

# **Improving Japanese Students' Listening Skills through Enhanced Minimal Pair Exercises with a**

## **Focus on /l/ and /r/**

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Distinguishing sounds within a foreign or second language (L2) that are not found in the students' mother tongue (L1) or which can be confused with similar, but different, sounds in the L1 can be immensely difficult and cause an array of communication problems. To address this issue minimal pair exercises have been utilized. These, however, by their nature are simple and although useful in aiding lower-level students to distinguish sounds are less satisfactory in aiding higher-level students to distinguish sounds in more natural, faster spoken language. This essay is primarily addressed to junior high school and senior high school English language teachers in Japan to think about this issue through reflection questions and to formulate their own plans to aid their students to better distinguish various problematic sounds in listening and speaking.

### **INTRODUCTION**

One of the many problems that students face in learning a second or foreign language (L2) is hearing and distinguishing sounds in the target language that are not found in their mother tongue (L1) or which appear to be similar, but different, to ones in the learners' L1. For Japanese learners of

English one of a number of well-known difficulties is distinguishing between /l/ and /r/ (Thompson, 2001, pp. 297-298). This can cause an array of communication problems from the humorous *I rub you* instead of *I love you*, through to the ambiguous *They turned to the light* where the listener needs to distinguish between *light* and *right* and on to nearly incomprehensible sentences such as *Ledge bloke the led ramp* instead of *Reg broke the red lamp*. Minimal pair activities have been included in pronunciation books, for example, *English Pronunciation Exercises for Japanese Students* (Grate, 1974), *Ship or Sheep?* (Baker, 1977, 1981, 2006a) and *Tree or Three?* (Baker, 1982, 2006b), mentioned in teacher trainer books, for example, *The Practice of English Language Teaching* (Harmer, 2001, p. 188), and utilized in various contemporary course books, such as *Unlock 2: Listening, Speaking & Critical Thinking* (Dimond-Bayir & Russell, 2019, pp. 63-64) to address this issue. A minimal pair is a set of two words that have a similar pronunciation, but which differ only with regards to the isolated pronunciation contrast being taught or tested. The activity is basic and appears to have limited use. What follows is an attempt to adapt and enhance this simple activity and make it more relevant and effective for junior high school and senior high school teachers taking a training session at Kwansei Gakuin University on the Summer Seminar for English Teachers programme to use in their classrooms and share with their colleagues. It is also hoped that teachers working in elementary schools, as well as those in post-compulsory education where remedial work is needed for some classes, will find the following useful.

Throughout this essay the minimal pair of /l/ and /r/ will be used to model the various activities. First, a description of the production of /l/ and /r/ will be given before comparing and contrasting these to the Japanese /r/. After, various minimal pair activities will be proposed and developed together with reflection questions.

## CONTRASTING THE PRONUNCIATION OF /l/ AND /r/ IN ENGLISH WITH JAPANESE SYLLABARY

In this section a description of the physical articulation of the pronunciation of /l/ and /r/ will be given before comparing and contrasting these two phonemes with the initial consonant position pronunciation they are most commonly confused with in the series of Japanese consonant plus vowel syllabary given in hiragana for Japanese words as らりるれろ and in katakana for non-Japanese words as ラリルレロ and which are represented in the Hepburn Romanized system as ra, ri, ru, re, ro.

According to The International Phonetic Association's revised alphabet chart (2018) /l/ is a lateral approximant consonant at the alveolar ridge. In English /l/ is pronounced with the mouth remaining stably open in mid-position throughout the production of the sound. The tip of the tongue curls upwards to touch the alveolar ridge behind the base of the upper front teeth causing a partial closure within the upper part of the mouth and the sides of the tongue are pulled inwards and upwards forming a u-shaped tongue before being pushed a little downwards and outwards causing the centre of the tongue to slightly rise. Because of this partial closure the voiced stream of air is forced to escape along the sides (lateral) of the tongue and eventually out through the mouth. It is considered approximant because the articulators, alveolar ridge and tip of the tongue, only slightly restrict the airflow, producing less friction or turbulence than with fricatives and plosives (MacMahon, 2006, pp. 370-371; Roach, 2000, p. 62). As Catford (1994) notes:

*Lateral approximants* are 'ordinary' [l]-type sounds, with a slightly wider articulatory channel than that of the lateral fricatives, and hence no turbulence when voiced, which they usually are, but some turbulence when voiceless. The regular English [l] is a voiced lateral approximant. (p. 3064)

The pronunciation of /l/ can be *clear* or *dark*. A *clear* /l/ allophone is found before vowels and is formed when the tip of the tongue breaks contact with the alveolar ridge to produce the following vowel in words such as *lad* /læd/, *lay* /lei/, *low* /ləʊ/, *lie* /lai/, *lea* /li:/, and *love* /lʌv/ where /l/ occurs in initial position and also where it occurs in mid-position (medial) in words such as *calendar* /'kælɪndə(r)/, *pilot* /'paɪlət/ and *bowling* /'bəʊlɪŋ/. A *dark* /l/ allophone is produced in a similar manner except that the back of the tongue is additionally raised towards the velum and occurs at the ending of words after a vowel such as *well* /wel/, as the final sound of the last syllable in words such as *brittle* /'brɪt(ə)l/ and when it precedes a consonant such as in *told* /təʊld/ and *eels* /i:lz/. This implies that the upper-case letter *L* is always pronounced as a *clear* /l/ while the lower-case *l* can be pronounced with either a *clear* or *dark* /l/. Although /l/ is usually voiced it is devoiced when it follows /p/, an unvoiced, plosive bilabial, or /k/, an unvoiced, plosive velar, at the beginning of a stressed syllable in words such as *please* /pli:z/ and *click* /klɪk/ (Roach, 2000, pp. 61-62; Underhill, 1994, p. 44).

The phoneme /r/ in English is a frictionless continuant consonant at the post alveolar position. It is produced with the pursing of the lips, an outward, central rounding “kiss” that causes an inward, centralized, contraction of the left and right corners of the mouth, together with a voiced stream of air as the tongue is curled up towards the rear of the alveolar ridge, but kept in a slightly withdrawn, retroflex, non-contact position. Although /r/ is usually voiced it can be devoiced after the plosive bilabial /p/, the plosive alveolar /t/ and the plosive velar /k/, as in *press* /pres/, *tree* /tri:/ and *crest* /krest/. It should also be noted that the letter *r* is not always pronounced /r/ in such words as *car* /kɑ:/, *here* /hɪə/ and *cares* /keəz/ in non-rhotic accents (Roach, 2000, pp. 62-63; Underhill, 1994, p. 45).

Having shown how /l/ and /r/ in English are distinguished the next step is to compare and contrast these with the Japanese pronunciations of the consonant plus vowel syllabary in the series of hiragana and katakana that are

represented in the Hepburn Romanized system as ra, ri, ru, re, ro. According to The Kenkyusha Japanese-English Learner's Dictionary (1992):

Phonetically, J[apanese] *r* is often a retroflex stop [ɖ] initially and flap [ɾ] between vowels. Unlike E[nGLISH] and other European *r*, it is made with a single tap of the tip of the tongue against the front upper teeth. It sometimes sounds like *d* to a European ear. (p. 1102)

Tsujimura (2014) notes that despite a general similarity in the place and manner of articulation of the initial sound in the Japanese words *roku* (six) and *ringo* (apple) with English /l/ and /r/ it is actually different being an “alveolar tap, represented by the phonetic symbol /ɾ/, and is produced by placing the tongue tip at the alveolar ridge followed by an immediate release of that contact” (p. 13). Following this, Tsujimura notes the similarity between /ɾ/ and the phoneme /d/ found in English words such as *tidy* /'taɪdɪ/ and *steady* /'stedɪ/. Hasegawa (2015) also notes that “the Japanese /ɾ/ sounds like the second consonant of *rider*” (p. 33) and then states, “Acoustically, it is a short /d/, called a [tap].” However, later on the same page, Hasegawa tells us that “Word-medially, Japanese /ɾ/ is frequently more like English /r/, e.g. *karada* ‘body’.”

What can be made of these three Japanese accounts of the pronunciation of the Japanese /ɾ/, represented phonetically as /ɾ/, in relation to the English pronunciation of /l/ and /r/? All are standardly voiced in the region of the alveolar. The difference is that /ɾ/ is produced between /l/ and /r/. In producing /l/ the tip of the tongue remains in contact with the alveolar ridge, whereas with /ɾ/ the tongue merely taps the alveolar ridge once before being withdrawn to a post-alveolar position that is similar to /r/ which makes no contact with the alveolar ridge.

Explaining how various phonemes are produced can be greatly facilitated by using diagrams of the mouth illustrating the place and manner of

production in addition to videos showing the action of articulation. Because /l/ requires the tip of the tongue to remain in contact with the alveolar ridge with the mouth in a stable, mid-open position this phoneme can be considered easier to produce for Japanese speakers than /r/ which requires manoeuvring the tongue to an appropriate post-alveolar, non-contact position in the centre of the mouth whilst rounding the lips. Despite the relative ease of producing /l/ compared to /r/ in listening there still remains a difficulty in distinguishing /l/ and /r/.

Reception is a prerequisite for acquisition and production. Students need to hear the sounds before attempting to produce them. Minimal pairs are an ideal way of modelling the differences between contrasting phonemes as well as giving students the opportunity to practise these for communication and testing. In the following sections various minimal pair activities will be proposed, reflected upon and developed.

### **A SIMPLE MINIMAL PAIR ACTIVITY**

Teachers can help students recognize the different sounds in the language being learnt (L2) not found in their mother tongue (L1) to enhance their listening comprehension through the use of minimal pairs. An example of a typical worksheet is given in Table 1.

When preparing minimal pairs teachers should try to use vocabulary that the students already know so they can focus on listening to the differences in the pronunciation of each word and not get distracted by what the individual words mean as well as making the activity relevant to their current level of learning. There are two simple ways to use minimal pairs:

1. Read out only one word of each pair and students circle the word that they think they heard. When checking answers, get the students to say the row number and column letter of their answer. Do not ask the students to say the word as their pronunciation may blur the distinction between the minimal pair being checked.

2. Read out both words in each minimal pair; vary which column you read first. Students number the words in each pair, 1 or 2, according to the order in which they were said and then answer giving the row number and column letters in order.

**TABLE 1**  
**Minimal Pair Worksheet: /l/ and /r/ (in initial position)**

	Column A	Column B
	/l/	/r/
1	leaf	reef
2	load	road
3	lime	rhyme
4	long	wrong
5	lake	rake
6	lace	race
7	lice	rice
8	low	row
9	lent	rent
10	light	right
11	law	raw
12	lock	rock

### **Reflection question**

This is a simple and well-known activity used both for listening and pronunciation practice. How can we enhance and develop this activity?

### **Discussion**

A problem with this activity is that some Japanese English teachers may have poor pronunciation or are not confident in correctly pronouncing

the subtle pronunciation differences. This can be overcome by getting a native English assistant language teacher (ALT) to read the words in class or to record sets of minimal pairs to use in future classes. This can be developed further by getting native English speakers from different regions of a particular country and from different English-speaking countries to do the same to compare accents. This is beneficial for higher-level students and those who will go on study abroad programmes, but teachers are cautioned not to introduce too wide a range of accents to lower-level students so as not to confuse them. In addition, as English is used as an international language, it is important to identify which nationalities Japanese students will communicate with in English in the future, for example Chinese and Koreans, and get people from these countries in which English is used as a foreign language to make similar recordings so that Japanese students will be better at listening to English in a variety of world accents. This would also give the opportunity for teachers to make their students aware of the English pronunciation problems other nationalities have, for example Chinese (Chang, 2001, p. 312) and Korean (Lee, 2001, p. 327) speakers also have problems in pronouncing the /l/ and /r/ phonemes.

Another problem is that the words are isolated, and this rarely occurs in natural speech so embedding minimal pairs in sentences is a way of enhancing this activity and helping students develop their recognition of sounds within the flow of speech.

### **Reflection question**

What problems do you envision with embedding minimal pairs in sentences?

### **MINIMAL PAIRS WITHIN SENTENCES (/l/ AND /r/ IN INITIAL POSITION)**

Words are rarely spoken in clear isolation. Learners have to distinguish words within a stream of sound, so a more natural way of training



students in distinguishing commonly confused sounds is to incorporate minimal pairs within sentences in which the choice of either word completes a well-formed, acceptable sentence.

This is a long (① lake / ② rake).

You took the (① long / ② wrong) way to the museum.

In this way students get to hear a full sentence with natural pronunciation and intonation patterns from which they have to distinguish which word in the minimal pair is actually said. Ideally the sentences should be spoken at a natural speed, but it could be spoken more slowly for students who are having difficulty in distinguishing the sounds. Preparing these kinds of sentences can be difficult for a number of reasons. The first is when both of the words given in a minimal pair can be used to complete the given sentence in an appropriate way, but where one choice of completion is more easily understood for the level of the learner than the other choice. This situation may lead the learner to focus on their current knowledge of grammar and word meaning, rather than listening to what was actually said, to determine the answer.

I noticed that Jane is (① light / ② right) -footed.

Here the student may choose *right* because they think of feet as being a pair, one being on the left side of the body and the other on the right, when they have not yet learnt that a person can also be *light* (nimble) on their feet as well as being *heavy* (awkward). If the students are already aware of these different meanings, then there will be less interference from the students' knowledge of grammar and vocabulary upon the actual listening task of distinguishing between different sounds. To avoid potential distractions the teacher, therefore, has to assure the students that either of the paired options is possible and it is only their listening skills that are required to determine which word is

actually spoken within the minimal pair.

The second problem is that it is rare for either of the words in a minimal pair to have an acceptable “fit” within the given sentence.

We often eat (① lice / ② rice) for breakfast.

Both nouns in this minimal pair, *lice* and *rice*, complete a perfectly formed, grammatical English sentence. The former is the plural countable noun of a *louse* and the latter is an uncountable noun for a grain people eat. However, the sentence formed with the word *lice* is highly unbelievable, while the one formed by *rice* is most natural. Such training sentences should be avoided, unless the teacher explicitly states that some of the sentences will be unnatural, to avoid the case where students select the answer according to commonly held beliefs rather than actual listening skills.

A major problem with “fit” is grammar in that one of the selected words in a minimal pair just cannot be slipped into the part of the sentence that needs to be completed.

I love the (① limes / ② rhymes) in poems.

I met (① lick / ② Rick) yesterday.

I went home (① late / ② rate) last night.

*Limes* and *rhymes* are both plural nouns, but the word *limes* refers to a kind of fruit, while the word *rhymes* refers to a similarity of sound in words and sentences. In the general context of poems the word *limes* is incongruous and has to be rejected in favour of *rhymes*. In the second example, the completing word needs to be a noun. However, *lick* is a simple, singular noun whereas *Rick* is a proper noun. Within the context of this sentence one cannot meet *lick* as a simple noun, so *Rick* as a proper noun, the person with that name, is the only possibility. Regarding the third example, *late* is being used as an adverb

to express somebody's timely delayed return home. *Rate*, on the other hand, can only be used as a noun or verb, indicating the speed at which something happens or as a degree of appraisal, and as such cannot be slotted into the required part of this example sentence.

### **Reflection question**

These few examples highlight the difficulty of incorporating many minimal pairs within authentically sounding, correctly formed sentences. What types of sentences can we use to naturally introduce more minimal pairs?

## **OVERCOMING THE PROBLEM OF LINGUISTIC “FIT” AND UNNATURALNESS**

A way to overcome the problem of linguistic “fit” and make minimal pairs more natural is to incorporate them in sentences that are questions or corrections. Please note that the word “light” in sentences 8 and 9 should be blanked out so as not to give students the answer to the listening task.

1. Did you say (① light / ② right) or (③ light / ④ right)?
2. What is the difference between (① light / ② right) and (③ light / ④ right)?
3. What is (① light / ② right)?
4. What are (① lights / ② rights)?
5. How do you spell (① light / ② right)?
6. What do you mean by (① light / ② right)?
7. What does (① light / ② right) mean?
8. Is “light” pronounced with (① an /l/ or ② an /r/) sound?
9. Is “light” spelt with (① an “L” or ② an “R”)?
10. How can I use a (① light / ② right)?
11. When would you say (① light / ② right) and when would you say (③ light / ④ right) ?

12. Where can I buy (① lights / ② rights)?
13. You misheard me. I said, (① light / ② right), not (③ light / ④ right).

Incorporating minimal pairs in such typical questions and corrections makes the distinguishing task more realistic and it also gives the students practice in common conversational phrases.

### Reflection question

In what other ways could minimal pair activities be developed?

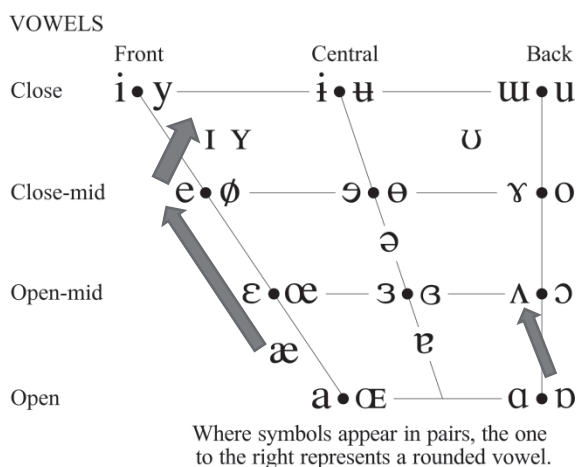
### DOUBLE PAIRS

Minimal pair activities can be developed by combining two sets of minimal pairs into a double pair sound-distinguishing activity. This type of activity is of course no longer a minimal pair but it can be effectively utilized for higher level students in teaching the distinctions between four phonemes in various combinations that are often confused, for example in consonant plus vowel clusters such as /læ/, /lʌ/ and /ræ/ /rʌ/. Thompson (2001, p. 297) notes that in addition to the consonants /l/ and /r/ another identified listening problem for Japanese students is distinguishing between the vowels /æ/ and /ʌ/ as in *ankle* /'æŋkl/ and *uncle* /'ʌŋkl/ and notes that both of these are pronounced as /a/ in Japanese which causes a confusion distinguishing between pairs of words such as *lack* and *luck*. This problem is due to the fact that the pronunciation of vowels in English is not identical to those in Japanese.

In English the five standard vowels are conventionally arranged according to the alphabetical order of the letters a, e, i, o, u that commonly represent these vowels and can be taught as /æ/ as in *apple*, /e/ as in *egg*, /ɪ/ as in *is*, /ɒ/ as in *octopus* and /ʌ/ as in *umbrella*. From the International Phonetic Association's International Phonetic Alphabet (revised to 2018) it can be seen that this alphabetical series of pronunciation can be divided into two parts. The first is a movement from /æ/ to /e/ to /ɪ/ in which there is a glide from an

open/open-mid, fore-central /æ / position, towards a post-front, close-mid /e/ position and ending near the close, front /i/. The second movement, /ɒ/ to /ʌ/, is from a back open position to a back open-mid position. See Figure 1.

**FIGURE 1**  
**International Phonetic Association: English Vowels**



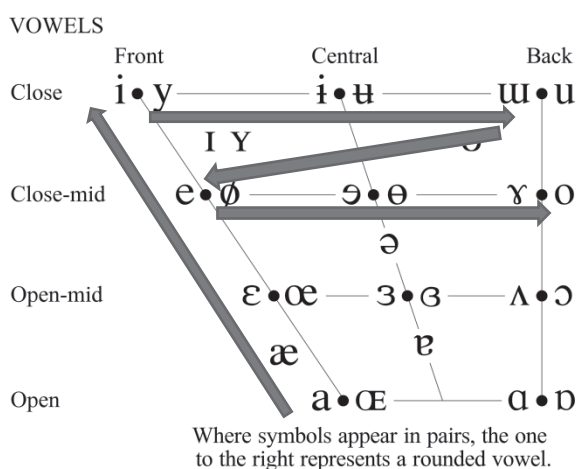
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*Note:* Adapted from IPA vowel chart

([https://www.internationalphoneticassociation.org/IPAcharts/IPA\\_Kiel\\_2018\\_vowels\\_1200.png](https://www.internationalphoneticassociation.org/IPAcharts/IPA_Kiel_2018_vowels_1200.png)). Copyright 2018 by the International Phonetic Association.

In Japanese the order of vowels is differently arranged and are differently pronounced as follows (hiragana/katakana): (あ/ア) /a/, (い/イ) /i/, (う/ウ) /u/, (え/エ) /e/, (お/オ) /o/ (See The Kenkyusha Japanese-English Learner's Dictionary, 1992, pp. 1098-1100 for a nuanced description of pronouncing Japanese vowels). These differences can be seen in Figure 2.

**FIGURE 2**  
**International Phonetic Association: Japanese Vowels**



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*Note:* Adapted from IPA vowel chart

([https://www.internationalphoneticassociation.org/IPAcharts/IPA\\_Kiel\\_2018\\_vowels\\_1200.png](https://www.internationalphoneticassociation.org/IPAcharts/IPA_Kiel_2018_vowels_1200.png)). Copyright 2018 by the International Phonetic Association.

The importance of this is that the vowels in Japanese are not quite the same as in English adding an extra dimension of difficulty for Japanese learners when articulating or listening to consonant plus vowel clusters such as *lush* /lʌʃ/ and *rush* /rʌʃ/ and also *lash* /læʃ/ and *rash* /ræʃ/ where /ʌ/ and /æ/ are not part of the Japanese vowel system and get associated with /a/ and where /ɾ/ lies midway between /l/ and /r/.

Double pairs are useful in aiding students to distinguish between two sets of minimal pairs where the four phonemes are mixed as in Table 2. Teachers can use this activity in a variety of ways. The first and most difficult way is to say only one word and the students have to identify it giving row number and column letter. Secondly, the teacher could say two, three or all of

the words and the students give the answers according to the order in which they were said. Further, the teacher could say only three words and the students identify which word was not said. This activity can then be used to give students in pairs or small groups practice saying and identifying which words were said.

**TABLE 2**  
**Double Pair Worksheet: /l/, /r/, /æ/ and /ʌ/**

		Column A	Column B
		/æ/	/ʌ/
1	/l/	lash	lush
2	/r/	rash	rush

### **FURTHER PRACTICE**

Teachers can give students further practice in distinguishing /l/ and /r/ in listening and speaking activities in a number of ways. Students in pairs can be given A/B sets of non-gapped and gapped sentences where either of a minimal pair could complete the sentence. One student reads the non-gapped sentences in their set and the partner listens carefully to distinguish the minimal pair and writes the missing word. This activity can be extended to gapped paragraphs in a similar way. Drawing pictures can also be a fun activity where a student reads a sentence or describes a picture and the partner draws the picture. For example, *There is a rake to the right of the lake*. Asking for definitions or explanations is another way of checking understanding. One student asks a question such as *What is a rake?* and the partner gives an explanation according to what they have understood before checking. Teachers can therefore adapt minimal pair activities in a variety of ways.

## **CONCLUSION**

Minimal pairs can be used effectively in teaching students in elementary, junior high and senior high schools, as well as in any remedial situation in post-compulsory education, how to distinguish often confused phonemes when listening and also in pronunciation activities. Teachers need to identify students' listening and pronunciation difficulties, analyze how the English phonemes are produced and how they are similar to and different from standard Japanese pronunciation. By adapting and enhancing minimal pair activities in various and critical ways teachers can make such exercises more appropriate and relevant in addressing their students' needs and thereby making them more effective in advancing their students' language skills.



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