'River' or 'Liver'?
Exploring the Intelligibility of Thai's (Mis)pronunciation of English 'r' and 'l'

Nussara Wadsorn
Assumption University, Thailand
nussara39@hotmail.com

Supakorn Panichkul
Assumption University, Thailand
iamoolive@gmail.com

Abstract

The establishment of ASEAN Community has in recent years brought about a number of studies related to English as a Lingua Franca (ELF). Most studies address the issues of mutual intelligibility of English used among the speakers in the Region, and those who will need to communicate with them. Jenkins, in 2000, proposed the Lingua Franca Core (LFC), i.e., the pronunciation features that are crucial for intelligibility required for effective communication. Included among those features are the correct pronunciation of all consonants except /θ/ and /ð/, and the initial consonant clusters. This study explores how Thai students in an international university characteristically mispronounce the 'r' and 'l' sounds, and how they are intelligible to listeners from certain ASEAN countries. Corresponding to Jenkins' LFC scheme, the study reveals that pronunciation deviances of the two consonants can often lead to misunderstanding, and miscommunication eventually. The implications for ELF teaching are then discussed.

Keywords: mutual intelligibility, English as a Lingua Franca, Lingua Franca Core, ASEAN, English pronunciation, Thai English speakers

Background

Mutual intelligibility among English speakers has recently become a subject of interest to many researchers, particularly since English has assumed its role as the Lingua Franca of the ASEAN Community. Questions of mutual intelligibility usually address whether, and to what extent, non-native speakers of English can understand each other in oral communication. This study has taken as its point of departure what Jenkins (2000) proposed to be the Lingua Franca Core (LFC): the pronunciation features that are crucial for intelligibility required for effective communication. According to the LFC scheme, the essential pronunciation elements include all the consonantal sounds except /θ/ and /ð/, the initial consonant clusters, vowel length distinctions, the mid-central vowel /ɜ:/, and the placement of nuclear stress. These attributes prove in practice to be difficult for learners of English to master, particularly when these elements do not exist in their mother tongue's systems. In line with Contrastive Analysis Theory (Lado, 1957), we tend to assume that sounds that are found in both the speaker's first and new language should pose less difficulty to the learners than those that do not. This assumption, however, as proved by researchers such as Fledge and Hillenbrand (1984) and Rogerson-Revell (2011), is an oversimplification. According to their findings, learners may even acquire *new* sounds more correctly than the

sounds that have a similar counterpart in L2. The substitution of the similar sounds of L2 with those from L1 can often lead to the *foreign accent* or to intelligibility problems.

While it is still unresolved whether the existence of similar sounds in L1 and L2 will hinder or facilitate pronunciation acquisition, studies of Thai pronunciation of English sounds reveal that the sounds /g z ʃ ʧ θ ð v l r ʤ and ʒ/ cause the most difficulties for English learners (Kanokpermpoon, 2007; Phintuyothin, 2011). This set comprises a sound that exists in the Thai language /l/, the sounds that cannot be found in Thai such as /z ʃ ʧ θ ð v r and ʒ/, and also the sound /g/ and /ʤ/ that can be said to be similar to Thai /k/ and ʨ/ respectively.

When excluding the dental fricative sounds as suggested by Jenkins, the sounds that are *problematic* for Thais should reduce to /g z ʃ ʧ v l r ʤ and ʒ/. To consider which sound(s) when not annunciated correctly will tend most often to create intelligibility complications, it will be helpful to look into the way Thai speakers pronounce each sound. To date, there has not been any empirical study about the intelligibility problems caused by mispronunciation of these sounds. However, it is observed that Thai speakers almost invariably mispronounce the /r/ sound by substituting it with the lateral /l/, leading to the minimal pair, e.g. *right* as *light*, *wrong* as *long*, *read* as *lead*, or *river* as *liver*. The sounds /r/ and /l/ are the focus of the current study which examines the hypothesis that problems related to /r/ and /l/ pronunciation lead to critical communication breakdowns. This issue of mutual intelligibility is further complicated by the fact that /r/ and /l/ can co-exist with several other consonantal sounds like /b, p, g, k, f, s, ʃ/, forming consonant clusters that are crucial to meaning based on the LFC basis. The hypothesis is that typically deviated pronunciation of the two English sounds by Thais will lead to routine misunderstandings of utterances in English.

English /r/ and /l/ Sounds

Among the reasons for the current interest in the study of the English sounds /r/ and /l/ is the fact that /r/ and /l/ are among the 10 most frequently occurring letters in the English language, according to the Concise Oxford Dictionary 11th edition (Oxford Dictionaries, n.d.). How the letter ‘r’ appears third in ranking for the most frequent occurring letter suggests that the sound ‘r’ is likely to be annunciated very often by speakers. While ‘l’ is the ninth in order, it is still among the top 10 most frequent occurring letters, and accordingly the study of the two sounds is justifiable.

Teacher’s Observation and Intuition

It is teachers of English who first encounter English learners’ patterns of error and who identify those errors that are widespread and persistent. The present study was developed from such observations since both authors of the current study are teachers in an international university. Sharing students’ achievements and challenges is common practice among colleagues in the setting. One of the most common topics of professional discussions on campus is how students’ mispronunciation of English words, in their informal classroom responses and in their formal oral presentations, leads to confusion or misinterpretation. Such errors often bring not only communication breakdowns, but also bring the additional consequences of embarrassment and discomfort to speaker and listener alike. While several other sounds may cause similar disruptions in communication, most teachers of English report that students’ mispronunciation of the /r/ sound, both individually and as a part of consonant clusters, are routinely a source of student frustration and oral miscommunication. In response to these observations and to move toward a practical educational solution to the perceived

problems of mutual intelligibility as seen in Thai English learners, the authors have examined the extent to which deviated pronunciation of /r/ and /l/ affects listeners' comprehension of messages in communication.

Intelligibility

It is hypothesized that the mispronunciation of English /r/ and /l/ sounds by Thai English learners should have an impact on intelligibility. *Intelligibility* as viewed by Deterding and Kirkpatrick (2006) is an *elusive concept* which can mean different things to different people. The commonly adopted model of intelligibility was originally proposed by Smith and Nelson (1985). According to communication model of these researchers, intelligibility is first tier of a three-tiered interactive construct - first, *intelligibility* refers to how a listener recognizes a word or utterance; next, *comprehensibility* refers to how the listener understands the meaning of a word or utterance; and finally, *interpretability* refers to how the speaker's meaning or intention in making a word or utterance is understood. In other words, interpretability goes beyond word/utterance recognition and formulation of literal meaning to include such things as irony and double entendre. Although the notion of intelligibility as proposed by Smith and Nelson is generally accepted by many, there is still no consensus on whether the term is to be understood from the speaker's or listener's perspective (Jenkins, 2000), nor whether are there finite boundaries that separate intelligibility and comprehensibility (Derwing and Munro, 2005 as cited in Wilang and Teo, 2012). Given the terminology confusion, the current study takes an overall intelligibility as a basis for speaker's judgment. That is to say, the participating listeners were asked to do a comprehension test where pronunciation of a target word (with /r/ or /l/ sounds) will determine a particular utterance's meaning. Evidently, the listeners under study interpreted Thai speaker's utterances by not only identifying words they actually heard, but also inferring from what they believed the speaker intended to say.

Despite researchers' non-consensual views about *intelligibility*'s definition, there are a number of studies on the topic. Some prominent works on intelligibility that have been conducted recently are by Deterding and Kirkpatrick (2006), Wilang and Teo (2012), Nazari (2012), and Becker and Kluge (2014). In line with the current study, Nazari's study found that awareness of the speaker's nationality can affect attitudes of and intelligibility for the listeners. Becker and Kluge's research also sheds light on LFC features. They found that, in the Brazilian contexts, dental fricative pronunciation does have a bearing on intelligibility.

ASEAN

The Association of Southeast Asian Nations, i.e., ASEAN, has adopted English as its Lingua Franca. Of the ten member states, Thailand is one of the key founders of the Association. With full establishment of ASEAN to take place in 2015, a rapid influx of workers and students is expected in all countries in the region. People of all the ten member countries will, by design, use English for communication. Questions related to mutual intelligibility thus have become a focus for many researchers. By Kachru's scheme of 3 concentric circles (Kachru, 1985), the ten countries of ASEAN can be placed in two of the circles, i.e., *outer* and *expanding*. With Brunei, Malaysia, the Philippines, and Singapore having English as an official language, they belong to the *outer circle* of Kachru's World English system. Cambodia, Indonesia, Laos, Myanmar, Thailand and Vietnam, on the other hand, belong in the *expanding circle*. The differences in the status and use of English in these

individual member states imply difficulties in mutual intelligibility when these non-native speakers attempt to communicate in English. In addition to the ten member countries, the ASEAN-plus-6 design will include China, Korea, Japan, India, Australia, and New Zealand. This model would therefore establish English across all the 3 of Kachru's circles (with Australia and New Zealand being from the *inner circle* of English users). At that point, international intelligibility becomes an additional concern.

Pronunciation of English /r/and /l/

A survey of the literature reveals much interest among researchers in the process by which English learners acquire pronunciation of the two sounds /r/ and /l/. Several studies on both sounds have been conducted on Japanese speakers of English. This is due to the fact that Japanese does not have the two sounds as contrasting phonemes (Logan, Lively and Piston, 1991; Lively et al., 1993, 1994 cited in Kinnaird and Zapf, 2004). Studies by Flege, et al. (1995) and Iverson, et al. (2005) explore difficulties of English learners in the *production* of the two phonemes. Studies by Logan, et al. (1991), Lively, et al. (1993, 1994), Bradlow, et al. (1997), McClelland, et al. (2002), and Ingvalson, et al. (2011) explore the ability of English learners to *perceive and identify* the two sounds. The study on the perception of the two sounds is normally made by investigating how training and the variables such as experience or English proficiency determine the ability to discriminate the two sounds of English. A single study, carried out by Sheldon and Strange (1982), looks into the relationship between the perception and the production of /r/ and /l/ sounds. Kinnaird and Zapf (2004) used acoustical analysis to describe Japanese speakers' production of the sounds. Despite widespread linguistic interest in the pronunciation of English /r/ and /l/, no study on the intelligibility of /r/ and /l/ as pronounced by non-native English speakers is found in any context.

Thai's Pronunciation of /r/ and /l/

As for the Thai contexts, substantial research on /r/ pronunciation was made by Chunsuvimol (1993). The writer discovered that Thais' pronunciation of /r/ can be as follows:

1. Pronounced as /r/
2. Pronounced as /ɹ/
3. Pronounced as /l/ in prevocalic position and consonant clusters
4. Dropped /r/ in consonant cluster
5.

Corresponding to Chunsuvimol's finding is the work by Hirunyupakorn and Chaimano (2014). Their study was carried out, however, on Thai pronunciation of only the sound /r/ with specific examination on the association between the speaker's English proficiency and how the /r/ sound is pronounced. Their findings indicated the effects of proficiency and the contexts where /r/ occurs on the sound production. As in other contexts, nevertheless, neither works on /l/ pronunciation alone, nor the intelligibility of Thai pronunciation of the two sounds is found.

The Present Study

The study attempts to gauge the extent to which Thai's pronunciation of /r/ and /l/ is intelligible to listeners with ASEAN backgrounds. The research question was:
To what extent is the Thai's mispronunciation of /r/ and /l/ intelligible to listeners from the ASEAN contexts?

To answer this, words were selected for Thai subjects to pronounce. These words came from among the list of 500 most frequently used English words where the /r/ and /l/ appear at the initial, middle, and final position as well as in consonant clusters (World English, 2013). The words chosen for the study were purposely those where the minimal pair might create misunderstanding if the sound /r/ or /l/ were to be pronounced alternately, for example, *right* and *light*; *read* and *lead*; or *pray* and *play*. Twenty-three sentences were then created which incorporated the selected words.

Participants in the study (Thai tertiary students in an international university) subsequently read these sentences for recording. There were altogether 18 student volunteers, all of whom had intermediate English proficiency. These students were not given any specialized instructions for the readings, nor were they told why they had to read the sentences.

The recorded readings were then analyzed to determine whether or not each student pronounced the /r/ and /l/ sound correctly. To arrive at a judgment about the correctness of pronunciation, 3 trained auditors listened to and discussed each reading to arrive at consensus. The auditors determined that of the 23 sentences, there were 10 wherein the /r/ and /l/ sounds had been mispronounced by over 50% of the Thai participants. Most often, the /r/ was mispronounced as /l/, such as in *read* as *lead*, in *river* as *liver*, and in *rain* as *lane*. The /r/ in consonant clusters was also mispronounced as /l/ such as in *pray* as *play*, in *press* as *place*. The auditors also noted that some speakers dropped the /r/ altogether in consonant clusters, resulting in such words as *pray* being mispronounced as *pay* and *press* as *pace*. From 18 Thai readers, one made pronunciation errors in all 10 sentences. Though the manner of readers' mispronunciations was not uniform, for considerations of variable control, this speaker was adopted by the study as the representative reader of the group. This decision by the researchers served to control for speaker variables such as gender or voice quality. Following are the 10 sentences with /r/ and /l/ being mispronounced. The word in parenthesis is the given word for reading in each sentence:

1. John loves to lead. (**read**)
2. This book gives information about the liver. **(river**)
3. It should not be this late. (**rate**)
4. The cars move slowly in the lane. (**rain**)
5. My dad found that lock. (**rock**)
6. You can pace that one on the top. (**press**)
7. She would run to the back yard and pay. (**pray**)
8. The door is now open. (**draw**)
9. Some bacteria can go in the dark. **(grow**)
10. They will ask him why he is working. (**while**)

The authors then presented a group of informants with the recorded reading and a set of sentences designed to gauge listener understanding of each recorded utterance. Listeners were asked to choose a response based on their understanding of the recorded statement.

These researcher-prepared responses were deliberately constructed to register a correct interpretation, an incorrect interpretation, or a failed interpretation of each message. For example, the sentence *The cars move slowly in the rain*, mispronounced by over half of the readers as *The cars move slowly in the lane*, had the following possible responses from which the listeners might choose:

1. The road is wet now.
2. The road track is full now.
3. I didn't get what was said.

It was anticipated that the informants under study would choose response number 2 because they would have heard the mispronounced word 'rain' as 'lane'.

The Informants

In the current study, the authors attempt to determine to what extent Thai's mispronunciation of /r/ and /l/ is misunderstood by non-Thais in the ASEAN context; therefore, listeners from 2 settings were recruited to listen to the recording and to perform the comprehension task. The participants in the listening phase of the study were as follows:

1. 15 Australian citizens working in a company in Sydney, Australia
2. 15 non-Thai listeners working or studying in an international university in Thailand. All 15 of these informants have lived in Thailand for over 5 years.

Listeners from both groups were categorized as being in the ASEAN context because they either came from one of the Member States of ASEAN (e.g. the Philippines, Vietnam, Cambodia, etc.) or had several years work experience in one of the ASEAN countries. Participants listened to each recorded statement as many as 4 times and then chose among the researcher-prepared responses based on an understanding of each recorded reading. If what participants heard on the recording did not match any of the available predetermined responses, listeners could elect to write down the recorded utterance as they had understood it. As noted earlier, the intelligibility test is to gauge how each of the speaker's utterance is understood so the test's focus is on the *meaning* of each utterance. It is an overall intelligibility test. After ASEAN participants completed the comprehension task, they rated the speaker's proficiency, speculated on the speaker's country of origin, and gave unmediated comments about the speaker's English skills. The authors also conducted a short informal interview with all listeners to draw their general observation about the speaker.

Findings

The study reveals that listeners have quantifiable difficulties in understanding Thai speakers. Nevertheless, the comprehension test shows 3 levels of understanding:

1. Have CORRECT understanding of the messages. (Messages *understood*)
2. Have INCORRECT understanding of the messages. (Messages *misunderstood*)
3. Have NO understanding of the messages. (Messages *not understood*)

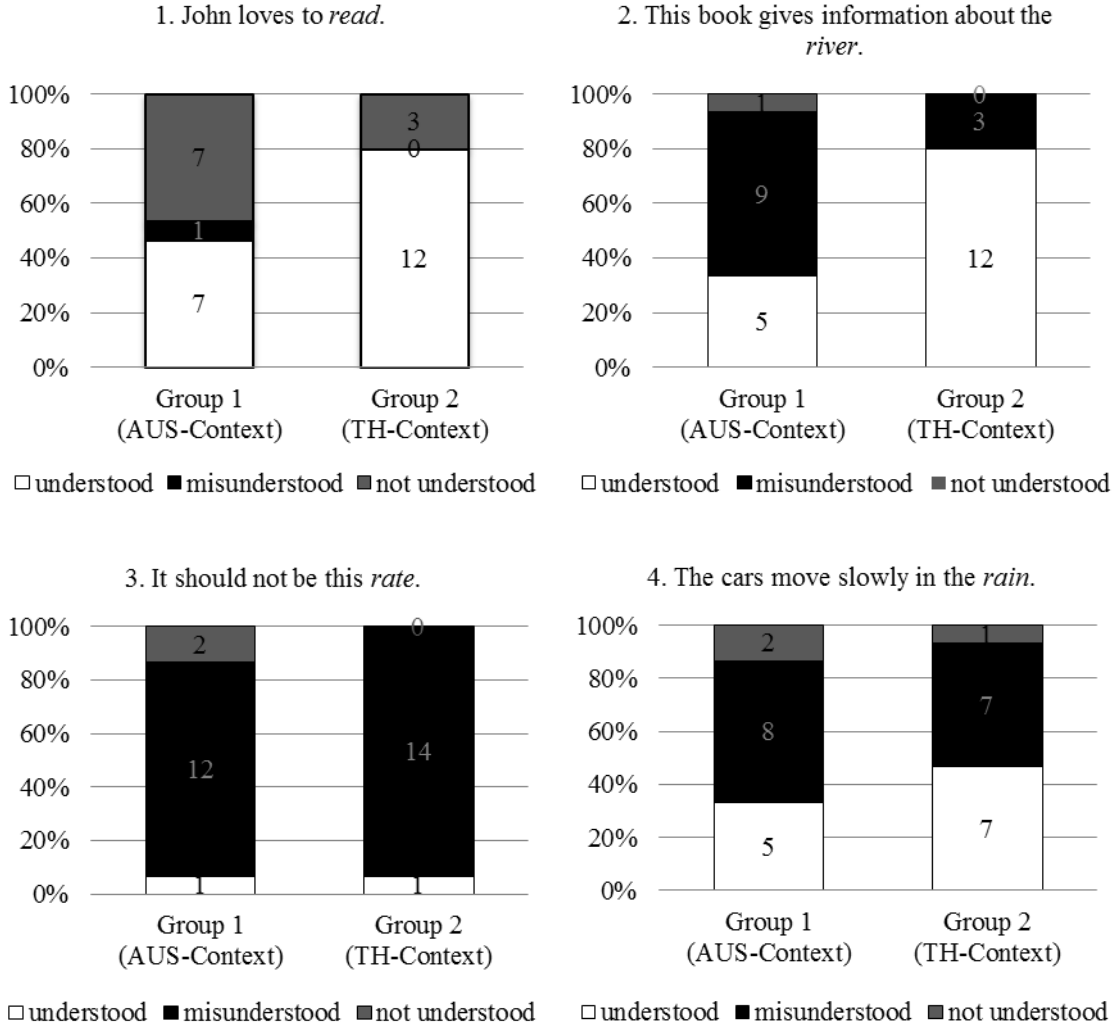
Table 1 below quantifies the reader/listener experience of one sentence.

Table1:
The intelligibility of Thai's pronunciation of /r/ in a sentence/statement

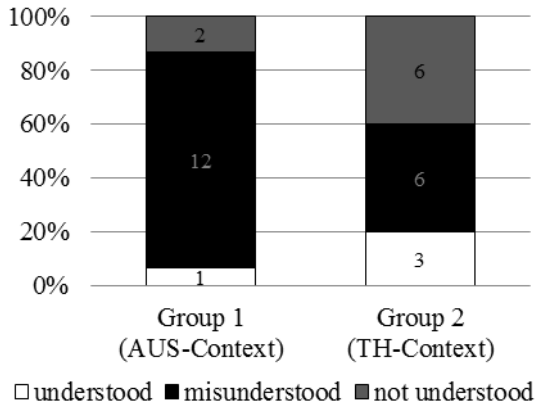
Sentence 1	John loves to *read*.		
Listeners	Understood (persons)	Misunderstood (persons)	Not Understood (persons)
Group 1 (AUS-Context)	7	1	7
Group 2 (TH-Context)	12	0	3

Graphs 1-10 below illustrate the intelligibility of each sentence spoken by the Thai speaker:

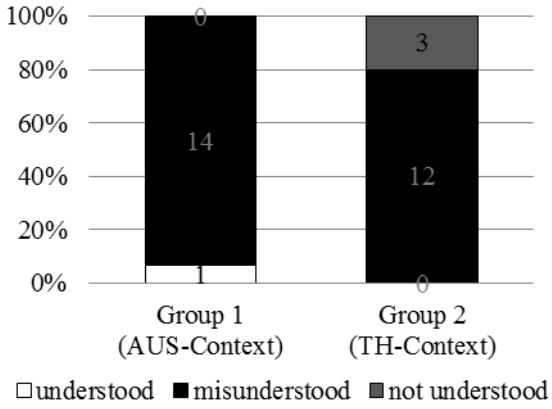
Graphs 1-10: The intelligibility of each sentence spoken by the Thai speaker



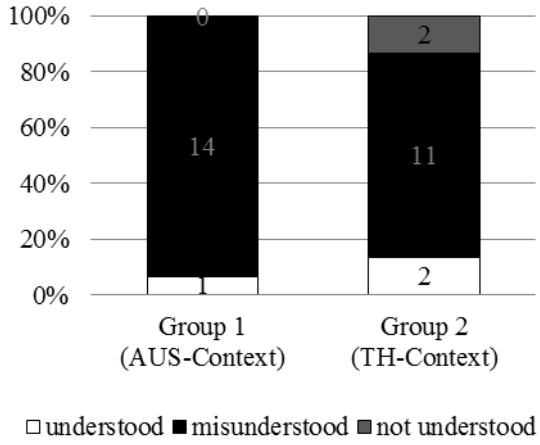
5. My dad found that *rock*.



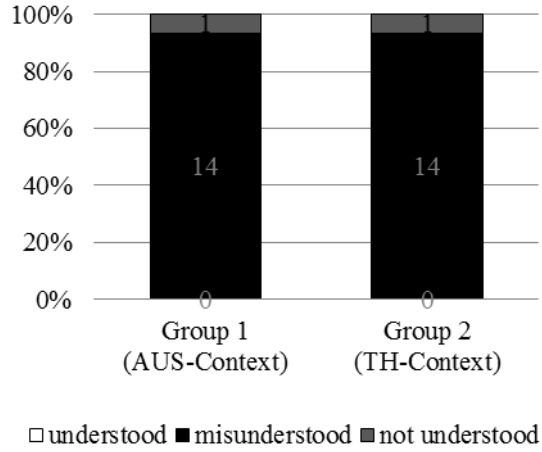
6. You can *press* that one on the top.



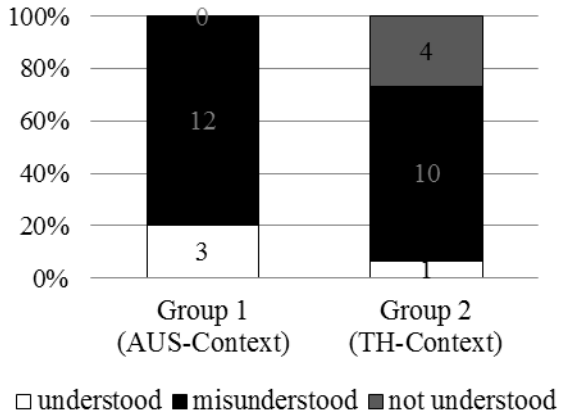
7. She will run to the backyard and *pray*.



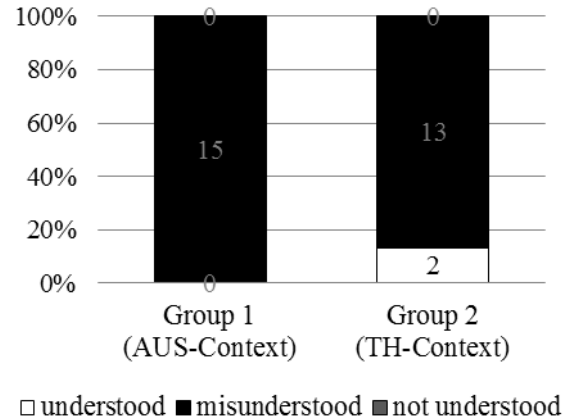
8. The *draw* is now open.



9. Some bacteria can *grow* in the dark.



10. They will ask him *while* he is working.

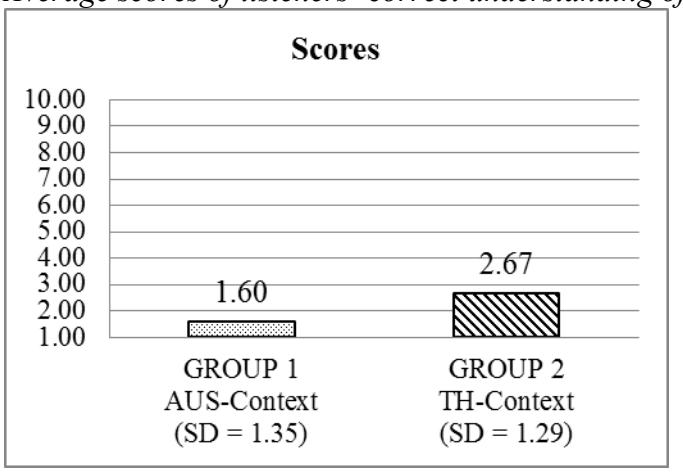


Discussion

Except for data in graphs 1 and 2, the study confirms that comprehension of messages produced by Thai speakers which depend on correct production and interpretation of English /r/ and /l/ is very low in ASEAN audiences. The data reveals misapprehension of the messages (misunderstood) occurs more often than uncertainty about what the messages are (not understood). This can be deemed more critical for communication since in reality, when people think they do not understand the points being made, they will seek to have them clarified in one way or another. Yet, if the listeners believe they grasp the idea being conveyed to them without any doubt, it can lead to miscommunication. Hence being misunderstood is worse than not understood.

Graph 11 below illustrates the average scores of listeners' correct understanding of the messages by listeners groups 1 and 2.

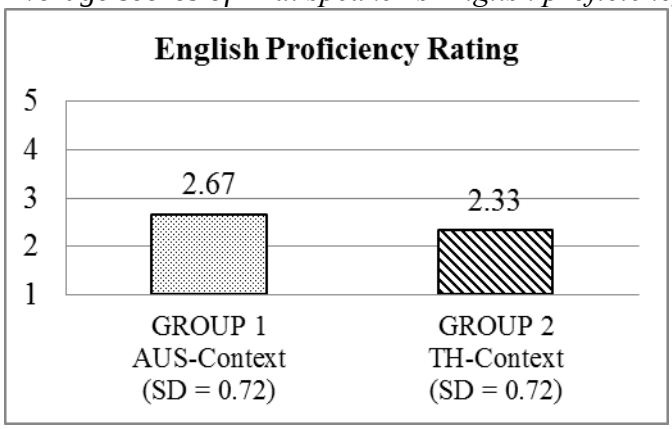
Graph 11:
Average scores of listeners' correct understanding of the intended messages



These findings establish that mispronunciations produced by Thai English learners of the English sounds /r/ in sample sentences 1 - 9 and /l/ in sample sentence 10 lead to misapprehension of spoken messages among listeners of ASEAN subject groups. While the results from the listeners of an international university in Thailand (Group 2) indicate a higher level of understanding, the difference is about one point (2.67 and 1.60). These results suggest that a typical Thai English learner's production of /r/ and /l/ are not sufficiently intelligible to an English-speaking ASEAN audience to allow accurate communication of meaning. Hence, to the research question *to what extent is the Thai's mispronunciation of /r/ and /l/ intelligible to listeners from the ASEAN contexts?* The answer is *very low level of intelligibility*.

When listeners rated the speaker's English proficiency, the participants' from both groups judged the speaker's skills as *very low*. Graph number 12 indicates the average ratings of the speaker's proficiency by listeners.

Graph 12:
Average scores of Thai speaker's English proficiency as rated by the listeners from 2 groups



In terms of English proficiency rating, interestingly, the first group (in the Australian contexts) rated the speaker's English with higher scores than the group who have had experience with the Thai speaking English.

Listener's Strategies for Message Interpretation

Although overall the research results display a very low level of intelligibility for the representative Thai speaker involved in the study, the methods of inquiry used by the authors revealed unexpected strategies used by listeners to arrive at their message interpretations. Message comprehension and interpretation seems not always to be dependent upon what the listeners actually *hear*. How listeners comprehend sentences 1 and 2 can be an instance of such finding. The Thai speaker clearly says *lead* instead of *read* and *lane* instead of *rain* in the sample sentences, yet most listeners chose the correct interpretation. When interviewed, these listeners said that they did not just trust what they hear. Rather, they relied on other resources such as the syntactical pattern, grammar, and most importantly, a familiarity with the Thai accent. For instance, one Chinese listener admitted that she heard *John loves to lead* but she recognized *the Thai accent*, so she knew that most Thais would typically pronounce /r/ as /l/. In this respect, she immediately chose the first choice *John has many books* over *John does not like to follow*. This kind of stereotype was found among many listeners, especially in Group 2, so this confirms Gass and Veronis's (1984) view that familiarity with a non-native accent is a significant criterion that facilitates intelligibility.

Apart from the accent awareness, *prosodic features* also played a determining role in listeners' analyses of messages. Some listeners based their interpretations on the tone adopted by the Thai reader to pronounce the word *read* (high tone) which is particularly different from *lead* (low tone) when said by the Thais.

Other listeners inferred meanings from cues in *sentence structures*. For example, to say *John loves to lead* is too strange a sentence to be the correct answer. The interviewees who held this belief said that *people don't say that to mean someone likes to be a leader, so I don't think it is what she wants to say, although I heard 'lead' I believe she means 'read'*. The same was true for the sentence *This book gives information about the river*. While a listener heard the word *liver*, he did not pass judgment solely from what he heard. He said *I guessed from the fact that if it is a book about the rivers, the word 'river' should be in a plural form (rivers) rather than just 'river', so I am sure that she really means 'liver'*.

In a similar vein, knowledge of English grammar becomes a significant additional resource for the listener's ability to construe intent and meaning in communication.

Conclusion

The current study, in agreement with previous investigations on typical Thai pronunciations of /r/ and /l/, reveals that Thai speakers usually pronounce /r/ as /l/ in the pre-vocalic position and in consonant clusters. Thais may also elide the /r/ sound in consonant clusters to realize pronunciations such as *grow* as *go*, *pray* as *pay*. Additionally, the /l/ sound is not problematic for Thai speakers under study except when it occurs at the final position, i.e. the word *while* which was pronounced by more than half of the readers as *why* leading to the misinterpretation of messages.

When words with /r/ and /l/ are mispronounced, one of three things can occur: the speaker can communicate accurately and be understood, can communicate inaccurately and be misunderstood, or can fail to communicate any information at all. Findings show that listeners who are non-Thai and who are from the ASEAN contexts find it difficult to understand typical Thai speakers who mispronounce the /r/ and /l/ sounds. The results also suggest that listeners tend most often to misinterpret messages that depend on /r/ and /l/ sounds rather than to recognize that they have not understood the message from the Thai speaker. In this regard, communication failure tends to take place if the listener does not hold the information for clarification.

While the listeners from the Australian contexts did not actually understand the Thai speaker in the study, they rated the speaker's English proficiency higher than the listeners from the Thai contexts. They, in other words, were inclined to have more tolerance and sympathy for the inefficient English speaker than those who have been in Thailand for some times.

The study findings show how the listeners made use of all available resources for the interpretation of a speaker's messages. Despite the clearly recognizable /l/ sound, for instance in words like *lead* or *liver*, many listeners chose to disregard the audible signal in favor of the meaning signaled by context. Contextual cues that listeners in the study utilized included speaker's accent, sentence structure, grammar, and/or prosodic features.

As stated above, listeners participating in the study went beyond Smith and Nelson's *intelligibility* precept and proceeded without preamble to his *interpretability* tier, confirming the elusive nature of the intelligibility concept.

Implications for ELF

The sounds /r/ and /l/ are significant features of English words in common use. The two sounds make minimal pairs for each other, which, in the presence of mispronunciation can cause misunderstanding. These two sounds are also a part of consonant clusters for several other sounds. They deserve special attention from English teachers. Thai students of English should start early learning correct English pronunciation of /r/- and /l/-involved sounds. Direct observations and empirical evidence available to the authors of this study demonstrate that learners of English in Thailand produce these two sounds ineffectively. This can be a serious concern because accurate pronunciation of these two sounds is crucial for intelligibility. If ASEAN listeners cannot understand the Thai speaker of English, what will be the socio-economic consequences for Thailand of such a failure of intelligibility in a wider international context?

Limitations of the Study

The study was conducted with some acknowledged limitations. First, pronunciation deviances among the 18 Thai readers were not uniform. By assigning a single representative of the subject groups, errors in /r/ and /l/ pronunciation were not exhaustively examined.

Secondly, the comprehension test used in the study was actually a one-way communication, i.e. the listeners did not have opportunity to negotiate for meaning as in ordinary spoken interactions. Although this type of one-way transactional listening may be common in life such as when we do telephone banking, or listen to an announcement (Wadsorn, 2004), broader conclusion about communication failure should be drawn with caution.

Finally, although the study revealed one instance of /l/ pronunciation challenge, i.e. the word *while* pronounced as *why* by more than half of the participating readers, this is not sufficient to conclude that the final /l/ is truly problematic for Thai speakers. The researchers note, however, that speakers often mispronounced final /l/ in other words, i.e. *will* as *wiew** or *view*, *uncle* as *unkern** or *unker**, or *call* as *kaw*. These observations suggest that final /l/ can be a pronunciation concern for Thais and that further investigation should be made to explore the scale and scope of the final /l/ issue.

Suggestions for Future Studies

The study on the intelligibility of Thai's mispronunciation of /r/ and/l/ may be replicated using non-ASEAN listeners, i.e. the listeners who are from the inner circle of Kachru's world English. The study may be conducted using other consonants and consonant clusters whose minimal pairs when mispronounced by Thais might cause confusion in an English-speaking audience.

Jenkins' Lingua Franca Core is another aspect that can be discovered further how each feature plays important roles for the international intelligibility in various settings. As the latest work of Becker and Kluge (2014) suggests, the Lingua Franca Core features may not work the same vein in different circumstances.

Finally, the study on the ability of Thai listeners to distinguish the /r/ and /l/ sounds in different word positions could also be very informative. To date, there are no studies on the relationship between the perception and production of the two sounds. Such studies should shed light on the /r/ and/l/ pronunciation acquisition processes.

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Appendix 1

Intelligibility Test Form

Section 1: Please tick (✓) on the item.	
1. You are ____.	□ male □ female
2. Do you speak only English?	□Yes □ No
3. You have lived in Australia (Thailand) for _____.	□1-5 years □6-10 years □over 10 years

Section 2: Please choose the answer that matches what you understand was said. You can play back the sound record for the maximum of 3 times. After 3 times playbacks, if you still do not understand what the speaker says, please choose 'I couldn't get what she said'.

1 a.) John has many books. b.) John does not like to follow anyone.
c.) I couldn't get what she said.

2 a.) It's a medical book. b.) It's a geographic book.
c.) I couldn't get what she said.

3 a.) It should be different price. b.) It should be earlier.
c.) I couldn't get what she said.

4 a.) The road is wet now. b.) The road track is full now.
c.) I couldn't get what she said.

5 a.) We think it's a nice stone. b.) We can use the key now.
c.) I couldn't get what she said.

6 a.) You are making a phone call. b.) You are arranging things.
c.) You are using a Word Processor for typing. d.) I couldn't get what she said.

7 a.) She will ask God for something. b.) She will have fun with a game.
c.) She will give someone some money. d.) I couldn't get what she said.

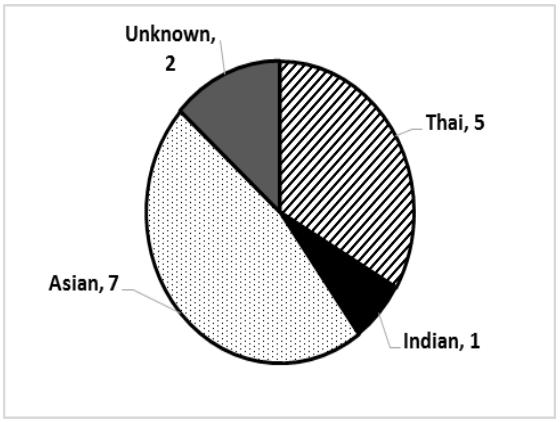
8 a.) Good luck with the lottery! b.) You can now enter!
c.) I couldn't get what she said.

9 a.) It can get bigger. b.) It can look brighter.
c.) It can move in the dark. d.) I couldn't get what she said.

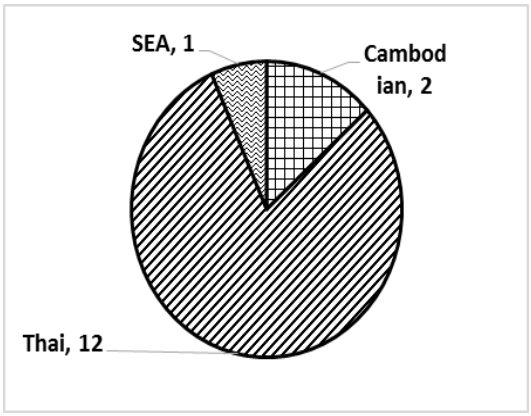
10 a.) He will tell them the reasons for his work.
b.) He will work and answer at the same time.
c.) I couldn't get what she said.

Appendix 2

Speculation on Speaker's Nationality



Group 1 (AUS-Context)



Group 2 (TH-Context)

Appendix 3

Listener's Country of Origin (Group 2)

Country	**Person(s)**
The Republic of China	3
India	1
Japan	2
Kore (South)	2
The Philippines	1
Singapore	1
Vietnam	1
Switzerland (Thai Parents)	1
Total	**15**