

Changes in the Language Ability of Incoming Freshmen in Taiwan

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This study examines the English language proficiency of incoming freshmen at Tunghai University from 1998-2003 by comparing the mean scores of the Tunghai English Placement Exam (TEPE). The results indicated no significant differences in the total measure of language ability for four of the five years. However, there were significant differences in each skill area. Over the five years, students' listening score increased significantly, while grammar and reading scores decreased significantly. Since the TEPE was administered to incoming freshmen, before any language instruction at the university level, these changes in language ability can be contributed to changes in secondary education and factors outside of the classroom. Not surprisingly, these results are consistent with a transition to a more communicative approach.

Key words: Second Language Learning, Second Language Proficiency

1. Introduction

According to Lee Chang-kuei, president of the *Taipei Times*, "Taiwan's economic development and political stability depends upon its international competitiveness. That is, being connected with the global village's economic system" (Wu & Huang, 2002, p.4.). The need for English as the tool of communication to the world market has not been overlooked in Taiwan. In fact, the importance of English in the areas of international trade, communication, academia, science, technology, and diplomacy has made English the only compulsory foreign language in public schools in Taiwan. Nunan (2003) points out that the emergence of English as a global has had a major influence on the government's thinking about English education. Nunan quotes a recent published document that explains government's official principles on the English curriculum (Ministry of Education, Taiwan 2000).

The objective of the elementary/junior high school curriculum should be to instill a basic communicative ability, to prepare students to take a global perspective, and to give individuals confidence in communication in global areas ("thus improving the nation's competitiveness".) Elementary and middle school should provide a natural and enjoyable language learning environment. (p.2)

Over the last decade, the need to improve Taiwan's English education has resulted in many reforms and policy changes regarding the English-language system (Chuang & Wu, 2002; Huang, J., 2003; Yun-Ping, 2003). Probably the best-known change came in August of 2001 when English became compulsory from the start of the fifth grade for all elementary students. Changes have not been limited to primary education. Many reforms have been implemented in junior and senior highs. In fact, over the last decade, there have also been numerous changes in secondary schools in Taiwan to make English education more communicative and meaningful for students (Chang, C. Y., 2003; "English-teachers", 2003; Lai, 2002; Ko, S., 2001). For example, the Taipei City Education Department proposed providing students with English lessons using materials that focus on improving students' speaking ability and listening comprehension, instead of writing and reading proficiency.

In addition to curriculum changes, there have also been changes in the amount of English exposure students receive outside of formal classroom settings. Parents are sending their children to private English schools, or *bushibans*, in large numbers (Huang, J., 2003; Huang, W., 1996); high school students listen to radio classrooms in the evenings; students are using their summer vacations to go to English-speaking countries for travel and study (Phipps, G., 2002). These are but a few examples of students' increased exposure to English that is not limited to the classroom. Even though for most students, English is not used for daily communication in Taiwan, their exposure to English has

increased over the last decade.

However, what effects have these changes in English education and the increased exposure to English had on the language ability of freshmen university students? This study attempts to address this question.

2. Purpose

The purpose of the study is to examine and compare the English-language proficiency of incoming freshmen at Tunghai University from 1998 to 2003. In short, have there been any changes in freshmen's language comprehension in the last six years? This paper will attempt to answer the following research questions:

1. Were there any statistical differences in the Total Scores of language proficiency for the five years in question?
2. Were there any statistical differences in the Grammar Scores of language proficiency from 1998 to 2003?
3. Were there any statistical differences in the Reading Scores of language proficiency over the last five years?
4. Were there any statistical differences in the Listening Scores of language proficiency over the same years?

3 Method

3.1 Subjects

The subjects (see TABLE 1) for this study were all incoming freshmen at Tunghai University for the 1998, 1999, 2000, 2001, and 2003 academic school years. The 2002 school year was not included in this study because a different placement exam was administered that year.

Tunghai University is a private institution with both graduate (2,200 students) and undergraduate (12,500 students) programs and 850 teachers. The undergraduate-student population is extremely homogeneous: 99.9% are Chinese (citizens of the Republic of China), the average age is 20 with 96% between 18 and 23 years old with an approximate equal number of males and females, a majority are first-generation college students whose parents have a high school education, about 94% have graduated from national public high schools, and a majority come from middle-income families (2002 Tunghai University Catalog). The undergraduate population did not vary much over the time period of this study.

Table 1. Number of Subjects per Year

	<u>Year</u>				
	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2003</u>
Total	2877	2920	3033	3037	3236
Females	1044	1275	1235	1401	1702
Males	1277	1475	1312	1359	1509
Unknown	556	170	486	277	25

Note. Unknown indicates either the students did not enter this information on their computer cards or the scanner did not read this information.

3.2 Instruments

The Tunghai English Placement Exam (TEPE) was used in this study to compare the English ability of the five groups. The TEPE is a multiple-choice exam composed of 60 questions. Each question had four plausible distractors, but only one correct answer. The Grammar Section (20%) was

composed of two cloze paragraphs with 10 questions each for a total of 20 points. The Reading Section (40%) was composed of two passages with 10 multiple-choice questions per passage for a total of 40 points. The Listening Section (40%) was composed of three parts: Story (7 questions), Dialogue (7 questions), and Appropriate Response (6 questions).

Test committees composed of five to seven experienced Freshman English teachers developed each section of the exam. Furthermore, each portion had been used on midterm or final exams from previous years. Clozes, reading passages, scripts, and questions were modified based on the results of test analysis from these previous administrations. Item difficulty, item discriminability, and item variance were all determined appropriate based on item analysis methods suggested by Henning (1987), Hughes (2003) and Bachman & Palmer (1997).

As suggested by Alderson, Clapham, & Wall (2002), Cohen (1994), Hughes (2003), and Tuckman (1988), the exam was determined to be valid based on a comparison of test specifications and test content. The test specifications, or skill meant to be covered, were presented above. Following Hughes' recommendations, these comparisons were made by four Freshman English teachers who were trained in language teaching and testing but were not directly involved with the production of the exam. These four teachers concluded that the exam was a valid measure of grammar, reading, and listening for Taiwanese students.

Hughes (2003) stresses the importance of a grammar component in a placement exam in order to place students in the most appropriate class and to know what gaps exist in students' grammatical repertoire. With this in mind, the grammar section of the TEPE assessed subject-verb agreement, count and non-count nouns, prepositions, adjective clauses, gerunds and infinitives. These test specifications were judged sufficient to give adequate separation in grammar scores to appropriately place students into classes and to give useful information of students' grammatical ability.

According to Hughes, reading exams should ask both macro questions, or questions that require some integration or generalization from specific sentences, and micro questions, questions that focus directly on specific sentences or parts of sentences. Thus, each reading passage of the TEPE had the following macro questions: main idea of article, main idea of paragraphs, and inferencing; micro questions included: general comprehension/details, vocabulary in context, and pronoun reference. The reading texts were factual, informative, and descriptive as suggested by Meyer and Freedle (1984) and Alderson (2000). The passages were expository and represented the genre of discourse that ESL students often deal with in their academic studies (Eskey, 1986).

Brindley (1998) suggested that by using a variety of different tasks, a listening test is more likely to provide a balanced assessment. Hence, the listening component of the TEPE was composed of three sections: story, dialogue, and appropriate response. The purpose of the story and dialogue was to test general comprehension of extended listening texts, while the goal of the appropriate response was to test students' immediate listening skills through the use of an appropriate response within the context of what students heard. The texts of the Listening Section were of a suitable nature (Buck 2001).

The split-half method was used to estimate reliability coefficients. Each section of the exam was divided into two equivalent halves, one containing the even-numbered questions, the other the odd-numbered questions. Each test item was carefully matched with a similar type of question from the other half. The split half reliability coefficient was $r=0.88$. According to Hughes (2003), language exams should have a reliability of at least 0.85. The TEPE was thus considered a reliable instrument to measure language comprehension. In brief, the exam was judged to be valid because of its high reliability and appropriate validity.

3.3 Procedures

During freshman orientation all incoming freshmen at Tunghai University took the TEPE. Based on the results of this exam, students were placed into one of approximately 100 sections of Freshman English for Non-Majors. The purpose of the placement exam was to divide students into classes based on their language ability. Students were informed of the purpose of the exam and took the exam with this in mind.

All the groups in this study were administered the identical placement exam (TEPE) at the same time of day (1:30 pm - 3:30 pm) and in the same place (the Tunghai Chiang Kai-Shek Auditorium/T-Building). The only difference was the dates. The first group was administered the

TEPE on September 22, 1998, the second group on September 21, 1999, the third group on September 19, 2000, the fourth group on September 13, 2001, and the fifth group on September 10, 2003.

Students were instructed to start with the Grammar Section and then move on to the Reading Section. Approximately twenty-five minutes before the end of the exam the Listening Section began. After the Listening Section students had about three minutes to finish writing their answers onto their computer cards. In total, students had 80 minutes to complete the exam.

The same recording (CD) of the Listening Section was played over the public address system for each administration of the exam. A sound-test was conducted before each TEPE to test for sound quality. There appeared to be no significant differences in the quality of the sound in the auditorium for the five different years.

Each student used a 2-B pencil to enter answers on a computer card. The computer cards were scanned on a SCANMARK 2000 and the scores were calculated by using the same EXCEL program. For all exams, the results were obtained in-house, using the same equipment and software.

3.4 Data Analysis

The data obtained from this study were analyzed by using a SAS statistical package. The alpha level, or probability, of falsely rejecting a true null hypothesis, was set at the .05 level. The threshold of practical importance was set at .50 standard deviations. Dr. Shen Pao-Sheng, Chair of the Statistics Department at Tunghai University, helped to process and to analyze the data.

An Analysis of Variances (ANOVA) design allowed the comparison of the means of dependent variables across the five groups, or years. Tukey's Studentized Range (HSD) Tests were used for the comparison of mean scores of the variables. These tests controlled the Type I experimentwise error rate. In total four Tukey's Studentized Range (HSD) Tests were run. The first was used to compare the Total Scores of the TEPE. The Total Score is the combined score of all three sections (Grammar, Reading, and Listening) of the TEPE. The second Tukey's Studentized Range (HSD) Test was conducted to compare Grammar Scores over the five years. The third Tukey's Studentized Range (HSD) Test was used to compare Reading Scores. The last Tukey's Studentized Range (HSD) Test compared Listening Scores for the five years in question.

4. Results

The sample means and standard deviations for the Total Scores are shown in Table 2. Based on results for the Tukey's Studentized Range (HSD) Test for Total Scores on the TEPE for the five years indicated that there was only a significant difference between the scores for group one (1998) and group five (2003). Students in 2003 scored significantly higher than students in 1998. But for all other group comparisons there were no significant differences.

Table 2. Means and Standard Deviations for Total Scores

<u>Year</u>	<u>Groups</u>	<u>n</u>	<u>\bar{x}</u>	<u>SD</u>
1998	1	2877	60.0945	14.6188
1999	2	2920	61.0781	15.3015
2000	3	3033	60.4791	14.7314
2001	4	3037	60.1943	14.6776
2003	5	3234	61.2174	15.5682

The sample means and standard deviations for the Grammar Scores are shown in Table 3. The results for the Tukey's Studentized Range (HSD) Test for Grammar Scores indicated there were no significant differences in mean scores on Grammar Scores for the comparison of groups one and two (1998 and 1999). Likewise, there were no significant differences in Grammar Scores for the comparison between groups three and four (2000 and 2001). For all other group comparisons, there

were significant differences. In short, the results indicated that students' Grammar Scores gradually decreased from 1998 to 2003.

Table 3. Means and Standard Deviations for Grammar Scores

<u>Year</u>	<u>Groups</u>	<u>n</u>	<u>\bar{x}</u>	<u>SD</u>
1998	1	2877	14.5130	2.81899
1999	2	2920	14.5048	2.95368
2000	3	3033	14.2450	2.87337
2001	4	3037	14.1291	2.84720
2003	5	3234	13.4753	3.12303

The sample means and standard deviations for the Reading Scores are shown in Table 4. The results for the Tukey's Studentized Range (HSD) Test for Reading Scores indicated that there were no significant differences in mean Reading Scores for the comparison of groups one and two (1998 and 1999); groups one and three (1998 and 2000); two and three (1999 and 2000); groups four and five (2001 and 2003). For all other group comparisons there were significant differences. In brief, the results indicated that students' Reading Scores steadily declined from 1998 to 2003.

Table 4. Means and Standard Deviations for Reading Scores

<u>Year</u>	<u>Groups</u>	<u>n</u>	<u>\bar{x}</u>	<u>SD</u>
1998	1	2877	21.8408	6.86111
1999	2	2920	21.6897	7.28857
2000	3	3033	21.6090	6.90847
2001	4	3037	21.0175	6.96188
2003	5	3234	20.7211	7.06451

The sample means and standard deviations for the Listening Scores are shown in Table 5. The results for the Tukey's Studentized Range (HSD) Test for Listening Scores indicated no significant differences for the comparisons of groups two and three (1999 and 2000); groups two and four (1999 and 2001); and three and five (2000 and 2003). For all other group comparisons there were significant differences. The results for Listening Scores were very different from those of Grammar and Reading. Instead of indicating a decline, they revealed an improvement in listening.

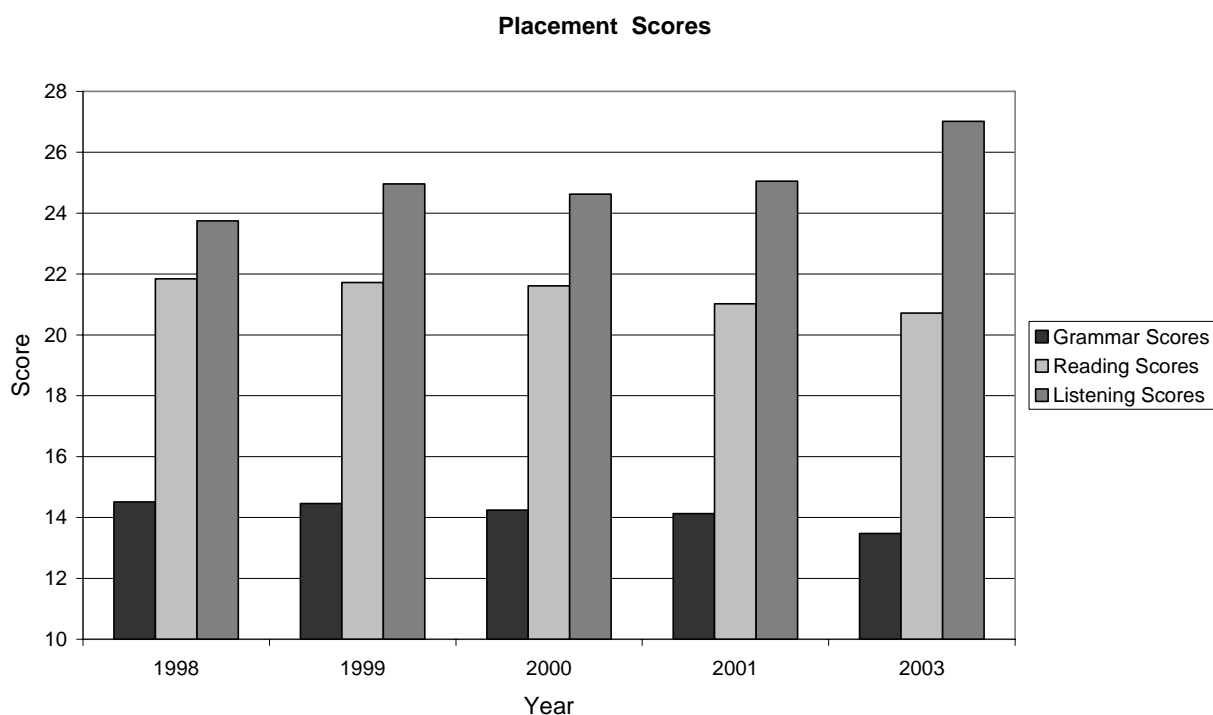
Table 5. Means and Standard Deviations for Listening Scores

<u>Year</u>	<u>Groups</u>	<u>n</u>	<u>\bar{x}</u>	<u>SD</u>
1998	1	2877	23.7407	8.30793
1999	2	2920	24.8836	8.35034
2000	3	3033	24.6251	8.28099
2001	4	3037	25.0477	8.22393
2003	5	3234	27.0210	8.38098

The comparisons of mean scores for the three sections of the TEPE are shown in Figure 1.

From this chart it is easy to see the steady improvement in Listening Scores and the gradual decline of both Grammar and Reading Scores.

Figure 1. TEPE Grammar, Reading, and Listening Mean Scores



Note. Grammar 20%, Reading 40%, and Listening 40% of Total Score

5 Conclusion/Discussion

Tunghai is a good representation of the general university student population in Taiwan because the student body comes from around the island and the university ranks in the middle of all universities in Taiwan. Thus, the results of this study can be used to generalize about the total university student population in Taiwan.

The results of this study indicate that while students' grammar and reading abilities have declined, their listening ability has actually improved. Since the TEPE was administered to incoming freshmen, before any language instruction at the university level, these changes in language ability can be attributed to changes in secondary education and factors outside of the classroom. Not surprisingly, these results are consistent with a transition to a more communicative approach.

The students who took the TEPE in 2003 would have been in their first or second year of junior high school when the students in 1998 took the TEPE. Thus, the more-recent-year students to take the TEPE would have been subjected to educational reforms and social factors outside of the classroom for a longer duration. In other words, students who entered Tunghai in 1998 were not affected by the educational reforms of the last decade to the same degree as the students who took the TEPE in 2003. Quite simply, the students of 1998 would have entered middle school in 1992, before many of the recent changes in English education were enacted.

Likewise, the scores of the English portion for the high-school graduates who took the 2003 college entrance exam fell on average between 10 and 20 points (Chang, S. E., 2003). The decline in English scores on the college entrance exam is consistent with the decrease of grammar and reading scores found in this study. Since there is no listening portion on the college entrance exam there is no way to make cross-comparisons about any improvements in listening.

Another important factor that could account for changes in language ability is the differences in the socialization of young people over time. As any society evolves, the people in the society also

change. The young people of today are not the same as those of the past. They act and talk differently. Their needs and desires have also changed. The students of today have been exposed to modern technology, from computers to cell phones for all of their lives. Changes in socialization of this very homogeneous group of people might account for improvements in English listening comprehension. Quite simply, it might have been cool to speak and listen to English and uncool to study (read and write) it.

It is important to note that due to the researcher's limited Chinese literacy and the limited number of scholarly articles and reports published in English about specific English educational reforms in Taiwan, the researcher cited daily English periodicals as references about educational changes over the last decade. It is sufficient to conclude from these English newspaper articles that there have been numerous changes in English education of over the last few years. It was not the purpose of this study to specifically identify which educational reforms or changes in policies had a direct effect on the language proficiency on incoming freshmen, but to point out that these changes may have had an affect on students' language ability.

In conclusion, the results indicated no significant differences in the total measure of language ability for four of the five years. However, there were significant differences in each skill area. Over the five years, students' listening score increased significantly, while grammar and reading scores decreased significantly. These changes in language ability can be attributed to changes in secondary education and factors outside of the classroom.

Limitations

Readers should bear in mind the following limitations of the study:

1. The study dealt with only students who were accepted into Tunghai University. Similarly, the study assumed that Tunghai University attracted a similar group, or portion, of students from the total student population that entered university for each year. In other words, the freshmen who entered Tunghai reflected the same portion of the total Taiwan freshman population for each year.

2. The study assumed that the sand-baggers had no significant effects on the results. Sand-baggers are students who deliberately do poor on the exam in order to get into a lower-level class.

3. Likewise, the study assumed that cheaters had no significant effects on the results of the exam. Proctors kept their eyes opened for cheaters. Also, students were informed not to cheat and that cheating would be more detrimental than helpful; that is, that their cheating could result in being placed in a class that would be too difficult. This same message was given to students each year.

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