Rosberg, 1983). Although numerous studies have been done to examine the predictive validity of TOEFL and ESL program, few (Bostic, 1997; South, 1992; Yan, 1995; Person, 2002) have probed into comparisons of both and none have investigated the academic performance of people who do not complete an ESL program. In addition, previous comparison studies used all international students' data without matching their ethnic or linguistic backgrounds. In other words, backgrounds across admission groups are always ignored even though L1 is found to have an affect on acquiring L2 (Lado, 1957; Saisuphaluck, 1998) which may influence international students' academic performance. This study, therefore intends to probe into the academic performance of international students from different language backgrounds in three admission groups.

2. Methodology

2.1. Subjects

The subjects of this study were 712 international undergraduate students from Japan, South Korea, China, Taiwan, Kuwait, Saudi Arabia, and the United Arab Emirates, who were enrolled at a large state university from fall 1997 to fall 2003, and who had successfully completed their freshman year. In this study, there are 199 subjects whose native language was Chinese, 200 are Japanese, 164 are Korean, and 149 spoke Arabic.

All subjects were also grouped by how they were admitted. Those who passed the TOEFL test without studying in the university-bound ESL program were "TOEFL takers" in this study. Those who successfully completed the ESL program without turning in TOEFL score were referred as to "ESL completers". The third group, ESL incompleters, were international students who could not complete the highest level of the ESL program but passed TOEFL and eventually were admitted to the university. Table 1 provides the numbers and percentages of subjects by admission group and language backgrounds.

Summary of Population by Admission Groups and Native Languages

Admission Group	Japanese	Chinese	Korean	Arabian	Total
TOEFL Takers	165 (26.6%)	179 (28.8%)	146 (23.5%)	131 (21.1%)	621
ESL completers	15 (41.7%)	7 (19.4%)	8 (22.2%)	6(16.7%)	36
ESL incompleters	20 (36.3%)	13 (23.6%)	10 (18.2%)	12 (21.8%)	55
Total	200	199	164	149	712

2.2. Data Collection

To collect data with a classification of students' admission background, the researcher first submitted a request to the university-bound ESL program in September 2004. After one semester, the ESL

program provided a list of international undergraduate students who had been enrolled in the ESL program identified as of "Y," eligible, or "N," ineligible, to receive a TOEFL waive letter from fall 1997 to fall 2003. In other words, 'Y' marked those who successfully completed the highest level of the ESL program with a satisfactory grade whereas N marks those who did not complete the ESL program or could not receive a passing grade. Another request, for all students' information, along with the list of students who have attended the highest level of ESL program was submitted to the Office of Data Administration. The office of Data Administration also helped researcher to initially exclude irrelevant participants. If students graduated from high schools in the U.S, had obtained the equivalent of a bachelor's degree in any English-speaking country, or transferred from other colleges or universities in the U.S., they were excluded at the very beginning. The Office of Data Administration returned a list of 2,347 international undergraduate students who were enrolled from fall 1997 to fall 2003. This list provided the students' admission type, gender, nationality, GPA in their freshmen year, and the number of credits taken in both semesters. All information was anonymous; the researcher was not able to identify any student.

For a more accurate comparison, inappropriate students were removed from study if they meet one of four criteria.

First, students with incomplete record were removed from this study because it was impossible to calculate their first year GPA without complete records.

Second, only students who were from the major countries in the ESL completers group were kept in the list. Therefore, only students who are from Japan, South Korea, Taiwan, China, United Arab Emirates and Kuwait, were included. The ESL completers were composed of very few students (n=3) from European countries. The number was too small to represent as a group and to compare with the large number of students in the other admission groups. As a result, students from the countries, which are not the well-represented among ESL completers, must be left out of this study.

Third, if students did not take at least 3 credits in the particular university researched, their records were not considered sufficient enough to reflect their academic performance. In the U.S., international

students could take classes in other universities or colleges, and register for less than twelve credit hours in their registered university, in order to remain on a F-1 student visa. However, GPAs in other colleges and universities were inaccessible and were incomparable with GPAs in the university researched. As a result, those who took less than 3 credits in either semester were removed from the list.

Fourth, only international students who had studied in the highest level were included. Those who had studied in the ESL program at other than the highest level were eliminated from this study because their ESL program records, such as levels, were inaccessible and were beyond the scope of this study.

2.3. Research Design

A nature of a comparison study is to compare a difference on the basis of some variables, at least one of which must explain differences in their performance (Brown, 2004). In this study, the first year GPA is the measure of academic performance, and the variable was one of two different evidences of English proficiency: a score of 500 on TOEFL or completion of the ESL program. The primary purpose of this study was to determine whether the academic performance of international students who were admitted by different means were equal. In addition, in order to evaluate the value of the complete ESL program, academic performance of students who had completed the ESL program were compared to those who had not.

2.4. Data Analysis

First, all data collected were coded and converted into a digital format. The coded data were calculated and analyzed by using Statistical Package for Social Sciences (SPSS). T-tests were performed to compare GPAs between groups with significance level set at .05.

2.5. Research Questions and Hypotheses

The purpose of this study is to compare the academic performance of international students from four language backgrounds in three admission groups. This study seeks to answer the following research questions:

(1)   Are international students better prepared to study in a postsecondary program in the United States if they pass the TOEFL or if they complete the ESL program?

(2)　Does the failure to complete the ESL program affect the academic performance in regular coursework of postsecondary program?

(3)　If students' linguistic background is taken into consideration, will the answers of (1) and (2) different?

Here this study formulates four null hypotheses for examining the research questions above.

H1: There is no statistically significant difference in the first year GPA between the TOEFL takers and the ESL completers.

H2: There is no statistically significant difference in the first year GPA between the ESL completers and the ESL incompleters.

H3: There is no statistically significant difference in the first year GPA between the TOEFL takers and the ESL completers for different language backgrounds.

H4: There is no statistically significant difference in the first year GPA between the ESL completers and the ESL incompleters for different language backgrounds.

3. Results

H1: There is no statistically significant difference in the first year GPA between the TOEFL takers and the ESL completers.

There are 657 subjects who were involved in this null hypothesis testing. Specifically, 621 were TOEFL takers, and the remaining 36 subjects were ESL completers.

An independent t-test was conducted to evaluate whether the first year academic performances of international students from two groups were equal. However, the result was non-significant, $t(655) = -1.258$, $p = .209$. The detail of these two groups and the statistical test result are presented in Table 2.

Table 2

Summary of Independent t-test for Difference in the First Year GPA for the TOEFL Takers and the ESL Completers

Admission Group	N	GPA	S.D.	t	Sig.
TOEFL takers	621	3.1721	.65852	-1.258	.209
ESL completers	36	3.3128	.53943		

H2: There is no statistically significant difference in the first year GPA between the ESL completers and the ESL incompleters.

The number of subjects involved in the second null hypothesis testing was 91 in which 36 were ESL completers and 55 were ESL incompleters.

This hypothesis is also examined by performing T-test with significance level at .05. The result of the t-test was significant, t(89) = 2.220, p = .029. ESL students who had completed the highest level of ESL program (M= 3.31, S.D. = .54), on the average, obtained the better first year GPA than those who had not (M= 3.01, S.D. = .70). Table 3 shows the detail of these two groups and results of t-tests.

Table 3

Summary of Independent T-Test for Difference in the First Year GPA for the ESL Completers and the ESL Incompleters.

Admission Group	N	GPA	S.D.	t	Sig.
ESL completers	36	3.3128	.53943	2.220	.029
ESL incompleters	55	3.0061	.70425		

H3: There is no statistically significant difference in the first year GPA between the TOEFL takers and the ESL completers for different language backgrounds.

Only data from Japanese language students was tested in T-test for this null hypothesis due to the small sample sizes for Chinese, Korean, Arabic language. The population, GPA, S.D. for TOEFL takers

and ESL completers subgrouped by language background are summarized in Table 4. The Chinese group is the one language group in which TOEFL takers have a slightly better first year GPA than ESL takers. The other three language groups, Japanese, Korean, and Arabic, demonstrate an opposite phenomenon.

Table 4

Summary of the First Year GPA and Standard Deviation for Four Language Backgrounds in TOEFL Takers and the ESL Completers

Language	Admission Group	N	GPA	S.D.
Japanese	TOEFL takers	165	3.1539	.60828
	ESL completers	15	3.4067	.47253
Chinese	TOEFL takers	179	3.2482	.64413
	ESL completers	7	2.9664	.49595
Korean	TOEFL takers	146	3.3020	.64863
	ESL completers	8	3.5763	.37807
Arabic	TOEFL takers	131	2.9462	.69660
	ESL completers	6	3.1308	.75582

For testing H3, Japanese TOEFL takers were compared to Japanese ESL completers by an independent t-test with significance level at .05. Although Japanese ESL completers slightly outperformed Japanese TOEFL takers, the difference was not significant, $t(178)= -1.565$, $p = .119$.

H4: There is no statistically significant difference in the first year GPA between the ESL completers and the ESL incompleters for different language backgrounds.

Information including GPA, and S.D. for every language group and admission group is summarized in Table 5. As Table 5 shows, Japanese, Korean, and Arabic ESL completers have a higher first year GPA than ESL incompleters whereas Chinese ESL incompleters outperformed Chinese ESL completers.

Table 5

First Year GPA and Standard Deviation for four language backgrounds in the ESL completers and the ESL Incompleters.

Language	Admission Group	N	GPA	S.D.
Japanese	ESL completers	15	3.4067	.47253
	ESL incompleters	20	2.8298	.74765
Chinese	ESL completers	7	2.9664	.49595
	ESL incompleters	13	3.1804	.51731
Korean	ESL completers	8	3.5763	.37809
	ESL incompleters	10	3.3275	.53024
Arabic	ESL completers	6	3.1308	.75582
	ESL incompleters	12	2.8433	.85558

An independent t-test was conducted to evaluate the difference in first year GPA between the Japanese ESL completers and the Japanese ESL incompleters. The t-test yielded a statistically significant difference, $t(62) = 2.66$, $p = .01$. Japanese students who had completed the ESL program (M= 3.41, S.D. = .47) on the average outperformed than their counterparts who had not done so (M= 2.90, S.D. = .69) in the freshman year.

4. Discussion

According to the results above, international students who either got admission by passing the TOEFL or completed the ESL program have equivalent first year GPAs. Their performances were not different even though they were admitted by different proof of English language proficiency. Nevertheless, if international students failed to complete an ESL program, they seem to have lower first year GPAs than those who completed an ESL program even though they could pass the TOEFL eventually. Here I hypothesize an ESL program which incorporates academic preparation into its curriculum functions as a filter, sorting out international students who are less likely to acquire academic skills. This phenomenon

of ESL completers outperforming ESL incompleters is especially obvious in the Japanese group. It is also possible that the result of the Japanese group influenced the outcome of all. If it is correct, the reason why only Japanese students demonstrate this phenomenon demands further research.

Based on the findings, this study makes two recommendations. First, it is appropriate for an admission office to accept or keep accepting these two evidences to satisfy English language proficiency requirement since there is no significant difference in the first year GPA between international students who pass the TOEFL and those who complete the ESL program. Second, university-bound ESL programs should consider incorporating academic skill preparation into curricula earlier, probably at the intermediate-level. As the result shows, some international students are not able to successfully graduate from an ESL program due to its difficult curriculum. To extend the learning period of academic skills may benefit international students in successfully transiting to an academic environment.

There are several limitations of this study. First, this study can only be generalized to international undergraduate students from four language backgrounds since this study only includes international undergraduates from certain countries. Second, language proficiency is important but not the only variable influencing foreign students' academic performance. However, those variables are beyond the scope of this study.

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