The Relationship between Hearing and Identification of Short Vowel Sounds in 2-Year Japanese Junior College Students

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Summary

Four groups of students at a private junior college in Gifu prefecture were involved in this study. I conducted a hearing exercise consisting of three tests to measure their ability to hear the "short" A, E, I, O, U vowel sounds and correctly identify them. The students performed poorly, in particular, when trying to distinguish "short" A, O, U. There appeared to be a lot of random guessing and many answers were left blank, raising speculation they could not hear the English sounds because of the interference of their Japanese sound system. However, test scores tended to improve after each test, illustrating the efficacy of English phonics training for Japanese junior college English students.

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Introduction

To be a successful speller requires a person to correctly hear and speak how the word is pronounced. It is necessary for the person to know how many syllables there are, where the stress is located, and what sound each syllable makes (Gray, 1992). Native English speakers learn this process at a very early age naturally and in the English classes in elementary school.

Japanese students do not start studying English until they are in Junior high school. By that time, their native language principles of pronunciation may negatively influence their English pronunciation. In addition, as other researchers have attested (Gray, 1992; Gay, 1992), they may not even receive any English phonics training from their Japanese English teachers.

Does this lack of English phonics training affect Japanese students ability to distinguish the "short" A, E, I, O, U vowel sounds, e. g., rat, set, bit, top, putt, etc., in order to spell a word correctly? The author conducted a series of pronunciation tests to see how well female students at a private junior college in Gifu prefecture could hear and correctly identify vowel sounds contained in the first syllable of a series of 25 words. The students corrected their own tests, and they were repeatedly given the correct word and vowel pronunciation after each successive test to see if their test scores would improve with increased listening practice.

Procedure

Four groups of students studying English participated in the study. All of the students were separate in each group, i. e., there was no case where one student participated in more than one group.

Group 1 consisted of 23 first year Business English majors studying in an English Conversation class. The tests were administered at the beginning of the first semester of the '93-'94 school year on 22 April 1993.

Group 2 included 7 second year Business majors studying in an English Listening class. The tests were given at the beginning of the first semester of the '93-'94 school year on 22 April 1993.

Group 3 was comprised of 18 second year Business English majors studying in an English Listening class. The tests were given at the beginning of the first semester of the '93-'94 school year on 23 April 1993.

Group 4 consisted of another 23 first year Business English majors studying in an English Conversation class. The tests were administered at the beginning of the first semester of the '93-'94 school year on 26 April 1993.

The students were given a blank piece of paper and instructed to write "Test 1, Test 2, Test 3," across the top of the page and the numbers 1 through 25 down the left hand side.

After the author had said a word twice, students were told to write the letter of the vowel they thought they heard in the first syllable of that word. It was not necessary for them to spell the entire word. They only had to write A, E, I, O, or U according to what they perceived as hearing.

Before testing commenced, the author explained the purpose of the study and went on to describe that there were two ways to pronounce A, E, I, O, U. They were already familiar with the first pronunciation in such examples as crate, eat, kite, note, and cute. However, the study was designed to test their hearing ability in the second pronunciation method as exemplified by such words as cat, bet, sit, cot, and cut. The author pronounced the different sounds and then conducted a short pronunciation clinic with the students for approximately 5 minutes.

All 25 words for each of the three tests were randomly selected by the author, using Webster's Ninth New Collegiate Dictionary, 1987 ed. The only criteria applied to the selection process were the first syllable contain the target vowel sound, the word could be easily heard by the students, and there were not too many syllables. They are listed in Table 1.

After the first test was completed, the students were asked to correct their own mistakes. The author spoke the word, then pronounced the correct vowel sound three times, and finally, the correct letter of the vowel. If a mistake was made, the student marked the answer as wrong and

Table 1. List of Words Used in Tests.

Table 2. Total Number of Mistakes

Test 1	Test 2	Test 3	per Test in Group 1.					
			Case No.	Test 1	Test 2	Test 3	Total per Case	
1. Extra	Poverty	Uptown					•	
2. Battle	Tread	Frost	1.	15	13	10	38	
3. Pistol	Vanish	Designate	2.	10	12	10	32	
4. Cost	Dusk	Liquid	3. 4.	13 13	11 9	10 10	34 32	
5. Lost	Volunteer		5.	14	10	12	36	
		Baffle	6.	9	11	7	27	
6. Mettle	Capture	Commando	7.	8	11	13	32	
7. Listen	Pinch	Languid	8.	6	7	8	21	
8. Supper	Entity	Temporal	9.	13	10	10	33	
9. Saddle	Intoxicate	Substance	10.	7	9	9	25	
10. Blunder	Rupture	Spectacle	, 11. 12.	12 13	11 10	11 13	34	
11. Enter	Pallor	Tinge	13.	15	9	13	36 37	
12. Bottle	Figure	Sovereign	14.	12	12	10	34	
13. Chaste	Member	Rumble	15.	5	12	9	26	
14. Grin			16.	11	10	13	34	
15. Pedal	Banquet	Cramp	17.	15	15	12	42	
	Punk	Leathery	18.	15	13	11	39	
16. Crumble	Tingle	Grovel	19. 20.	9 12	12	11	32	
17. Twin	Sentimental	Transplant	21.	9	8 6	6 11	26 26	
18. Sunder	Difference	Blubber	22.	10	7	7	24	
19. Rattle	Bomb	Envy	23.	14	9	9	32	
20. Stub	Rickety	Motto						
21. Special	Flesh	Pillar	Total Number of					
22. Spin	Cuddle	Mutter	Mistakes per Test	260	237	217	732	
23. Throttle			Fewest :	21				
	Hospital	Bishop	Most :	21 42				
24. Nasty	Habit	Napkin	Average :	32				
25. Blotter	Tuft	Cinder						

wrote the correct letter of the vowel next to it. The total number of missed vowels was tallied and written at the top of the paper above Test 1. The same procedure was followed in Tests 2 and 3.

The completed papers were collected by the author for analysis.

Results

Number of Mistakes.

The number of mistakes per case per test and totals for all groups are shown in Tables 2, 3, 4, and 5.

The fewest total number of mistakes per test (Test 1+2+3) per case among all groups was 11 (Group 3); the most 51 (Group 2); and, the average total number of mistakes was 32 in Group 1, 35 in Group 2, 28 in Group 3, and 29 in Group 4.

On a per test basis, the fewest number of mistakes was 2 in Test 3 (case no. 15), and the most was 21 in Test 1 (case no. 6).

Number of Mistakes per Word per Test.

Tables 6, 7, and 8 illustrate the number of mistakes made for each word in each test in all groups.

Table 3. Total Number of Mistakes per Test in Group 2.

Table 4. Total Number of Mistakes per Test in Group 3.

Case No.	Test 1	Test 2	Test 3	Total per Case	Case No.	Test 1	Test 2	Test 3	Total per Case
1.	9	8	6	23	1.	10	11	12	33
2.	15	12	14	41	2.	4	4	3	11
3.	11	8	11	30	3.	7	4	10	21
4 .	9	11	8	28	4.	9	10	8	27
5.	13	9	9	31	5.	13	10	11	34
6.	21	15	15	51	6.	10	7	7	24
7.	16	13	14	43	7.	10	6	13	29
1.	10	13	14	40	8.	15	10	12	37
Total Number of					9.	13	7	10	30
Mistakes per Test	94	76	49	247	10.	13	14	15	42
misianes per resi	34	70	43	247	11.	10	2	6	18
Fewest :	23				12	12	5	9	26
Most :	51				13.	9	6	9	24
Average	35				14.	12	12	9	33
Average .	33				15.	7	10	16	33
					16.	15	12	14	41
					17.	5	7	5	17
					18.	10	5	4	19
					Total Number of				
					Mistakes per Test	184	132	173	499
					Fewest :	11			
					Most	46			
					Average	28			
					Avoiago	2.0			

The number of mistakes per word in Test 1 ranged from 0 (word no. 6) to 18 (nos. 12, 23) in Group 1; from 1 (nos. 1, 6, 7, 11) to 6 (nos. 18, 21, 25) in Group 2; from 0 (no. 1) to 17 (no. 12) in Group 3; and, from 1 (no. 1) to 20 (no. 12) in Group 4.

In Test 2, the number of mistakes per word ranged from 1 (no. 13) to 18 (nos. 22, 25) in Group 1; from 0 (nos. 7, 8, 13, 18) to 7 (no. 22) in Group 2; from 1 (nos. 13, 16, 20) to 14 (no. 22) in Group 3; and, from 0 (no. 7) to 19 (nos. 9, 22) in Group 4.

The number of mistakes per word in Test 3 ranged from 0 (no. 8) to 18 (no. 9) in Group 1; from 0 (nos. 8, 10) to 7 (no. 2) in Group 2; from 1 (nos. 8, 23, 25) to 15 (nos. 12, 20) in Group 3; and, from 0 (no. 19) to 18 (no. 12) in Group 4.

Number of Missed Vowels.

The total number of missed vowels per each test are shown in Tables 6, 7, and 8. The most mistakes occurred with O and U, followed by A, then I and finally E.

Types of Vowel Mistakes per Word.

The types of mistakes made for each word in each test for all groups were tabulated, and the results are shown in Tables 12, 13, 14. The most confusing vowel sounds for the students to clearly distinguish were the "short" A, O, and U sounds. However rather large discrepancies occurred for other combinations of vowel sounds as well.

Discussion

Being able to clearly hear and distinguish the sounds of a foreign language can aid in improving one's spelling ability. O'Connor (1973) states, "The sound is not the message, but it is

Table 5. Total Number of Mistakes per Test in Group 4.

Table 6. Total Number of Mistakes per Word per Group in Test 1.

Case No.	Test 1	Test 2	Test 3	Total per Case		Group 1	Group2	Group3	Group 4
1,	12	10	10	32	1. Extra	4	4	0	
2.	12	11	11	34	2. Battle	11	3	7	1
3.	9	11	9	29	3. Pistol	5.	3 4	,	3
4.	18	14	14	46	4. Cost	11	•	2	13
5.	15	8	11	34	5. Lost		5	10	12
6.	6	6	6	18		13	5	13	17
7.	10	5	5	20	6. Mettle	0	1	3	2
8.	16	8	12	36	7. Listen	3	1	0	3
9.	10	8	. 7	25	8. Supper	13	5	9	14
10.	12	/	7	26	9. Saddle	11	4	6	11
11.	12	10	7	29	Blunder	13	4	14	12
12.	11	/	8	26	11. Enter	1	1	2	4
13.	8	3	2	13	12. Bottle	18	4	17	20
14. 15.	14	10	6	30	13. Chaste	11	4	5	9
16.	6 10	8	2	16	14. Grin	13	4	8	17
16. 17.	14	9	11	30	15. Pedal	5	4	6	6
18.	10	12 12	13 7	39	16. Crumble	13	5	12	18
19.	14	10	12	29 36	17. Twin	12	5	6	
20.	15	10	11	36 36	18. Sunder	17	6	-	17
21.	10	7	10	36 27	19. Rattle	11		12	14
22.	7	9	9	27 25	20. Stub		2	8	5
23.	11	9	10	30		16	4	12	16
20.	* ' '	9	10	30	21. Special	9	6	2	6
Total Number of	d				22. Spin	10	3	1	5
Mistakes per Te		204	200	666	23. Throttle	18	4	11	19
mounce per re	JOI	204	200	000	24. Nasty	8	2	7	3
Fewest :	13				25. Blotter	15	6	11	15
Most :	47				•				
Averses	00								

Table 7. Total Number of Mistakes per Word per Group in Test 2.

Table 8. Total Number of Mistakes per Word per Group in Test 3.

	Group 1	Group2	Group3	Group 4		Group 1	Group2	Group3	Group 4
1. Poverty	12	4	10	13	1. Uptown	13	4	40	
2. Tread	14	5	3	9	2. Frost	17	7	10	5
Vanish	12	3	5	12	3. Designate	3	,	8	10
4. Dusk	20	3	9	16	4. Liquid	1	4	8	2
Volunteer	12	2	4	3	5. Baffle	16	-	2	4
6. Capture	5	1	3	2	6. Commando	9	0	5	4
7. Pinch	2	0	4	ō	7. Languid	6	4	4	6
8. Entity	5	0	3	5	8. Temporal	0	3	8	9
9. Intoxicate	17	5	13	19	9. Substance	18	U	1	1
10. Rupture	15	6	10	13	10. Spectacle	6	4	12	14
11. Pallor	17	3	8	14	11. Tinge	1	0	4	3
12. Figure	4	2	4	Ŕ	12. Sovereign	13	1	4	5
13. Member	1	0	1	1	13. Rumble	13	6	15	18
14. Banquet	10	3	6	i	14. Cramp	13	6	12	14
15. Punk	11	6	10	à	15. Leathery	5	2	7	12
16. Tingle	2	2	1	6	16. Grovel		3	7	5
17. Sentiment	2	2	3	1	17. Transplant	10	3	7	8
Difference	2	Ō	2	2	18. Blubber	13	4	8	11
19. Bomb	8	2	3	11	19. Envy	14	4	11	13
20. Rickety	5	2	1	6	20. Motto	4	1	2	0
21. Flesh	6	4	7	g g	21. Pillar	10	4	15	17
22. Cuddle	18	7	14	19	22. Mutter	13	5	5	16
23. Hospital	5	3	4	6	23. Bishop	15	5	12	15
24. Habit	13	3	2	6	24 Nankin	11	1	1	4
25. Tuft	18	5	11	15	24. Napkin 25. Cinder	12	2	4	2
		-	• •	15	zu. Oillaer	1	1.	1	2

what gives the message shape in spoken communication, and it is worth study simply for that reason; in speech we rely very heavily upon sound to make plain significant distinctions of meaning which can be made by the more central operations of grammar and vocabulary. A word, when it is pronounced, must have a particular sound-shape if it is to be recognized, just as it must have a particular letter-shape when written" (15).

Native speaking children learn the pronunciation of the language around them without being taught formally (Lado, 1964, 71). Then, how are second language learners going to learn pronunciation, except when it's taught in the language curriculum in the schools? Lado goes on to explain the reason for teaching pronunciation, "is because except during preschool age the student will not learn it or will not learn it well otherwise. Merely hearing a foreign language does not result automatically in good pronunciation" (71).

Japanese students generally do not begin studying English until Junior high school. They have not had any informal, foundation-building exposure to the language before this time. They are ill-equipped to learn the English sound system on their own. They must be taught English phonics by a competent English instructor.

Three basic questions need to be answered when attempting to learn English pronunciation. They are 1.) how many syllables are there; 2.) where is the stress; and, 3.) what sound does each syllable make (Gray, 1992, 57). However, as Gray (1992) and Goya (1992) lament, most Japanese students receive no formal phonics training in their English classes.

When the author made an informal survey of the students participating in this study about whether they had ever had any phonics training, all of them replied in the negative.

This study was conducted because the author felt that maybe the students poor spelling abilities were partially due to their inadequate hearing abilities. As shown in Tables 2, 3, 4, and 5, the number of mistakes was very high, often exceeding 50% of the total number of words in each test. And, tables 6, 7, 8, and 9 show that in some words, the total number of mistakes were made by more than 80% of the participating students.

Tables 9, 10, and 11 illustrate the number of missed vowels per test. As can be seen, the A, O, U vowel sounds prove to be especially troublesome for the students. Tables 12, 13, and 14 show the students can not clearly differentiate these sounds into their correct letters. This is principally due to the fact that the Japanese sound system does not distinguish between these sounds. They are lumped together in the $/\mathcal{T}/$ category. Therefore, the students have had no prior training in hearing and deciphering these sounds. One surprising result is the spread of the vowel sounds extends so broadly across all of the vowels. The Japanese sound system contains sounds that closely resemble the E, as in crept or set, and the I, as in bit or flit. Some reasons that may account for this situation are the students didn't pay close enough attention to the spoken words

Table 9. Total Number of Missed Vowels per Group in Test 1. Group 1-Group 2-Group 3-Group 4.

Table 10. Total Number of Missed Vowels per Group in Test 2. Group 1-Group 2-Group 3-Group 4.

Case No.	A	Ε	1	0	U	Case No.	Α	E	1	0	U
1.	3-1-0-0	1-1-3-0	4-3-1-3	4-2-3-4	3-2-3-5	1.	2-1-4-1	3-2-4-0	2-0-1-2	2-0-0-5	4-2-2-2
2.	2-3-0-1	1-2-0-1	2-2-0-4	2-4-3-5	3-4-1-1	2.	3-3-2-2	2-1-0-2	1-0-0-1	3-3-1-3	3-5-1-3
3.	2-1-1-1	1-0-0-0	3-2-1-1	3-4-1-2	4-4-4-5	3.	4-0-0-21	3-0-1-0	0-0-0-2	1-3-1-3	3-5-2-4
4.	2-1-0-2	1-2-0-4	1-1-0-5	5-2-5-4	4-3-4-4	4.	2-3-1-2	1-2-0-5	0-0-1-1	3-2-3-2	3-4-5-4
5.	2-1-3-3	3-1-0-2	3-3-1-4	3-4-5-4	3-4-4-2	5.	1-1-3-2	0-0-0-1	2-0-0-2	3-3-3-0	4-5-4-3
6.	2-3-0-1	0-3-1-0	0-5-2-0	4-5-4-3	3-5-3-2	6.	3-4-2-1	0-3-0-0	0-3-2-0	4-1-1-3	4-4-2-2
7.	2-5-3-1	0-3-0-0	1-2-2-3	1-4-3-3	4-2-2-3	7.	3-2-1-0	0-3-1-1	0-3-0-1	4-3-2-1	4-2-2-2
8.	15-3	00-3	02-3	24-4	34-3	8.	11-1	01-2	01-1	32-3	35-2
9.	35-2	10-0	20-2	43-2	35-4	9.	32-3	00-2	01-0	22-0	52-3
10.	03-1	03-1	15-3	32-4	34-3	10.	22-1	12-1	13-0	22-2	35-3
11.	30-2	01-0	21-4	44-4	34-2	11.	20-2	20-0	10-1	22-4	40-3
12.	25-2	00-1	20-1	42-4	55-5	12.	30-2	10-1	20-1	02-2	43-1
13.	32-0	21-0	00-2	53-4	53-2	13.	02-0	10-0	20-0	32-1	32-2
14.	02-2	11-2	33-3	53-4	34-3	14.	10-2	22-1	13-1	33-2	54-4
15.	11-0	00-0	10-1	13-3	23-2	15.	41-2	11-1	00-0	23-1	55-4
16.	34-0	12-0	30-1	44-4	05-5	16.	43-3	23-0	00	12-3	34-3
17.	30-2	10-1	40-2	45-5	30-4	17.	41-1	30-2	00-1	33-3	5 3- 5
18.	53-0	33-0	32-3	22-4	22-3	18.	30-2	31-1	20-2	02-3	52-4
19.	0 2	0 2	1 3	3 3	5 4	19.	2 1	0 1	1 0	4 3	5 5
20.	3 3	1 1	1 4	4 4	3 3	20.	2 1	0 2	0 0	4 2	2 5
21.	2 1	1 0	1 3	3 3	2 3	21.	2 1	1 1	0 0	3 3	0 2
22.	30	0 1	1 1	3 2	3 3	22.	3 1	1 1	0 4	1 1	2 2
23.	5 1	2 0	2 2	2 4	3 4	23 .	3 2	1 0	0 1	2 2	3 4

Table 11. Total Number of Missed Vowels per Group in Test 3. Group 1-Group 2-Group 3-Group 4.

Table 12. Types of Vowel Mistakes per Word in All Groups in Test 1.

	_	_					1111 0100	ipo ii		St 1.				
Case No.	Α	Е	ı	0	U	Word	Correct	Α	E	1	0	U	Blank Tota	al
1.	0-1-2-3	3-1-4-0	2-1-0-1	2-2-3-4	3-1-3-2	1. Extra	E	5					1	6
2.	4-4-0-2	0-0-0-0	0-1-0-3	3-4-1-2	3-5-2-4	2. Battle	Ã	•			12	10	3	25
3.	3-1-0-1	1-0-1-0	0-2-2-2	1-4-3-3	5-4-4-3	3. Pistol	i	3	18			1	1	23
4.	1-2-2-2	0-1-0-3	1-0-0-0	3-3-3-6	5-2-3-3	4. C ost	Ö	23	1	1		13		38
5.	3-2-3-2	1-0-1-3	2-1-0-2	3-4-3-2	3-2-4-2	5. Lost	Ö	35	1			11	1	48
6.	0-3-2-1	0-3-1-0	2-2-1-1	2-4-1-2	3-4-2-2	6. Mettle	Ē	2		2			1	5
7.	3-3-1-1	0-1-3-0	2-2-2-1	5-3-3-3	3-5-4-0	7. Listen	1		6				1	7
8.	33-2	01-0	11-3	24-3	23-4	8. Supper	U	22	8	1	6		3	40
9.	32-2	00-0	20-0	14-2	44-3	9. Saddle	Α		7		14	9	3	33
10.	21-0	02-0	23-1	34-3	-	Blunder	U	21	2		16		2	41
11.	10-1	31-0			25-3	11. Enter	E	2		5			1	8
12.	41-1		11-1	13-3	51-2	12. Bottle	0	35				24		59
13.		11-1	10-1	42-2	45-3	13. Chaste	Α		14	1	7	6		28
	22-0	11-0	20-1	52-0	34-1	14. Grin	l l		20		4	15	2	41
14.	13-0	12-0	10-2	42-2	32-2	15. Pedal	E	13		1	1	4	2	21
15.	32-0	02-0	23-1	15-0	34-1	16. Crumble	U	7	2	1	37		2	49
16.	45-3	22-0	10-2	43-3	24-3	17. Twin	1	2	4		3	27	4	40
17.	414	00-1	10-1	43-3	31-4	18. Sunder	Ų	32	4		7		2	45
18.	42-0	20-0	10-1	21-2	22-4	19. Rattle	A		5	2	8	9		24
19.	4 4	1 0	1 2	3 3	2 3	20. Stub	ū	24	3		19		2	48
20.	2 1	0 2	1 2	0 4	3 2	21. Special	E	7	_		_	12	2	21
21.	3 2	0 0	0 1	4 3	4 4	22. Spin)		6		1	14	_	21
22.	2 2	0 1	1 2	1 2	3 3	23. Throttle	0	29	1.		•	17	3	50
23.	3 3	2 1	00	2 3	2 3	24. Nasty 25. Blotter	A O	0.0	11	1	3	5	•	20
		,	- 0	_ 0	2 3	23. DIVILET	U	26	3			15	3	47

because they knew it was not a graded test, or they just could not hear the sounds correctly from the beginning. The author is not sure which is correct, but there appears to be a high incidence of random guessing or blank spaces, more than would normally be expected. One possible explanation is that their Japanese sound system was so much at the forefront they could not displace it to be able to clearly hear the English one in the short time the tests were given which was approximately 45 minutes.

Lado (1964) talks about the problem of the native sound system impinging on the second language one as transfer. He states, "the learner transfers the sound system of his native language and uses it instead of the foreign language without fully realizing it. … This transfer occurs even when the listener consciously attempts to avoid it. Force of habit influences his hearing as well as his speaking. He does not hear through the sound system of the target language but filters what reaches his ear through his own sound system" (72).

Goya (1992), Gray (1992), and others contend teaching English pronunciation to Japanese English students is vital and necessary. Based on the results of this study, the author also concurs. One other reason for agreeing to their plea is the fact there is a trend towards improvement of the test scores in each successive test, because the author speaks the word twice during the test and once after the test, then pronounces the vowel sound three times before giving the correct letter. This improvement trend illustrates the efficacy of teaching English phonics to Japanese English students. Better recognition of the vowel sounds leads to more correct identification of the letter which is an aid towards better spelling.

Teaching pronunciation is difficult, but it is not necessary to teach everything about the sound system of the English language (Lado, 1964; Stack, 1969). There are many similarities between the two sound systems, and those do not need to be overly stressed. It is where the two systems diverge that emphasis needs to be placed. Riney and Anderson-Hsieh (1993) argue for more systematic studies of the Japanese and English sound systems to effectively identify problem areas in order to develop practical teaching methodologies that confront and correct them. This study has identified one area, i. e., the A, O, and U "short" vowel sounds as exemplified by such words as rat, flat, tot, mop, strut, and putt.

Finally, Stanlaw (1982) has commented, "among the Englishes described in this volume, the variety spoken in Japan is unique. It is not an official language, a lingua franca, or a second language in the sense as in other contexts described here. It is not a remnant of colonization or the legacy of zealous missionaries, and though it is taught in the schools it never has been institutionalized (as, say, in India or Nigeria) to function as the primary language of higher learning. English is required on college entrance exams, and a typical Japanese student may study it for six or ten years; still, few Japanese actually *speak* English well enough to converse with

Table 13. Types of Vowel Mistakes per Word in All Groups in Test 2.

U Blank Total Correct 0 Word 0 23 1. Poverty 3 21 7 31 E A U Tread 33 46 3 Vanish 19 2 10 Dusk 20 12 Volunteer O A 6. Capture 7. Pinch 6 12 55 44 42 18 3 20 36 11 8 5 24 58 18 Entity 7 27 EOUALE 13 9 Intoxicate 10. Rupture 11. Pallor 12. Figure 13. Member Ā 14. Banquet 22 15. Punk 16. Tingle E 3 17. Sentiment 18. Difference 0 19. Bomb 20. Rickety 20 2 12 21. Flesh E U O 22. Cuddle 23. Hospital 24. Habit

Table 14. Types of Vowel Mistakes per Word in All Groups in Test 3.

Word	Correct	A	E	ı	0	U	Blank Tota	li
1. Uptown	U	20	3		8		1	32
2. Frost	Ō	15	4	1		21		41
3. Designate	Ē	9		2		3	1	15
4. Liquid	- Í	1	6				1	8
5. Baffle	A		1		20	10		31
6. Commando	0	10	1			12	1	24
7. Languid	A		6	2	4	12		24
8. Temporal	E	1			1			2
9. Substance	Ü	23	6	1		16		46
10. Spectacle	Ē	2		1		12		15
11. Tingle	Ī	2	9					11
12. Sovereign	O	21	3			27		51
13. Rumble	Ü	17	1		25			43
14. Cramp	A		13		6	14		33
15. Leathery	E	14			1	4		19
16. Grovel	0	15	1			12		28
17. Transplant	A		20		2	11		34
18. Blubber	υ	17	3		22			42
19. Envy	É	6		1				7
20. Motto	0	27	3			15	1	46
21. Pillar	1		35		1	2		38
22. Mutter	U	33	2		12			47
23. Bishop	1	2	15					17
24. Napkin	A	_	4		3	13		20
25. Cinder	1		4		1			5

26

25. Tuft

foreigners beyond a rudimentary exchange of greeting" (170–171). However, if the Japanese government is serious about encouraging its populace to participate in the world community, spoken English, as taught at the present time in Japan, needs to be raised to a higher level. One way to accomplish this is to stress English phonics training to the point where the Japanese sound system can be completely displaced with the English one so Japanese English speakers can more fully listen and comprehend spoken English.

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^{*} Students were asked to listen to the second syllable and write their answer.