An Analysis of Successful Pronunciation Learners: 
In Search of Effective Factors in Pronunciation Teaching

Yuko Tominaga

University of Tokyo


In order to discover some clues to and make suggestions for better teaching English pronunciation to learners in English as a Foreign Language (henceforth abbreviated as EFL) settings, the paper attempts to analyze Successful Foreign Language Learners (SFLL), focusing on their study history. The subjects were 24 junior high school students, who were selected through a 2004 Intra-school English recitation contest. Their pronunciation was tape-recorded and evaluated by three Assistant Language Teachers (ALT). The subjects responded to a questionnaire regarding the history, environment, and strategies of their English learning experience. The results indicate that formal instruction at school did not contribute much to their acquisition of pronunciation, and that they made the best use of the opportunity outside the school to motivate their learning. The comparison with the eliminated subjects showed that the Successful Pronunciation Learners (SPL) outstood them in terms of attitude and motivation. Also some differences of effective factors were found between the learners in junior and senior high school.

Key Words: SPL, PPL, pronunciation teaching/learning

1 Introduction

In an EFL classroom where many learners are struggling with learning English pronunciation, we occasionally and pleasantly discover a few learners who exhibit remarkable ability. Often these learners do not have any particular lengthy record of living in an English-speaking environment. How, then, have they attained such pronunciation, and why? Given that they have acquired intelligible pronunciation\(^1\) in a virtually non-speaking EFL setting with little successful pronunciation teaching going on, it is assumed that there may be common factors at work in their ability to learn English pronunciation. The present paper is an attempt to shed light on some

\(^1\) The exact determination of the term “intelligible pronunciation” needs more examination (Gallego, 1990). Recent research on intelligibility suggests that it is difficult to specify the very features that determine whether or not one’s pronunciation is comprehensible. The pronunciation theorists take a mild and realistic view about intelligibility without getting too involved in a linguistic debate as Goodwin (2001) defines it tentatively: “spoken English in which an accent, if present, is not distracting to the listener” (p. 118).
such successful pronunciation learners (SPL) and to explore their attitude and individual strategies that may have positively affected their learning of English pronunciation.

2 Background

The importance of focusing on learners in language teaching may be traced back to pioneering work done by individuals such as Gardner and Lambert (1972) and Oller and Richards (eds.) (1973). Instigated by these works, researchers in the field of TESOL (Teaching English to Speakers of Other Languages) began analyzing SFLL. Rubin (1975) focused on the learning strategies employed by SFLL. Stern (1975) analyzed the differences between successful and unsuccessful language learners from the viewpoint of autonomous learning and meta-cognitive ability. Naiman, Frohlich, Stern and Todesco (1978) refined the framework of Stern’s earlier research through the analysis of numerous learners by conducting questionnaires, systematic interviews, and class evaluations. In the 1980s researchers and teachers began exploring the issues of learning styles and strategies. Rubin and Thomson (1982) focused on learners’ self-responsibility and their goals of learning. In the 1990s, O’Malley and Chamot (1990) analyzed learning strategies within this theoretical framework and established three primary categories: meta-cognitive, cognitive, and social/affective strategies. Oxford (1999) gave an inventory of the strategies for language learning. Furthermore, Choens’s (1998) comprehensive research adopted two categories: language learning strategies and language use strategies. Holistically speaking, along with the proliferation of the learner-centered approach, more detailed focus began to be paid to the strategies employed by learners that differ from learner to learner according to the age, sex, nature and learning circumstances.

In Japan, this “focus-on-the-learner” trend presumably began in 1980s with the work of Hatori and Matsuhata (1980). They emphasized the importance of thinking from the viewpoints of the students and of incorporating this thinking into teaching endeavors. In the same vein, Takeuchi and Wakamoto (2001) analyzed Japanese SFLL at the college level, while Maeda (2002) analyzed Japanese SFLL at the senior high school level. Through these works, the importance of the learner-centered approach became widely understood in Japanese ELT circles. However, in spite of this recognition, very few studies which specifically deal with pronunciation learning have been made to date. The present paper is an attempt to discuss this issue.

3 Research 1

3.1 Method

3.1.1 General escription

This study is based on the data from a recitation contest held at a private junior high
school in Tokyo in February 2004. 232 students participated in the contest (101 first-year, 60 second-year, and 71 third-year students). They all had six English classes per week: five reading and grammar classes with Japanese teachers of English (JTE), and one conversation class with a native speaker of English.

3.1.2 Procedure

232 participants took part in this study. The first selection was based on their academic ability and class activities. Those who passed this selection went on to the second one in which they were asked to read aloud a text of around 70 words. After these initial selections, the participants who were chosen went to undertake three activities: 1) to answer five casual introductory questions, 2) to read aloud a 60-70-word text, and 3) to listen to and answer four true-or-false questions in English. All these activities were tape-recorded. We then asked three ALT to listen to the tape-recording and assess the students’ ability based on the criteria. In order to obtain a more detailed understanding of the factors and strategies of the students’ English study, individual interviews (20-30 minutes) were conducted by one of the authors in Japanese, so that the students could express their ideas more easily and freely. The interviews were also tape-recorded for our later analysis.

3.1.3 Criteria for selection

The base line of the criteria for selecting SPL is whether the participants can make themselves understood in English, that is, their intelligibility. To be more precise, SPL were evaluated by the five elements of their pronunciation: 1) stress, 2) rhythm, 3) intonation, 4) sound change, and 5) voice quality. These five elements were respectively marked at three levels by the three ALT (2: good [clear, natural and intelligible], 1: average [within the range of intelligibility], 0: not good [not clear, unnatural, and not intelligible]).

3.1.4 Raters

In order to minimize the inter-rater reliability gap as much as possible, we selected three ALT as raters, who had not had contact with the participants and who had a similar level of experience of teaching in Japan as shown in Table 1. After explaining the objective of the study, we then asked them to rate in a group.

---

2 These features can be considered to play a significant role in communication because they usually provide crucial context and support for segmental production. At the same time, they can function as an obstacle against non-NSE in learning English pronunciation (see Celce-Murcia, Brinton, & Goodwin, 1996).

3 Despite our rater training, the evaluation by ALT indicates a significant inter-rater reliability gap between the American and British ALT.
Table 1. Background of the ALT(1)

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Age</th>
<th>Sex</th>
<th>Degree</th>
<th>ALT*</th>
<th>Sojourn**</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT 1</td>
<td>UK</td>
<td>23</td>
<td>M</td>
<td>BA</td>
<td>6 months</td>
</tr>
<tr>
<td>ALT 2</td>
<td>UK</td>
<td>24</td>
<td>F</td>
<td>BA</td>
<td>1 year</td>
</tr>
<tr>
<td>ALT 3</td>
<td>US</td>
<td>26</td>
<td>M</td>
<td>BA</td>
<td>1 year</td>
</tr>
</tbody>
</table>

*ALT: the time period as ALT in Japan
**Sojourn: the sojourn period in Japan

3.2 Results

35 students were selected by the Japanese teachers of English (JTE) as the candidates for the contest in the first selection. In the following selection, 24 candidates were further selected. We focused on these 24 participants who actually went up to the stage of the contest and gave yet another selection. As a result, 8 students were selected as SPL (see Table 2). However, insofar as the objective of this research is to identify the factors that contribute to obtaining good pronunciation in the EFL environment, from among the 8 students, 2 students were excluded (one student who had stayed in the US for more than one year, and the other student whose mother was a native speaker of English). Finally, out of the original 232 students, 6 were selected as SPL both by the JET and ALT.

Figure 1. Process of results (1)

![Diagram]

From the questionnaire and interviews with these 6 SPL, three common factors that might affect their learning were observed.

1. All of them were given private learning outside school.
2. They all enjoyed their informal instruction of English, as a result of which they worked on English positively and spontaneously.
3. They unanimously agreed to the boredom they had from mechanical aspect of “reading– aloud and repetition practice.”

4 Research 2

4.1 Method
4.1.1 General description

This study is based on the same data as in Research 1 from a recitation contest held at a private senior high school in Tokyo in February, 2004 in which 339 first-year students participated. They all had six English classes per week: four reading and two grammar classes with JTE, and 10-minutes listening training every morning from Monday to Saturday.

4.1.2 Procedure

The procedure was almost the same as that of Research 1. The differences between them were four points:

1. In the second selection the students were asked to read aloud an excerpt from the school textbook.
2. In the third the text to read aloud was a 73-word text of a different content.
3. The five casual introductory questions were at a higher level.
4. The time period of the interview was 30 minutes.

4.1.3 Criteria for selection

The base line of the criteria for selecting SPL was also the same as that of Research 1.

4.1.4 Raters

In Research 2, different ALT were chosen as raters, but the criterion of selecting these ALT was the same as that of Research 1.

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Age</th>
<th>Sex</th>
<th>Degree</th>
<th>ALT*</th>
<th>Sojourn**</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALT 1</td>
<td>UK</td>
<td>29</td>
<td>M</td>
<td>MSc</td>
<td>2 years</td>
</tr>
<tr>
<td>ALT 2</td>
<td>UK</td>
<td>26</td>
<td>F</td>
<td>BA</td>
<td>1 year</td>
</tr>
<tr>
<td>ALT 3</td>
<td>US</td>
<td>31</td>
<td>M</td>
<td>MA</td>
<td>3 years</td>
</tr>
</tbody>
</table>

*ALT: the time period as ALT in Japan
**Sojourn: the sojourn period in Japan

4.2 Results

Figure 2 indicated that 18 students were selected in the first selection by the JTE. As a result, 4 students were selected as SPL in the third selection by ALT. However, one Chinese student who had different experience of English learning from others was excluded. Finally, out of the original 339 students, 3 were selected as SPL both by the JTE and ALT.
Figure 2  Process of results (2)

<table>
<thead>
<tr>
<th>339 Participants</th>
<th>18  (5.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Selection by JTE</td>
<td></td>
</tr>
<tr>
<td>8  (2.4%)</td>
<td></td>
</tr>
<tr>
<td>Second Selection by JTE</td>
<td></td>
</tr>
<tr>
<td>4 SPL  (1.2%)</td>
<td></td>
</tr>
<tr>
<td>Third Selection by ALT</td>
<td></td>
</tr>
<tr>
<td>3 Final SPL  (0.9%)</td>
<td></td>
</tr>
<tr>
<td>Exclusion of SPL with Peculiar Background</td>
<td></td>
</tr>
</tbody>
</table>

From the questionnaire and interviews with these three SPL several common factors that might affect their learning were observed. In the questionnaire, all the three SPL responded “yes” to the six questions:

1. Be fond of English learning,
2. Do independent practice,
3. Hope to acquire fluent pronunciation,
4. Have a role model,
5. Be fond of reading aloud and repeating practice, and
6. Frequently imitate pronunciation of native speakers.

On the other hand, in the interviews, seven common factors were found:

1. They started English learning as formal instruction.
2. They began to get interested in English learning at the first-year of junior high school although the triggers were different respectively.
3. They had their original learning strategies.
4. They listened to what native speakers say everyday.
5. They positively went to the teachers’ common room and asked ALT for help when they had any questions on pronunciation.
6. They consider that they should study by themselves if they wanted to acquire good pronunciation.
7. They were impressed when they saw JTE talking to ALT apparently fluently, even if JTE spoke in broken English.

4 Research 3

4.1 Method

4.1.1 General description

Since the selected SPL in Research 1 and 2 represented an extremely small percentage in the cohort of the 232 junior high school students and the 339 first-year
An Analysis of Successful Pronunciation Learners

senior high school students (2.6%, 0.9% respectively), in order to identify the reliability of the data of the interviews on the SPL, the author conducted research on PPL using the same questionnaire as in Research 1 and 2.

4.1.2 Procedure

First, the PPL were selected. In all grades of this school, English classes are divided into three levels (α, β, and γ: γ is the lowest level). The same questionnaire to which the SPL responded was distributed to the students in γ classes (first-year to third-year of the junior high school and first-year of the senior high school). From among those students in the four γ classes, their JTE selected the answer sheets of the 39 junior high school students (17% of the original 232) and 25 senior high school students (7% of the original 339), whose pronunciation the JTE judged as poor. Next, in order to examine which factors contribute to the differences between the SPL and the PPL, two tests were conducted: chi-square tests for yes-no questions, t-tests for multiple-choice questions.

4.2 Results

From the results of chi-square test, three items are listed as significant factors between SPL and PPL among junior and high school students respectively. (see Table 3).

Additionally, one notable result is that no SPL of senior high school have received informal instruction before entrance to junior high school, whereas SPL of the junior high school received it.

Table 3. Significant Factors from the Result of Chi-Square Tests

<table>
<thead>
<tr>
<th>Junior high school students</th>
<th>Senior high school students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received Informal Instruction</td>
<td>Be fond of English leaning</td>
</tr>
<tr>
<td>Be fond of English leaning</td>
<td>Do independent pronunciation practice</td>
</tr>
<tr>
<td>Have a role model</td>
<td>Have a role model</td>
</tr>
</tbody>
</table>

From the results of t-tests, no significant item was identified among the junior high school students. On the other hand, in the comparison between the senior high school SPL and PPL six items are listed as to be relevant to their motivations and their teachers’ intervention.

1. Have bad impression of JTE’s pronunciation
2. JTE often corrected pronunciation
3. JTE taught stress, intonation, and rhythm
4. Strongly want to be an SPL
5. Be fond of reading aloud and repetition
6. Imitate native speakers

Generally, the above-mentioned items that can be considered to have statistically significant difference between the SPL and the PPL are related to
strategies, motivations, and teachers’ intervention.

5 Discussion

In Research 1 and 2, a gradual four-step-process was adopted respectively in order to identify what proportion of SPL exist among the junior and first-year senior high school students in this study. As a result, 2.6% of the 223 junior high school students and 0.9% of the senior high school students were selected as SPL. This very small number means that pronunciation teaching does not work properly in classroom settings. On the basis of the results, questionnaires and interviews were given to the SPL in order to examine how they acquired English pronunciation and thereby to find out suggestions on pronunciation teaching.

In Research 3, in order to find out more concrete suggestions, differences between SPL and PPL were investigated. The same questionnaires that the SPL had answered were conducted to the PPL. Then, the collected data from both the SPL and PPL were analyzed by chi-square tests and t-tests in order to discover various factors that can be considered to contribute to generate SPL.

As a result of these research, three factors were identified as statistically significant, i.e., motivations, strategies, and teachers’ intervention.

5.1 Informal instruction

In Research 1, the finding that all the SPL selected in this study had received informal instruction may indicate that informal instruction has specific advantages over formal instruction. On the other hand, in Research 2, none of the senior high SPL had informal instruction. It can be said that these SPL got other external excitement/motivation than informal instruction such as films, the intra-recitation contest, and encounter with good teachers.

It can also be said that those “SPL” at the junior high school level are generally interested in learning English and received informal instruction while attending English schools or learning from their parents. As a result, they have longer study history than their peer students.

However, in Research 1, the evaluations by the three native ALT split to a great extent, and in Research 3, no statistically significant correlation was found between SPL and PPL. Therefore, those junior high school students who have been selected as “SPL” cannot be considered to be true SPL. On the other hand, as Research 3 reveals significant correlation, the senior high school SPL selected in Research 2 can be regarded as true SPL. Thus, in finding out influential factors on successful learning, it would be better to depend on the analyses of the data of the senior high school SPL. Furthermore, on the junior high school level, the study time-period may not be enough to generate true SPL. Therefore, what can be considered more important is the fact that none of the senior high school SPL had informal instruction. This might mean that these SPL have found their own strategies outside of informal instruction.
An Analysis of Successful Pronunciation Learners

5.2 Joy of learning

As the result of Research 3 indicates, enjoyable aspect of learning English can be considered to be one of the common positively influential factors among SPL. In Research 1, all the SPL in this study state that the informal instruction they took was quite enjoyable and five out of the six SPL responded, “Yes” to the question, “Do you like English as a compulsory school subject?”

In Research 2, the result shows that the SPL did not expect formal instruction to offer good pronunciation guidance to them. However, it seems that because these SPL have autonomously acquired their original learning strategies, they are to some extent able to enjoy in class activities regarding pronunciation such as reading aloud practice.

5.3 Learners’ strategies

In Research 1, to the question, “Do you practice pronunciation outside of school?” two first-year SPL responded, “No.” The difference based on learners’ age is so noticeable among these junior high school SPL.

In contrast, senior high school SPL appear to have their original learning strategy, and they spontaneously conduct their own practice everyday. Therefore, it can be said that together with the learning time period, those who are interested in learning English are more likely to develop their own learning strategies, which contribute to make them SPL.

5.4 Role model

Learners, in the course of their study, are prone to spot some role models, i.e., persons whom they look to as good examples in learning English. As the examples of role models, the SPL listed foreign singers and actors, their friends, and their teachers. In this school, it is not difficult for students to find a role model among their friends because, as is cited in this research, the intra-school recitation contest is held every year, and they have many chances to listen to models of English pronunciation within their reach. This role-model variable appeared to have contributed to the motivation of SPL.

The SPL first watched their models closely and attempted to imitate their pronunciation. Moreover, they began to spend much time with their models at school, asking them questions about how their teachers or friends had learned English in order to get available information to improve their own pronunciation strategies.

5.5 Teachers’ intervention

As the results of Research 3 show, teachers’ intervention appears to be a strong factor that contributes to generating SPL. In fact, the SPL in this study answered in the interviews that teachers’ good pronunciation and concrete guidance on
pronunciation were quite beneficial. Such interventions from the teachers seem to have worked well in improving these SPL’s pronunciation. Conversely, taking into consideration the fact that very small number of SPL were identified, it can be said that non SPL have had few chances to encounter with appropriate teachers’ intervention. Actually, under the current circumstances in junior and senior high schools, pronunciation teaching is a peripheral component and it may be difficult for JTE to focus only on it. However, the teachers can make a number of ‘small’ changes: they can rethink about their own attitudes toward pronunciation teaching, they can make an effort to improve their own English pronunciation, and can create a method that give their students proper intervention and feedback both inside and outside class, to name a few.

6 Conclusion

To begin with, this study has identified very few SPL among the junior and senior high school students. It can be considered from this result that English pronunciation teaching does not properly function in Japanese formal education and, therefore, that organized methods to activate pronunciation teaching should be investigated and promoted.

Secondly, the results of this study clearly indicate that the SPL elected in this study show a remarkable contrast from other learners in such cognitive and meta-cognitive areas of learning English as attitude, motivation, engagement, and persistence. To be more concrete, the SPL excelled others in 'successfully' having incorporated elements of choice, interest, relevance, expectancy, and outcomes. Thus self-engaged and self-invested, the SPL appear to have increased their level of interest, involvement, and responsibility in their pronunciation learning, which result in the achievement that otherwise could not have easily been produced in an EFL setting. In order to produce more SPL in formal education, teachers should learn more from their strategies and devise methods to do so.

However, the current Course of Study by the Education Ministry is far from pronunciation-oriented teaching. Thereupon, under this circumstance, it would be important for teachers to set an air in which learners are encouraged and supported to learn and practice English pronunciation spontaneously.

Likewise, external stimuli such as films and music can be considered as strong tool for having the students become more interested in English learning, since the SPL state in the interviews that such stimuli encouraged them to learn English pronunciation positively. Moreover, the SPL make it clear that encounters with respectable teachers are another very positive stimuli. In fact, we must never forget that teachers can be an external stimulus to learners.

In addition, guidance to lead learners in finding out their original strategies on English pronunciation should be conducted in classes. For example, appropriate assignments and feedback by teachers should be continuously offered to learners.

Finally, teachers should pay more attention to their own English pronunciation skills, which will lead some of us to reconsider our own professional role as an English teacher. Teachers are not necessarily required to pronounce like a
An Analysis of Successful Pronunciation Learners

native speaker of English, but at least they are required to teach intelligible pronunciation to students because, at the threshold level, it is important for students to learn pronunciation that enables them to make themselves understood in English.

Further research on SFLL analysis with larger numbers of populations of learners would be necessary in order to discover the factors that can contribute to generating SPL. These factors could be beneficial in changing English pronunciation teaching in Japan.

References


Tominaga

Yuko Tominaga  
Department of Language and Information Science  
Graduate student, the University of Tokyo  
3-4-16 Asahi-cho, Nerima-ku  
Tokyo, Japan 179-0071  
Tel: +81-3-3975-5281  
Fax: +81-3-3975-1329  
E-mail: Yukotominana@yahoo.co.jp

Received: February 18, 2009  
Revised: May 20, 2009  
Accepted: May 31, 2009
An Analysis of Successful Pronunciation Learners

Appendix A.

Raw data of chi-square tests

The results of chi-square tests on yes-no questions: %

| Questions /Yes | Junior | Senior | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|
|                | SPL    | PPL    | X²     | SPL    | PPL    | X²     |
| 1 Have lived abroad | 0      | 8      | 0      | 0      | 0      | 0      |
| 2 Have a chance to speak in English daily | 17     | 5      | 0      | 0      | 0      | 0      |
| 3 Have friends talking with you in English | 17     | 5      | 0      | 16     | 0      | 0      |
| 4 Receive informal instruction | 100    | 33     | *      | 0      | 36     | 0      |
| 5 Be fond of English leaning | 83     | 33     | *      | 100    | 34     | *      |
| 6 Taught pronunciation skills enough | 83     | 49     | 33     | 24     | 0      | 0      |
| 9 Learned a method outside of school | 17     | 15     | 33     | 12     | 0      | 0      |
| 10 Have an independent practice | 67     | 10     | *      | 100    | 16     | ***    |
| 11 Have a role model | 83     | 34     | *      | 100    | 44     | *      |

* p < .05  ** p < .01  *** p = .00

When the numerical value from chi-tests was under 0.5, it means a significant factor. It is shown by asterisked mark.

Appendix B.

Raw data of t-tests

The results of t-tests on five-choice questions: mean (SD)

| Questions                  | Junior | Senior | | | | | |
|----------------------------|--------|--------|--------|--------|--------|--------|
| 7-1 Frequency of using English by JTE | 3.0(0.8) | 2.5(0.7) | 3.3(0.4) | 3.0(0.5) | 0.3(0.5) | 0.8(0.7) |
| 7-2 Bad impression of JTE’s pronunciation | 1.7(0.9) | 0.9(1.0) | 1.0(0.7) | 2.1(0.9) | 1.2(0.4) | 1.2(0.6) |
| 7-3 JTE taught detailed pronunciation | 1.2(0.4) | 1.2(0.6) | 1.3(0.4) | 0.7(0.6) | 0.3(0.5) | 0.8(0.7) |
| 7-4 JTE often corrected pronunciation | 0.3(0.5) | 0.8(0.7) | 1.5(0.5) | 0.4(0.5) |
## Tominaga

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7-5</td>
<td>JTE taught stress, intonation &amp; rhythm</td>
<td>1.3(0.9)</td>
<td>1.4(1.2)</td>
<td>2.0(0.0)</td>
<td>1.1(0.9)</td>
</tr>
<tr>
<td>7-6</td>
<td>JTE taught the goals of pronunciation</td>
<td>1.2(0.9)</td>
<td>1.3(0.9)</td>
<td>1.5(0.5)</td>
<td>1.0(0.6)</td>
</tr>
<tr>
<td>8-1</td>
<td>ALT taught detailed pronunciation</td>
<td>1.2(0.9)</td>
<td>1.1(0.7)</td>
<td>0.8(0.8)</td>
<td>0.7(0.6)</td>
</tr>
<tr>
<td>8-2</td>
<td>ALT often corrected pronunciation</td>
<td>1.0(0.8)</td>
<td>1.1(0.7)</td>
<td>0.8(0.8)</td>
<td>0.9(0.7)</td>
</tr>
<tr>
<td>8-3</td>
<td>ALT taught stress, intonation &amp; rhythm</td>
<td>1.0(1.2)</td>
<td>1.2(1.1)</td>
<td>1.0(1.2)</td>
<td>1.5(1.0)</td>
</tr>
<tr>
<td>12</td>
<td>Strongly want to be an SPL</td>
<td>2.5(1.1)</td>
<td>1.9(1.1)</td>
<td>3.5(0.4)</td>
<td>2.3(1.0)</td>
</tr>
<tr>
<td>13</td>
<td>Be fond of reading aloud &amp; repetition</td>
<td>2.3(0.9)</td>
<td>1.6(1.1)</td>
<td>3.8(0.5)</td>
<td>1.9(0.8)</td>
</tr>
<tr>
<td>14</td>
<td>Imitate native speakers</td>
<td>1.7(0.9)</td>
<td>1.4(0.9)</td>
<td>2.5(0.5)</td>
<td>1.2(0.9)</td>
</tr>
<tr>
<td>15</td>
<td>Have confidence in pronunciation</td>
<td>0.7(0.5)</td>
<td>0.5(0.5)</td>
<td>0.5(0.5)</td>
<td>0.2(0.4)</td>
</tr>
</tbody>
</table>

* p < .05  ** p < .01  *** p = .00

When the numerical value from t-tests was under 0.5, it means a significant factor. It is shown by asterisked mark.