A Diachronic Study of Small Track Classes in University (1):
Does the Students’ English Proficiency Improve?

HASEGAWA, Shuji[1], KUWANA, Shun’ichi[1], HOJO, Yoko[2]


Abstract
The purpose of the present study was to verify the effects of small track classes aimed at improving the freshmen’s English ability at University X. The small track classes were conducted in 2013, 2014, and 2015, with the approximately 200 freshmen of each year being divided into upper, middle, and lower level classes. The size of each class was around 20 students, and two classes from each level were selected as samples for this trial each year. After four months of instruction, the effects of the small track classes were measured by both a written and a listening test, comparing each pre- and post-test score. In the results, the students’ English proficiency consistently showed significant improvement on the written test in the lower level classes. In all classes regardless of level, the students’ English proficiency on the written test gradually improved to produce an overall significant difference in the final year. Despite these results, no improvement on the listening test was shown in any year either overall or in any individual class. These findings made it apparent that the next measures to be taken should be for the enhancement of the students’ listening comprehension along with further work on written English. More specifically, the former would be for all the classes, while the latter for the upper and the middle level classes only.

Key words: small track classes, diachronic study, English proficiency, written test, listening test

1. Introduction
Recently in Japanese universities, because of the diversity of selection methods for entrance examinations, accompanied by a decrease in 18-year-old population, the academic ability difference among the freshmen has been a serious problem (Uchida, 2012, p. 41). As for English ability, its decline and the expansion of differences among the freshmen are notable. The prevailing view is that this trend will only accelerate in the future (Chujo, Yokota, Hasegawa, & Nishigaki, 2012, p. 49).

“University X,” where the authors engage in English teaching and curriculum design, is no exception to the condition stated above. In order to tackle this reality, the university adopted a system of small track classes in 2013, which was expected to enhance each student’s command of English (Takahashi, 2000, pp. 145-146) and is still continuing. Related to this trial, the purpose of the present study was to verify the effects of these small track classes conducted at University X from 2013 to 2015.

2. Study of the Literature
In order to present individual students with comprehensible and effective English lessons, Takahashi (2000) suggests the following two measures: a) to make class sizes smaller than 50 students, and b) to form the classes according to the degree of ability. The merits of the first point (the small class) are asserted as follows:
firstly, students’ participation in class is encouraged and their motivation is increased; secondly, communication becomes easy and language activities are stimulating; thirdly, individual instruction is facilitated and comprehensive evaluation is enabled. However, realizing smaller classes requires solving financial problems, such as funding the relevant number of teachers and securing the required classroom space (ibid.).

Takahashi (2000) maintains that the second point (the track class) is based on the learning theory that language education produces the strongest effect when it is practiced in accordance with the student’s language ability (learning degree of ability). The merits are collected as follows: firstly, the upper class students compete amicably with each other and raise their motivation for learning; secondly, the lower class students are relieved from the pressure caused by the superior students and enjoy the learning process more; thirdly, the upper class students are able to learn without suffering a delay of the learning, while the lower class students are given special treatment. The track classes should be carried out by the relevant instructor so that the students do not feel an inferiority complex and sense of discrimination especially in the lower class (ibid.).

Concerning the track class, Ogasawara (2012) reported about the effectiveness of a one-semester proficiency-based class in the Faculty of Engineering, analyzing the scores of the students by the G-TELP test (General Tests of English Language Proficiency). In the study, based on the G-TELP scores as a pre-test, approximately 170 students were divided into five classes, which consisted of two upper level, two intermediate level classes and one lower level class. After four months of instruction, all the students were required to take the G-TELP as a post-test. Then, statistical analyses were conducted on the scores of the three sections (Grammar, Listening, and Reading) along with the total scores of the pre-test and the post-test. As a result, it was suggested that proficiency-based classes are more effective for the lower level class. As for the upper level classes, the students required to complete online vocabulary exercises showed much more improvement in listening and reading skills than those not (ibid.).

Another relevant report is that of Miyata, Rebuck, and Norris (2008). In their study, based on CASEC (Computerized Assessment System for English Communication), 47 students of two treatment classes in the Faculty of Economics were divided into two classes, which consisted of one upper level class of 24 and one lower class of 23. The two treatment classes were compared with two contrast ordinary classes of 24 and 23, by means of a pre-test conducted in April and a post-test in January. In the results, the scores of upper level class decreased from 613.5 to 604.2 points, while that of the lower class increased from 541.3 to 544.8 points. On the other hand, scores for the two contrast ordinary classes both increased: one from 563.2 to 585.1 points, and the other from 556.4 to 585.7 points. Interviews with the students whose score had increased notably revealed that one thing they all had in common was that they had been studying English by themselves outside of compulsory classes.

As is represented in the literature quoted above, it is suggested that the system of small track classes is effective for the students in the lower level class in improving their proficiency in English. Meanwhile, for the students in the upper level class to improve their proficiency in English, it is thought that they have to be encouraged to either tackle additional work in their class or continue self-study together with their regular class.

3. Research Question

The purpose of the present study was to verify the effects of small track classes aimed at improving the freshmen’s English ability at University X. Considering the literature cited above, the following question was asked:

Do these small track classes improve the students’ English proficiency?

This question was verified in each of the lower, middle, and upper level classes as well as in all the classes combining the three levels, for the freshmen in 2013, 2014, and 2015, respectively.
4. Method

4.1 Participants of the Small Track Classes
The participants of this study were approximately 200 freshmen at University X each year from 2013 to 2015. Their majors were either education or health sciences. Consequently, few students find jobs at companies outside of these fields when they graduate. According to the instructors previously concerned with English education at University X, most of the students are low in their English ability. Therefore, in order to classify the participants according to ability in English, a 30-minute English proficiency written test based on the EIKEN, Grade Pre-2 test (high-school graduates’ minimum level) was given to all of the freshmen on the first day of the academic year in April. The result produced 10 classes, which consisted of four upper classes, four middle classes, and two lower classes. Two classes were selected from each level as samples for this trial.

4.2 Class Style
To support individual students, the small track class system of around 20 students per class was adopted, with one instructor allotted to each class. Conforming to the regular course format, fifteen 90-minute classes were conducted in the first semester.

4.3 Contents of Each Class
Instructors did their best to improve the students’ proficiency in written and spoken English, while enhancing their attitudes toward the language. According to the class level, the specific contents were the following:

4.3.1 Upper level classes
The instructional speed was fast, so that the students could learn as much English as possible. In each class, the students were required to prepare for the next class in their set of learning materials. In these learning materials, each unit was composed of listening, reading and writing practice in English. In the listening practice, the students were required to listen to a dialogue of 200 to 300 words and to fill in around 10 blank spaces in a printed dialogue. After that, the students were asked to dictate four questions and write each answer in English, reading the dialogue. In the class, the instructor explained the content of the dialogue with the English used in it, and then checked the words to be filled in each blank space. In the question and answer section, the students named beforehand for each question wrote their answers in English on the whiteboard at the front of the class. Then, the instructor corrected the errors in the students’ answers and explained the critical points.

On the topics dealt with in the materials, the students were given assignments on writing their own opinions in English of more than 200 words three times. The third time, the students were requested to make a one-minute speech based on the written draft in front of the class, and then to answer questions from the classmates.

In the latter 30 minutes of every class, the students watched part of the movie, “The Sound of Music” and listened for three English phrases the instructor specified before seeing the section of the day. In the song section, the students were required to take dictation of the song and to sing it in front of the class the next time, which was practiced twice.

Lastly, the students had to read and understand an article from TIME magazine as an aim to be accomplished. Through this reading, the students were instructed how to read an essay, including the structure of paragraphs.

4.3.2 Middle level classes
The instructional speed was moderate, so that the students could understand as much English as possible. Using the identical text and movie, the contents of the class were almost the same as those practiced in the upper classes described above, except for the reading of TIME magazine. In order to arouse the interest in English, for the first assignment, the students were required to gather English phrases that sound like Japanese because of their unique pronunciation. In each class, observing the reaction of the students when needed, the instructor explained about English grammar
relating to the materials of the day.

4.3.3 Lower level classes

Instruction was given intending to help the students form the habit of studying at school and home, and to encourage them to develop global awareness and basic communicative competence. In the first part of each class, by means of a personal computer and a projector, the instructor showed the students several pictures relating to the topic of the day in the learning materials. At that time, the instructor explained the pictures in easy English, raised a question, and supplemented the content using relevant handouts. Next, in relation to the topic, the students were required to practice an English conversation in pairs and to present it in front of the class. Following this, the instructor explained the sentences in the text, including the listening points, and had the students practice reading some lines aloud. Then, the instructor picked out two basic sentences and let the students practice orally, and then checked whether they were able to sort the constituent words printed on a sheet into a correct word order in each sentence.

The students were requested to give a presentation three times throughout the semester, including such topics as self-introduction, a specific theme, and so on. In each case, the instructor urged the students to applaud the presenter and made the time for them to comment on the presenter’s good points.

In order to promote communicative competence in Japanese, too, the students were obliged to change seats twice throughout the semester. The instructor was actively involved with the students to help them get accustomed to the new surroundings.

For the last five minutes in each class, the students were required to write what they had learned or understood in the class on self-evaluation cards, together with the record of preparation and review. On the cards, the students were also requested to write their thoughts and opinions about the class. The instructor made the most of the cards to understand the individual students, writing back her messages to meet their needs.

4.4 Verification of the Effects of the Small Track Classes

The verification of the effects of the small track classes was conducted on the students’ English proficiency. For English proficiency, utilizing the initial placement test as the pre-test, the identical test was administered to the students as the post-test in the final class. Additionally, a listening test was conducted at the first class as a pre-test, and the identical test as the post-test at the final class together with the written test. The details of the tests were as follows:

4.4.1 English proficiency tests

One of the English proficiency tests was a 30-minute written test based on EIKEN written test, Grade Pre-2, evaluating vocabulary, grammar, and reading. It consisted of a total of 30 questions, each of which was counted as a mark of 1, with a perfect score being a mark of 30. The other English proficiency test was a 25-minute listening test based on EIKEN listening test, Grade Pre-2. In the same way as the written test, it consisted of a total of 30 questions, each worth one point, with a perfect score being a mark of 30.

5. Results

The results of the two sets of tests administered to the students are summarized in the following sections separately. Because the students were divided into three levels according to English ability, normal distribution of each group was not expected to statistically conduct a parametric test. Therefore, to verify the change in an individual student’s ability, a non-parametric dependent test, i.e. Wilcoxon signed-rank test, was applied to the specific evaluation. Excluding the missing values, the results were produced by combining the responses from each level’s two classes.

First of all, the results of the tests in the final year, 2015, are shown, and then the results of those in each year are compared between the three relevant years: 2013, 2014, and 2015.
5.1 Tests on the English Proficiency in 2015

5.1.1 Written tests

Table 1 shows the results of the pre- and the post-written test conducted on the students’ proficiency in English. Compared with the pre-test Mean-value, the post-test Mean-value increased in the middle and the lower level classes. In the lower level classes, the difference was statistically significant ($p < .01$). Contrary to this, in the upper level classes, the post-test Mean-value decreased, compared with the pre-test Mean-value, though the difference was not significant. In all the classes, compared with the pre-test Mean-value, the post-test Mean-value increased, and the difference was statistically significant ($p < .05$).

<table>
<thead>
<tr>
<th>Class</th>
<th>Test</th>
<th>$n$</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Z-value</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>Pre</td>
<td>37</td>
<td>15.22</td>
<td>3.64</td>
<td>12</td>
<td>28</td>
<td>-0.96</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>37</td>
<td>14.62</td>
<td>5.09</td>
<td>5</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>Pre</td>
<td>35</td>
<td>10.94</td>
<td>2.06</td>
<td>8</td>
<td>15</td>
<td>-1.10</td>
<td>.27</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>35</td>
<td>11.49</td>
<td>3.30</td>
<td>4</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Pre</td>
<td>22</td>
<td>6.00</td>
<td>1.16</td>
<td>4</td>
<td>8</td>
<td>-3.91</td>
<td>.00**</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>22</td>
<td>9.59</td>
<td>2.56</td>
<td>5</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>Pre</td>
<td>94</td>
<td>11.47</td>
<td>4.44</td>
<td>4</td>
<td>28</td>
<td>-2.27</td>
<td>.02*</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>94</td>
<td>12.28</td>
<td>4.43</td>
<td>4</td>
<td>27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* $^*$ $p < .05$. $^{**}p < .01$.

5.1.2 Listening tests

Table 2 shows the results of the pre- and the post-listening test conducted on the students’ proficiency in English. Compared with the pre-test Mean-value, the post-test Mean-value increased in the upper and the lower level classes. However, the difference was not statistically significant in either of the classes ($p = .48$, and $p = .30$, respectively). As for the middle level classes, the post-test Mean-value decreased, compared with the pre-test Mean-value, although the difference was not statistically significant ($p = .78$). In all the classes, compared with the pre-test Mean-value, the post-test Mean-value increased, but the difference was not statistically significant ($p = .41$).

<table>
<thead>
<tr>
<th>Class</th>
<th>Test</th>
<th>$n$</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Z-value</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>Pre</td>
<td>37</td>
<td>14.14</td>
<td>4.00</td>
<td>6</td>
<td>23</td>
<td>-.71</td>
<td>.48</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>37</td>
<td>14.73</td>
<td>4.56</td>
<td>5</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>Pre</td>
<td>35</td>
<td>12.31</td>
<td>3.90</td>
<td>4</td>
<td>16</td>
<td>-.28</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>35</td>
<td>12.00</td>
<td>4.39</td>
<td>3</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Pre</td>
<td>22</td>
<td>10.05</td>
<td>3.02</td>
<td>4</td>
<td>16</td>
<td>-1.03</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>22</td>
<td>11.18</td>
<td>3.84</td>
<td>3</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>Pre</td>
<td>94</td>
<td>12.50</td>
<td>4.09</td>
<td>4</td>
<td>23</td>
<td>-.83</td>
<td>.41</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>94</td>
<td>12.88</td>
<td>4.56</td>
<td>3</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.2 Comparison of the Results between Three Years

5.2.1 Written tests

Table 3 shows the results of the pre- and the post-written test conducted on the students’ proficiency in English in the three relevant years: 2013, 2014, and 2015.

In the upper level classes, compared with the pre-test Mean-value, the post-test Mean-value decreased in 2013, and the difference was statistically significant ($p < .05$), although there was no significant difference in 2014 and 2015. In the middle level classes, there was no significant difference between the pre- and the post-test Mean-value in any of the three relevant years. In the lower level classes, compared with the pre-test Mean-value, the post-test Mean-value increased in 2013, 2014, and 2015, and the statistical difference was consistently significant ($p < .01$). In all the classes, compared with the pre-test Mean-value, the post-test Mean-value increased in 2013, 2014, and 2015. The difference between the pre- and the post-test Mean-value was not statistically significant in 2013, but it was marginally significant ($0.05 < p < 0.10$) in 2014, and then it was statistically significant ($p < .05$) in 2015.

As to the classes having produced a significant difference between the pre- and the post-test Mean-value, it appears that the pre-test Mean-value in the lower level classes as well as overall gradually decreased from 2013 to 2015. However, results of Kruscal-Wallis test showed no significant difference among the three pre-test Mean-values either in the lower level classes ($\chi^2(2, N=73) = 1.55, p = .46$) or overall ($\chi^2(2, N=292) = 1.02, p = .60$).

Table 3  Results of the Pre- and the Post-Written Test on the Students’ English Proficiency in 2013, 2014, and 2015

<table>
<thead>
<tr>
<th>Class</th>
<th>Test</th>
<th>2013 Mean (SD)</th>
<th>2014 Mean (SD)</th>
<th>2015 Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>$p$</td>
<td>N</td>
</tr>
<tr>
<td>Upper</td>
<td>Pre</td>
<td>40</td>
<td>16.90 (3.71)</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>40</td>
<td>15.65 (5.47)</td>
<td>28</td>
</tr>
<tr>
<td>Middle</td>
<td>Pre</td>
<td>40</td>
<td>11.33 (1.77)</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>40</td>
<td>11.75 (3.03)</td>
<td>39</td>
</tr>
<tr>
<td>Lower</td>
<td>Pre</td>
<td>27</td>
<td>6.48 (1.16)</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>27</td>
<td>9.37 (2.37)</td>
<td>24</td>
</tr>
<tr>
<td>All</td>
<td>Pre</td>
<td>107</td>
<td>12.19 (4.85)</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>107</td>
<td>12.61 (4.71)</td>
<td>91</td>
</tr>
</tbody>
</table>

5.2.2 Listening tests

Table 4 shows the results of the pre- and the post-listening test conducted on the students’ proficiency in English in the three relevant years: 2013, 2014, and 2015. In the upper level classes, the middle level classes, the lower level classes, and overall, the difference between the pre-test and the post-test Mean-value was not statistically significant in 2013, 2014, or 2015.
6. Discussion

Firstly, as is shown in the results of the pre- and the post-written test (see Table 1 and Table 3), the students’ English proficiency relating to vocabulary, grammar, and reading consistently improved in the lower level classes. The results produced a statistically significant difference \((p < .01)\) all through the three relevant years. On the contrary, in the upper and the middle level classes, the students’ English proficiency did not improve significantly. However, overall, the students’ English proficiency improved gradually year by year, yielding a statistically significant difference \((p < .05)\) in the final year, 2015.

Secondly, as is shown in the results of the pre- and the post-listening tests (see Table 2 and Table 4), the students’ English proficiency relating to listening comprehension did not improve in any of the three levels as well as in all the classes consistently. None of the results produced statistically significant difference between the pre- and the post-listening test Mean-value throughout the three years.

Referring to Senba and Ise (2005), Mori and Yumoto (2006), Mori, Satouchi and Ogata (2007), Ogasawara, Nishihara, Kuwano, Kanamaru and Collins (2010), Ogasawara (2012) reported that it is quite difficult for only class instruction to produce a statistically significant difference in the upper classes, compared with in the lower classes (p.12). In the present study, all the instruction was restricted to the regular classes, including compulsory homework related to the instruction. As is represented in remedial education, university English education nowadays tends to focus on the students with low performance of English. However, our study reiterated the difficulty in improving students’ English proficiency in the upper and the middle level classes by regular instruction alone, and the necessity to present concrete solutions.

Additionally, our study revealed the difficulty of enhancing the students’ listening proficiency in English within regular classes. Compared with the positive results of the written test over the years, those of the listening test showed no statistically significant improvement in any of the classes. This was an unexpected outcome. In order to tackle this problem, it goes without saying that some measures have to be taken, including the reconsideration of the methodology.

Referring to Takefuta (1996), the results of the pre- and the post-listening test on the students’ English proficiency in 2013, 2014, and 2015 are represented in Table 4.

Table 4  Results of the Pre- and the Post-Listening Test on the Students’ English Proficiency in 2013, 2014, and 2015

<table>
<thead>
<tr>
<th>Class</th>
<th>Test</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(N)</td>
<td>Mean ((SD))</td>
<td>(N)</td>
</tr>
<tr>
<td>Upper</td>
<td>Pre</td>
<td>39</td>
<td>13.74 (4.54)</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>39</td>
<td>13.33 (4.85)</td>
<td>28</td>
</tr>
<tr>
<td>Middle</td>
<td>Pre</td>
<td>39</td>
<td>11.44 (3.50)</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>39</td>
<td>12.08 (4.20)</td>
<td>37</td>
</tr>
<tr>
<td>Lower</td>
<td>Pre</td>
<td>26</td>
<td>11.23 (2.54)</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>26</td>
<td>11.73 (3.48)</td>
<td>24</td>
</tr>
<tr>
<td>All</td>
<td>Pre</td>
<td>104</td>
<td>12.25 (3.88)</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>104</td>
<td>12.46 (4.31)</td>
<td>89</td>
</tr>
</tbody>
</table>
improvements in listening proficiency have a positive effect on speaking, reading and writing skills, suggesting an important overall role in English learning. However, as is shown in the results of our study, the improvement of listening proficiency itself is very difficult to accomplish. In order to solve this problem, a revolutionary approach may be required.

Regarding university students’ listening proficiency, Hasegawa (2018) verified the effects of computer-based English teaching materials. In this study, a total of five lessons of 15 minutes each produced a statistically significant difference (p < .05) between the pre- and the post-listening test Mean-value. The lesson was conducted every week for 27 freshmen in the beginning of a general class. The testing method was identical to that in the present study, including the tests themselves. The specific English teaching materials (Hasegawa & Ando, 2013) utilized were originally developed for elementary school fifth and sixth graders, incorporating psychological knowledge applicable to memory retention in learning. The concept underlying the English teaching materials is thought to be universally effective in English education. Therefore, using these new teaching materials could be a breakthrough solution to the present problem in University X.

7. Conclusion

The purpose of the present study was to verify the effects of small track classes aimed at improving the freshmen’s English ability at University X. The verification was conducted dividing approximately 200 freshmen into upper, middle, and lower level classes in the 2013, 2014, and 2015 academic years. Each class size was of around 20 students.

From the results, it was confirmed that improving the students’ English proficiency both on the written and listening test is difficult especially in the upper and the middle level classes in the small track classes. In particular, it was found that improving the students’ English proficiency on the listening test is very difficult in all of the three level classes. However, it is worthwhile to report that the students’ English proficiency on the written test, relating to vocabulary, grammar and reading, improved significantly overall in the third year.

As a limitation of this study, to firmly assert the success of the trial, a contrast group should have been prepared for comparison, but was not, because of the fixed curriculum. However, as is apparent from the analyses summarized above, the next stage of the small track classes at University X is to enhance the students’ command of written English in both the upper and middle level classes. Especially, specific measures have to be taken for the improvement of English listening comprehension in all of the three level classes. Referring to these findings, it is hoped that English education in the university can be promoted successfully.

Notes

1. According to JIEM, INC (nd), CASEC test consists of four sections: a) vocabulary knowledge, b) knowledge of useful expressions, c) listening comprehension, and d) dictation. The first two sections are to be answered by reading English, and the second two sections are by listening to English.

2. In psychological terms, Rost (2011) defines “learning” as “the durable modification of a concept in memory due to an experience.” (p. 73). Based on this definition, the computer-based English teaching materials were developed adopting psychologically effective methods to retain learning items in memory. The specific psychological knowledge incorporated consists of five theories or effects, which are explained in Hasegawa and Ando (2017).

3. In addition to the memory retention, the English teaching materials were developed considering developmental stages of children. According to Higuchi, Kanamori and Kunikata (2005), elementary school fifth and sixth graders are capable of analytic, logical and abstract thinking. This is the same capacity that adults intrinsically possess, and activating it could lead to the arousal of “intellectual curiosity,” which is “a main factor constituting intrinsic motivation” (Hirayama et al., 1988, p. 293). The details of the English teaching materials are described in Hasegawa and Ando (2014).
References


Ogasawara, S. (2012). Eigo-shujukudo-betsu-kurasu no kokateki-unyo ni tsute: Kogakubu-sogo-eigo-Ⅲ no G-TELP deta ni yoru bunseki [How to effectively teach English to students in the proficiency-based English classes]. Nagasaki-
A Diachronic Study of Small Track Classes in University (1):

大学における習熟度別少人数クラスの通時的研究（1）

——学生の英語力は向上するか——

長谷川修治[1]，桑名 俊一[2]，北條 洋子[3]

【1】植草学園大学発達教育学部，【2】植草学園大学保健医療学部，【3】植草学園大学非常勤

本研究の目的は，X大学1年生の英語力向上を目指した習熟度別少人数クラスの効果を検証することであった。この習熟度別少人数クラスは，2013年，2014年，2015年に，それぞれ約200名の学生を上位・中位・下位から成る3レベルに分割して実施された。各クラスの人数は20名程度であり，サンプルとして，各レベルからは，毎年，2クラスずつが抽出された。習熟度別少人数クラスの効果は，4ヶ月の授業を行い，その事前・事後に実施した筆記テストおよびリスニングテストの成績を比較して検証した。その結果，筆記テストでは3年間に渡り，下位クラスは一貫して英語力の有意な向上を示した。上位・中位・下位を合わせた全クラスでは，年を追うごとに英語力が伸长し，3年目には有意な差となるまで向上した。しかし，リスニングテストでは，3年間を通じて，レベル分けされたクラスのみならず全クラスでも英語力の有意な向上は見られなかった。これらの結果より，次に取るべき方策は，文字英語に対応できる英語力の養成と同時にリスニング力の増強であることが明らかとなった。特に，前者は上位・中位クラス対象であり，後者は全クラス対象とするものであった。

キーワード：習熟度別少人数クラス，通時的研究，英語力，筆記テスト，リスニングテスト