English Auditory Discrimination Test for Japanese Students

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The aim of this paper is to assess the Japanese students' listening ability to distinguish English sounds by using the modified version of the English Auditory Discrimination Test which was devised by the author in 1998.

1. Modified version of EADT for Japanese

EADT for Japanese used for the present test is a slightly modified version of the original EADT of 1998. It has been found necessary to modify the original version to better detect the perceptual errors of the Japanese. For instance, the /zoo-jew/ pair in the original version was removed since /z/-/ʤ/ opposition was found to be relatively easy for the Japanese to distinguish.

The modified EADT for Japanese given below consists of 40 word pairs of which 37 pairs are minimal pairs and the rest homophonous synonyms. The ratio of vowel pairs and consonant pairs in the EADT for Japanese is 24 to 16.

2. Subjects for EADT Test

20 undergraduate students of Tokyo Gakugei University took part in the present EADT test in Tokyo. The twenty subjects were asked to listen to Lee's recorded tape of the 40 word pairs listed in EADT. They were instructed to listen to each pair of words twice and mark the "same" or "different" column on the answer sheet. In addition the subjects were instructed to write down the words they heard either in spelling or in phonetic symbols.

3. Results of EADT

The results of EADT for Japanese students of Tokyo Gakugei University can be summarized as follows:

3.1 Vowels

The most frequent listening errors for vowels are listed below.

	Different	Same
1. dead - dad	D	S
2. code - coat	D	S
3. sin - sin	D	S
4. low - law	D	S
5. cork - cock	D	S
6. bees - beads	D	S
7. tie - thigh	D	S
8. lane - rain	D	S
9. breathe - breeze	D	S
10. ruse - rouge	D	S
11. code - curd	D	S
12. cat - cut	D	S
13. lease - leash	D	S
14. cheese - trees	D	S
15. tour - tour	D	S
16. lick - lip	D	S
17. shred - thread	D	S
18. heart - hurt	D	S
19. mass - mats	D	S
20. full - fool	D	S

	Different	Same
21. three - free	D	S
22. duck - dark	D	S
23. lack - lag	D	S
24. but - buck	D	S
25. ban - bang	D	S
26. they - day	D	S
27. loud - loud	D	S
28. drain - Jane	D	S
29. pain -paint	D	S
30. ten - tin	D	S
31. aids - age	D	S
32. leave - live	D	S
33. fie - pie	D	S
34. thick - sick	D	S
35. turn - torn	D	S
36. such - search	D	S
37. ledger - leisure	D	S
38. clue - crew	D	S
39. pain - pen	D	S
40. vow - bow	D	S

1) /ɔ:/ → /ou/ (30 errors)

The long pure vowel /ɔ:/ was perceived by the students as the diphthong /ou/ as in torn → tone, law → low, cork- coke, and this turned out to be the most frequent type of error in vowels. The reverse case of /ou/ → /ɔ:/ was also noiced(15 errors).

2) /ɜ/ → /ɑ/ (24 errors)

The English central vowel /ɜ/ was perceived as the low back vowel /ɑ/ as in hurt → heart, curd → card. The perceptual error of /ɜ/ → /ɑ/ marked the second most frequent error in vowels, The vowel /ɜ/ was also pervceived as /u/ (2 errors), as /æ/ (2), as /u/ (1) and as /ou/ (1).

3) /u/ → /ɔ:/ (7 errors),

The English lax vowel /u/ was erroneously perceived as /ɔ:/ seven times as in full → fall. It was also perceived as diphthong /ou/ three times.

3.2 Consonants

Perceptual errors of consonants were observed at syllable-initial and syllable-final positions.

3.2.1. Syllable-initial position

1) /l/ → /r/ (30 errors)

The most frequent perceptual errors of consonants at syllable intial position were shown by /l/→/r/ confusion(30 times) as in leave → red, low → row, lick → rick. There were reverse type of errors(12) of /r/ - /l/ as in ruse → loose. /l/→/r/ confusion also occurred in consonant cluster /kl/ → /kr/ or /tr/ as in clue → tree (16).

2) /θ/ → /s/ (21 errors),

Fricative /θ/ was perceived as /s/ as often as twenty one times. ten times as /t/

and four times as /f/, as in thick → sick, thigh → tie, thigh → fai.. On the other hand, /s/(6). /f/(4) and /t/(2) was perceived as /θ/.

3) /tr/ → /ʧ/ (16 errors),

The affricate /tr/ was perceived as /ʧ/ 16 times in all, /tr/ was also perceived as fricative /ʃ/ (1) and as /ts/(1).

3.2.2 Syllable-final position

Perceptual errors of consonants at syllable final possition are as follows.

1) /ʤ/ → /ʒ/ (10 errors),

Affricate /ʤ/ was perveived as fricastive /ʒ/ (10), It was also heard as /θ/ (1).

2) /ʒ/ → /ʤ/ (3 times)

Fricative /ʒ/ was perceived as affricate /ʤ/ (3), as /z/(3), as /ð/ (1).

3) /dz/ → /ts/ (10 times),

Voiced affricate /dz/ was perceived as the voiceless affricate /ts/(10) and as /t/(3) and /ʧ/ (1), as in beads → beats, aids → ates.

4) /s/ → /θ/ (11 times),

Fricative /s/ was perceived as /θ/(11), as /z/ (1), and as /d/(1).

5) /n/ → /ŋ/ (7 times),

The alveolar nasal /n/ was perceived as the velar /ŋ/ (7), as /nt/(3). On the other hand, velar nasal /ŋ/ was percieved as /n/ (3) and as /nt/(2).

6) /k/ → /g/ (6 times)

Voiceless /k/ was perceived as voiced /g/(6) as in dark → dug, lark →lag.

On the other hand /g/ was perceived as /k/ (2).

7) / ð / → /d/ (7 times)

Fricative / ð / was perceived as plosive /d/ seven times in all as in breath → breed.

8) /ts/ → /t/ (once)

Affricate /ts/ was perceived as /ʧ/ (2), fricative /s/ (1), plosive /t/ (1), as /ʒ/ (1), as /d/ (1),

9) /z/ → /θ/ (once),

Voiced alveolar fricative /z/ was perceived as voiceless interdental fricative /θ/(1). It was also perceived as /s/, /ʤ/, /ts/, / ð /.

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