

大学生の英語力の比較： 2 大学における追跡調査の結果から

デイヴィッド レヴィン
ロス ミラー

Abstract

本研究では、必修の英語授業を受講している大学生（2 大学、合計 82 名）を対象に英語力の比較をおこない、専攻課程の違いによって学生の英語力にどのような差が生じるのかを考察した。調査の結果、一方の大学生は他方よりも高い英語能力を示したが、海外の高校に在籍した経験をもつ学生の有無が結果に影響を及ぼすことがわかった。なお、2 大学の到達度別クラス編成の方法に違いがあることにより、今回の研究結果は暫定的なものとなった。

Comparing English Ability at Two Different Universities: A follow-up Study

**David Levin
Ross Miller**

Introduction

Over the past few years, several inter- and intra-institutional comparisons of Japanese university students vis-à-vis English language ability have been carried out by this researcher and others. As the birthrate in Japan continues to decline, universities are left to chase fewer and fewer students for enrollment. This situation leads us to the following questions: has this resulted in any changes in the English ability of the students who are accepted at the various universities around Japan? Or have national universities had to lower certain student academic standards in order to meet enrollment goals? The purpose of this paper is to follow up on similar studies that have already attempted to shed light on these questions. For this particular study, students from two different Japanese universities—one public and one private—both of which were involved in a previous study by this researcher will be compared again to see if any changes have occurred in the intervening years. In addition, this study attempts to address some of the constraints faced in the previous studies discussed below.

Background

During the 2003 academic year, students from one of the universities in this current study, Toyohashi University of Technology (TUT), and a second, private university, Kansai University (KU), were compared to determine any differences in English ability (Levin, 2004). All students who participated in the study were enrolled in science and technology faculties. Results showed that

the KU students were slightly more proficient in English as measured by a reading aptitude test. One potential shortcoming of this study was the increased ratio of lower-level English ability students in the group of subjects from TUT—an aspect that this present study attempts to account for.

In another related study conducted during the 2005 academic year (Levin, Redfield, and Figoni, 2006), student English ability—all from technology faculties—was compared as part of a study involving L1 and L2 reading proficiency. Again, given that only the TUT students from the lowest, English class level were included, it is not surprising that they came out ranked below that of the other two universities in the study included in the comparison, KU and Osaka Institute of Technology.

A third study, and the one most pertinent to this current study, was conducted during the 2005 academic year (Miller, Redfield, and Levin, 2005). In this study, students from four different universities (three different faculties), KU, TUT, Kinki University (KinU) and Otemon Gakuin University (OGU), were compared to determine, in part, differences in English ability. The results from this study indicated a statistically significant difference between only KinU and the other three institutions. In other words, and of particular interest to the study at present, students from TUT and OGU exhibited no differences in English ability despite the fact that the group from TUT were lower-level learners and the OGU group were English majors. This would seem to indicate that institutional ranking—given that TUT is a national university—played some part in the results. And this would also lead us to predict that if the subject group selected from TUT were to better reflect the English ability as a whole of learners from the institution, students from TUT should demonstrate higher English ability on average than those from OGU.

Of other interest pertaining to this study—at least with regard to English ability—is the inclusion of more international students in Japanese universities. First, with a policy in 1983 to increase international students in Japanese universities to 100,000 by the year 2000, and then a new plan in 2008 to increase that number to 300,000 by 2020, international students have been on the rise in Japanese universities. This trend will continue along its upward path, it appears, for years to come. In fact, 2008 saw yet another increase in international student enrollment in Japanese universities over the year before; a 4.5 percent increase. (JASSO, 2008). How exactly will this new reality figure into English language levels in university classrooms around Japan?

Method

Participants

A total of 82 students from Toyohashi University of Technology (TUT) and Otemon Gakuin

University (OGU) participated in this study. All participants were students enrolled in a required 2nd-year English language course at the time the instrument was administered. The 2nd-year English courses at TUT are streamed using a placement test and are divided into three levels, A, B and C—the highest level class receiving the designate 'A.' Out of the 56 participants from TUT, 27 were from the 'A' level, and 29 participants were enrolled in the 'C' level class. The TUT students all had majors from a variety of science and technology disciplines. The participants from OGU, all English majors from the Department of English, were enrolled in one, 2nd-year English course, designated as 'B.' At OGU, however, students are only streamed into the highest level 'A' class, with the remaining students shuffled into 'B,' 'C,' and 'D' class without regard to English ability.

A further breakdown of the TUT participants shows that six of the participants were international students, and two of the Japanese students had attended a high school in an English-speaking country—all eight were members of the top-level "A" class. As for the OGU students, all were Japanese who had attended Japanese high schools.

Instrument

Parts I-III of the Matsushita Pilot Placement test (MAT), a 60 item multiple-choice exam containing sections covering structure, vocabulary, reading, and cloze questions was employed as the measuring instrument. The MAT is an aptitude measure written specifically for post-secondary Japanese learners of English.

Procedure

At TUT, the regular classroom English teacher administered the MAT during the second trimester of the 2009 academic year. The trimesters at TUT generally consist of 9 or 10 class meetings for each English course. At OGU, the regular classroom English teacher administered the MAT during the second semester of the 2009 academic year. These semesters generally consist of 13 or 14 class meetings for the English course. Forty minutes were allowed for completion of the MAT.

Statistical Analysis

InStat 3 for the Macintosh was used to derive descriptive statistics and to run the Kolmogorov and Smirnov Normality Test necessary to gauge the Gaussian distribution. The alpha for statistical significance was set at .05.

Research Questions

1. Will there be any statistical differences in English ability between English language learners at

TUT and OGU, as measured by the MAT?

2. How will the removal of the 'A' class scores from the TUT data affect the difference, if any, found in question 1?
3. How will the removal of the international student scores and those of the students who attended high school abroad from the TUT data affect the difference, if any, found in question 1?

Results

Overall proficiency

The combined classes at TUT (N=56) had a mean score on the MAT of 34.661 (out of 60) with a standard deviation of 9.541 and a standard error of 1.275. The minimum and maximum scores were 17 and 55, respectively; the median score was 34.5. Finally, the lower and upper 95% confidence intervals (CI) were 32.104 and 37.217, respectively. As for OGU, the mean score on the MAT was 30.038 with a standard deviation of 6.533 and a standard error of 1.281. The minimum and maximum scores were 15 and 40, respectively; the median score was 31.5. Finally, the lower and upper 95% confidence intervals (CI) were 27.33 and 32.678, respectively (see Table 1 for descriptive statistics).

Table 1. MAT Descriptive Statistics for TUT and OGU

Parameter:	TUT	OGU
Mean:	34.661	30.038
# of points (N):	56	26
Std deviation:	9.541	6.533
Std error:	1.275	1.281
Minimum:	17	15
Maximum:	55	40
Median:	34.5	31.5
Lower 95% CI:	32.104	27.399
Upper 95% CI:	37.217	32.678

Because the data for both TUT and OGU passed the Kolmogorov and Smirnov (KS) normality test for determining Gaussian distribution, .09811 and .1515, respectively, a statistically powerful t-test was chosen to further analyze the data. Using a Welch correction, due to different standard deviations, a statistically significant two-tailed P value of .0128 was obtained (Welch's approximate $t=2.557$ with 68 degrees of freedom). Therefore, the observed difference between the means of the two groups is considered significant with the TUT participants scoring higher on the MAT than the ones at OGU (see Figure 1).

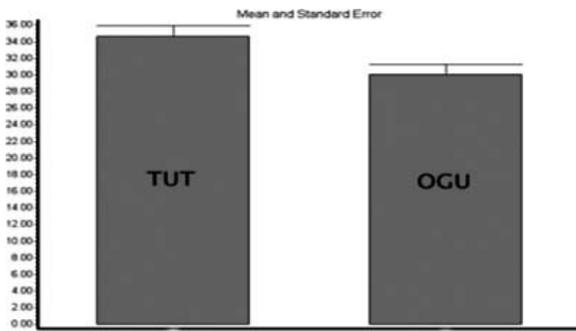


Figure 1. Mean and standard error for TUT and OGU participants.

Overall proficiency without TUT A-Class students

With the removal of the A-Class students, the remaining C-Class (N=29) had a mean score on the MAT of 29.103 (out of 60) with a standard deviation of 7.807 and a standard error of 1.450. The minimum and maximum scores were 17 and 46, respectively; the median score was 29. Finally, the lower and upper 95% confidence intervals (CI) were 26.134 and 32.073, respectively. The descriptive statistics for OGU remain the same as before (see Table 2).

Table 2. MAT Descriptive Statistics Without A-Class Participants for TUT

Parameter:	TUT	OGU
Mean:	29.103	30.038
# of points (N):	29	26
Std deviation:	7.807	6.533
Std error:	1.450	1.281
Minimum:	17	15
Maximum:	46	40
Median:	29	31.5
Lower 95% CI:	26.134	27.399
Upper 95% CI:	32.073	32.678

Again, because the data for both TUT and OGU passed the Kolmogorov and Smirnov (KS) normality test for determining Gaussian distribution, .1095 and .1515, respectively, an unpaired t-test was used to further analyze the data. Using a Welch correction, due to different standard deviations, a two-tailed P value of .6309 was obtained (Welch's approximate $t=4.833$ with 52 degrees of freedom). Therefore, the observed difference between the means of the two groups is considered not significant. This indicates that, without the A-Class student scores included in the data for TUT, the English proficiency of the students from TUT and OGU as measured by the MAT is the same (see Figure 2).

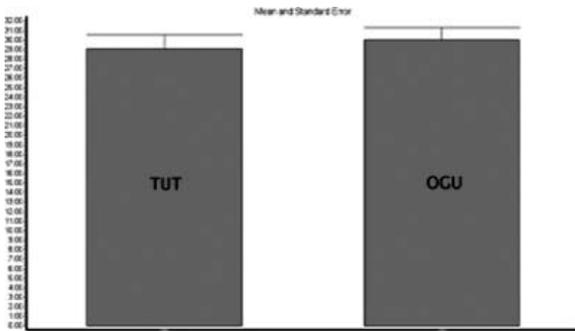


Figure 2. Mean and standard error for TUT and OGU participants without TUT A-Class.

Overall proficiency without TUT international high school attendees

With the removal of the all students who attended an international high school (6 international students and 2 Japanese students), the remaining TUT subjects (N=48) had a mean score on the MAT of 32.583 (out of 60) with a standard deviation of 8.348 and a standard error of 1.205. The minimum and maximum scores were 17 and 48, respectively; the median score was 31.5. Finally, the lower and upper 95% confidence intervals (CI) were 30.157 and 35.010, respectively. The descriptive statistics for OGU remain the same as before (see Table 3).

Table 3. MAT Descriptive Statistics Without International HS attendees for TUT

Parameter:	TUT	OGU
Mean:	32.583	30.038
# of points (N):	48	26
Std deviation:	8.348	6.533
Std error:	1.205	1.281
Minimum:	17	15
Maximum:	48	40
Median:	31.5	31.5
Lower 95% CI:	30.157	27.399
Upper 95% CI:	35.010	32.678

Once more, because the data for both TUT and OGU passed the Kolmogorov and Smirnov (KS) normality test for determining Gaussian distribution, .1007 and .1515, respectively, an unpaired t-test was used to further analyze the data. Using a Welch correction, due to different standard deviations, a two-tailed P value of .1530 was obtained (Welch's approximate $t=1.447$ with 62 degrees of freedom). Therefore, the observed difference between the means of the two groups is considered not significant. This indicates that, without the international high school attendees' student scores included in the data for TUT, the English proficiency of the students from TUT and OGU as measured by the MAT is the same (see Figure 3).

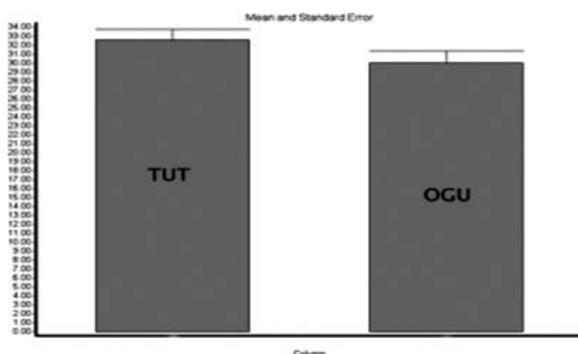


Figure 3. Mean and standard error for TUT and OGU participants without Int. HS.

Discussion

Regarding the overall English proficiency of the 2nd-year students who took part in this study, the students from TUT were statistically shown to be at a higher level. Therefore, we can answer our first research question in the positive. However, the TUT students' mean score on the measuring instrument, the MAT, was only a bit higher than that for OGU—4.6 points out of 60. Both mean scores on the MAT for TUT and OGU, 34.6 and 30, respectively, were somewhat low when looking at the total points possible, 60. But the TUT score here is similar to that in a previous study mentioned earlier (Levin, 2004). In that study, the mean score was 34; however, the participants did not include students from the highest ranked class as they do here. So it doesn't seem that the addition of the higher-level students made much of a difference for this study.

Moving on to the second research question, we find that the removal of the top “A” class scores from the TUT data does affect the difference in measured English ability between TUT and OGU. In fact, there is no statistical difference between the lower-proficiency TUT participants and those of mixed levels (excluding the top-ranked) from OGU. At this point it would be tempting to say, with regard to English proficiency among 2nd-year learners, that students from OGU are at a similar level as those found in the lowest-ranked English class at TUT. However, as we will see, this is not necessarily the case.

With the final research question, we look at what effect the English ability of international students and those Japanese students who have studied in an English-speaking country may have had on the TUT MAT scores as a whole. In this case, we find that this also had an effect on the results of the comparison between the two groups. With the removal of scores from these eight participants, the English proficiency of the remaining TUT participants and those from OGU is statistically the same. It would seem that at TUT, international students and those Japanese students who have returned from extended studies in English-speaking countries raise the English

proficiency score of their class as a whole.

It is hard to say how much institutional ranking may have played in the English proficiency of the participants in this study. TUT is considered a middle-ranked national university, and many consider the “national” status in Japan as a step up from many private universities. OGU, on the other hand, might be considered a middle-ranked private university, so one might expect that the TUT students would exhibit higher English proficiency in comparison—which they did if international students are included. However, most students in their second year of studies at TUT seem to be at par with their OGU counterparts with regard to English ability, so one’s particular institution does not seem to have played a part. This may be true, but when you look at the fact that the participants from OGU were all English majors from the Department of English—as opposed to an all-technology group from TUT—an institutional factor may have been at play here. However, there are limitations to this study that further cloud the comparison.

Besides the sample size of participants in this study, it is important to mention another limitation to this study that may have been an important factor. Like TUT, OGU does have international students, and some Japanese who have studied abroad, but, unfortunately, none of them were represented in this study. A possible reason for this is that these students have a much higher likelihood of having been streamed into OGU's A-level class (just as they have been at TUT). As the streaming process at OGU only separates the students with the highest proficiency from their peers, the B class used in this study could have been composed partly, or mostly, of students that would have been streamed into the C class at TUT. Future studies would benefit from the opportunity to compare a greater number of students, especially the ‘A’ classes, as both universities have assessed them as having the highest English ability in their respective departments.

Conclusion

In this paper, a total of 82 university students enrolled in required English language courses at two universities, Toyohashi University of Technology and Otemon Gakuin University, were compared to determine if any difference in English proficiency could be determined between these two groups of students with different academic majors. At first glance, it was shown that the engineering/technology students from TUT exhibited a slightly higher English proficiency than their English-major counterparts at OGU. However, once the international students and the Japanese students who had attended high schools abroad were removed from the subjects, both the TUT and OGU groups were on par with each other with regard to English proficiency. Furthermore, due to the streaming process for English ability at OGU, the sample of students from that institution most likely didn’t accurately reflect the English proficiency for the purposes of comparison.

As with many inter-institutional comparisons, limiting factors existed in this study that prevented conclusive results. However, important insights were gained that will be useful in future studies that attempt to provide a clearer picture of English proficiency across institutions and academic fields in Japan.

References

- Levin, D. (2004). Comparing English ability at one private and one public university. *Toyohashi University of Technology: The Lark Hill*, 26, pp. 77-88.
- Miller, R., Redfield, M. & Levin, D. (2005). Comparing college students' L1 and L2 reading levels and reading habits: a pilot study looking at literature and technology faculties. *Otemon Gakuin University: Faculty of Letters Review*, 41, pp. 101-110.
- Levin, D., Redfield, M. & Figoni, W. (2006). Comparing technical students' L1 and L2 reading levels. *Toyohashi University of Technology: The Lark Hill*, 28, pp. 127-137.
- Japan Student Services Organization* (2008, Dec. 25). Retrieved Oct. 10, from http://www.jasso.go.jp/statistics/intl_student/data08_e.html.