CHAPTER TWO
REVIEW OF LITERATURE

This chapter reviews the literature and studies some of the characteristics Thai and English phonological systems by focusing on aspects of both languages. The content includes the following topics:

2.1 THE IMPORTANCE OF INTELLIGIBLE ENGLISH PRONUNCIATION

According to Jenkins (n.d.) in "teaching English: Global English and the teaching of pronunciation", English being used nowadays is no longer spoken only by its native speakers. It is also spoken among non-native speakers throughout the world. Thus English is now often referred to as 'English as an International Language'.

As English become more important in this globalized world, English used as a tool to communicate with both native and non-native speakers of English should be as clear as possible. Intelligible pronunciation makes it easier to communicate with English natives or non-natives in the English speaking world (Wei & Zhou, 2002). Morley (1991) said that, "Intelligible pronunciation is an essential component of communication".

Celce- Murcia (1987) noted that a person who has bad pronunciation cannot be understood by the listener when communicating. Even among English speaking countries, Giles (1970) and Wenner (1967) stated the disadvantage of heavily accented English; not only are the individuals often thought of as "lower class" but their saying is also discounted by others. But so far, the most important value is that

intelligible pronunciation is easily understood throughout the English speaking world (Wei & Zhou, 2002).

2.2 TONE: A CHARACTERISTIC OF THAI LANGUAGE

Thai is the national language of Thailand. Like Chinese, Thai is a tonal language, the meaning of each syllable being determined by the pitch at which it is pronounced. And because every syllable in Thai carries a certain fixed tone, Thais tend to give equal weight and timing to each syllable (Smyth, 2001).

Ladefoged (1982) indicates that there are two types of tone language. The first type is called "register tone" languages in which most of the tones can be described in terms of points within a pitch range. Most of them have basically two tones, high and low, or three tones, high, mid and low. Register tone languages with four tones are more uncommon. Thai, though, is in the second type which is called "contour tone languages" in which a number of the tones have to be specified in terms of gliding pitch movements, rather than in terms of single points.

Standard Thai has five tones, mid, low, high, rising and falling. However, there are only four tone marks. Moreover, the four tone marks in Thai are placed above the initial consonant of the syllable whose tone they mark or on top of the vowel (if the vowel is placed above the consonant). Those four tone marks are mai ek (◌่), mai tho (◌้), mai tri (◌๊), and mai chattawa (◌๋). The one tone that has no tone mark is normally the mid tone.

Each of the tone marks gives a different tonal value depending on the class of the initial consonants (high, mid, or low), vowel length (long or short), and the type of syllable (open or closed syllable) that they mark. The syllable which does not receive any tone mark also follows this rule (Yuphaphann Hoonchamlong, 2007).

Table 1. Tone Marks in Thai

	Live Syllables				
Tone Marks	No Mark	่	้	๗	๋
"High" consonants	ขา Rising Tone	ข่า Low Tone	ข้า Falling Tone	-	-
"Mid" consonants	อา Mid tone	อ่า Low Tone	อ้า Falling Tone	อ๗้า High Tone	อ๋า Rising Tone
"Low" consonants	คา Mid Tone	ค่า Falling Tone	ค้า High Tone	-	-

Table 2. The Pitch Variations That Affect the Meaning of a Word:

Tone	Thai	Phonemic	English
high	น้า	/ná ː/	*aunt/uncle*
mid	นา	/nā ː/	*a paddy*
low	หน่า	/nà ː/	*(a nickname)*
rising	หนา	/nă ː/	*thick*
falling	หน้า	/nâ ː/	*face*

As you can see from the table, the word "หน้า" /nâ ː/ pronounced with falling tone means "face", but if it is pronounced with a high tone, /ná ː/ means "aunt or uncle" (Sumon Ariyapitipun, 2003).

2.3 THE PHONOLOGICAL PROBLEMS OF THAI AND TEACHING

2.3.1 Consonants

A consonant is a sound in spoken language characterized by a closure or stricture of the vocal tract sufficient to cause audible turbulence (Consonant Information, 2001). Each consonant can be distinguished by several features but Sumon Ariyapitipun (2003) classifies English and Thai consonant sounds in terms of (1) manner of articulation; the method that the consonant is articulated (2) place of articulation; where in the vocal tract the obstruction of the consonant occurs, and which speech organs are involved and (3) voicing; the vibration of the vocal cords. Therefore, consonants all differ from each other in at least one of these ways.

English

English has twenty-one consonant letters but twenty-four consonant sounds, including two semivowels (Sumon Ariyapitipun, 2003)**.**

Table 3. Phonetic Alphabet of English Consonant Phonemes

	Places of Articulation	*Bilabial*	*Labio-dental*	*Inter-dental*	*Alveolar*	*Retroflex*	*Alveo-palatal*	*Palatal*	*Velar*	*Glottal*
Manners of articulation	**Stops** Vl.	p			t				k	
	Vd.	b			d				g	
	Fricatives									
	Vl.		f	θ	s		š (ʃ)			h
	Vd.		v	ð	z		ž ( )			
	Affricates									
	Vl.						č (ʧ)			
	Vd.						ǰ ( )			
	Nasals Vd.	m			n				ŋ	
	Lateral Vd.				l					
	Retroflex									
	Vd.					r				
	Semi-vowels Vd.	w						y (j)		

Initial consonant: Although almost every consonant sound in English can occur in the initial position, Avery and Ehrlich (1992) stated that no syllable in English can begin with /ŋ/ (the final sound of 'sing').

Final consonant: According to Avery and Ehrlich (1992) almost every consonant sound can occur in a syllable-final position. There are just glottal /h/ and both of the semivowels, /y/ and /w/ that cannot be used as the final consonant sound.

Table 4. Phonetic Symbol of English Consonants in the initial and final positions

English Letter	**Phonetic Symbol**	
	Initial	**Final**
p	/p/	/p/
b	/b/	/b/
t	/t/	/t/
d	/d/	/d/
k	/k/	/k/
g	/g/	/g/
f	/f/	/f/
v	/v/	/v/
th	/θ/	/θ/
th	/ð/	/ð/
s	/s/	/s/
z	/z/	/z/
sh	/š/ (ʃ)	/š/ (ʃ)
-ge	-	/ž/( )
h	/h/	-
ch	/č/(ʧ)	/č/(ʧ)
j, -dge	/ ǰ /( )	/ ǰ /( )
m	/m/	/m/
n	/n/	/n/
ng	-	/ŋ/
r	/r/	-
l	/l/	/l/
w	/w/	-
y	/y/	-

Thai

There are twenty-four consonant letters in Thai language but there are only twenty-one consonant sounds (Sumon Ariyapitipun, 2003). Moreover, the consonants are divided into three classes - low, middle and high - which determine the tone of the following vowel (as cited in Thai alphabet information Web site).

Table 5. Phonetic Alphabet of Thai Consonant Phonemes

	Places of Articulation		*Bilabial*	*Labio-dental*	*Alveolar*	*Alveo-palatal*	*Palatal*	*Velar*	*Glottal*
Manners of articulation	**Stops**	Asp. Vl.	p^h		t^h			k^h	
		Unasp. Vl.	p		t			k	?
		Vd.	b		d				
	Fricatives	Vl.		f	s				h
	Affri-cates	Asp. Vl.				c^h			
		Unasp. Vl.				c			
	Nasals	Vd.	m		n			ŋ	
	Lateral	Vd.			l				
	Trill (Roll)	Vd.			r				
	Semi-vowels	Vd.	w				j		

Initial consonant: In Thai, every consonant can occur in the initial position. But nowadays, two of the consonants (kho khuat '**ข**' and kho khon'**ค**') aren't used in written Thai anymore. Some sources say that when the first Thai typewriter was developed by Edwin Hunter McFarland in 1892, there was simply no space for all characters, thus two had to be left out (Thai alphabet information, 2001).

Final consonant: There are only eight consonants which are allowed to occur in the final position: /n/, /m/, /ŋ/, /p,b/, /d,t/, /k/, /j/, /w/ (McKenzie-Brown, 2006).

Table 6. Phonetic Symbol of Thai Consonants in the Initial and Final Positions

Thai Letter	Phonetic Symbol	
	Initial	Final (including open syllable)
ก	/k/	/k/
ข, ฃ, ค, ฅ, ฆ	/ k^h /	
ง	/ŋ/	/ŋ/
จ	/c/	
ฉ, ช, ฌ	/c^h/	
ซ, ศ, ษ, ส	/s/	
ญ, ย	/j/	/j/
ฎ, ด	/d/	/t/
ฏ, ต	/t/	
ฐ, ฑ, ฒ, ถ, ท, ธ	/t^h/	
ณ, น	/n/	/n/
บ	/b/	/p/
ป	/p/	
พ, ภ, ผ	/p^h/	
ฟ, ฝ	/f/	
ม	/m/	/m/
ร	/r/	
ล, ฬ	/l/	
ว	/w/	/w/
ห, ฮ	/h/	-
อ	/?/	-

2.3.2 Consonant Clusters

The consonant clusters are combinations of consonant sounds occurring together (Wilkins, 1976). In linguistics, a consonant cluster has no intervening vowel. In English, consonant clusters are permitted both at the initial and final positions (Sumon Ariyapitipun, 2003), for example, the groups of /spl/ and /ts/ are consonant clusters in the word *splits*.

English

Initial consonant clusters: These clusters are the combination of sounds found at the beginning of English words (Newman, n.d.). Most English initial clusters are of two consonants. There are only a few initial clusters of three consonants and they all begin with /s/ followed by /p/, /t/, or /k/ followed in turn by /r/, /l/, or /w/ (Avery & Ehrlich, 1992).

Final consonant clusters: These clusters are those combinations of sounds found at the end of English words. They are less predictable than initial consonant clusters. (Newman, n.d.). The final clusters in English mostly are not the same as the initial clusters (Smyth, 2001). There is no three-consonant combination like /spr/ at the end of a syllable and all of the final clusters found would be impossible to pronounce as initial clusters. There are a lot of two and three-consonants in this final position. Moreover, the addition of grammatical endings creates many more final consonant clusters, for example, the past tense ending /t/ when added to 'glimpse' creates the four-consonant cluster /mpst/ and the plural ending /s/ when added to 'text' creates the four-consonant cluster /ksts/ (Avery & Ehrlich, 1992).

Table 7. English Consonant Clusters in the Initial Position

English Letter	Phonetic Symbol of Consonant Cluster
	Initial
bl	/bl/
gl	/gl/
pl	/pl/
cl	/kl/
fl	/fl/
br	/br/
gr	/gr/
pr	/pr/
cr	/kr/
fr	/fr/
dr	/dr/
tr	/tr/
sk	/sk/
sc	/sk/
sm	/sm/
sn	/sn/
sp	/sp/

English Letter	Phonetic Symbol of Consonant Cluster
	Initial
st	/st/
sw	/sw/
sl	/sl/
spl	/spl/
spr	/spr/
str	/str/
scr	/skr/
squ	/skw/
scl	/skl/
shr	/ʃr/
sph	/sf/
thr	/θr/
thw	/θw/
tw	/tw/
dw	/dw/
qu	/kw/

Table 8. English Consonant Clusters in the final position

English Letter	Phonetic Symbol of Consonant Cluster Final
ct	/kt/
ft	/ft/
lt	/lt/
nt	/nt/
pt	/pt/
st	/st/
lb	/lb/
ld	/ld/
lf	/lf/
lk	/lk/
lm	/lm/
lp	/lp/
lve	/lv/
lth	/lθ/
lse	/ls/
lsh	/lʃ/
lch	/ltʃ/
lge	/l /
ln	/ln/
mp	/mp/
nd	/nd/
nk	/nk/
ns	/nts/
nth	/nθ/
nch	/ntʃ/
nge	/n /
nk	/nk/
sk	/sk/
sm	/sm/
sp	/sp/
nst	/nst/
rst	/rst/
rp	/rp/
rt	/rt/
rd	/rd/
rk	/rk/

English Letter	Phonetic Symbol of Consonant Cluster Final
rgue	/rg/
rf	/rf/
rve	/rv/
rth	/rθ/
rse	/rs/
rsh	/rʃ/
rch	/rtʃ/
rge	/r /
rm	/rrn/
rn	/rn/
rl	/rl/
fth	/fθ/
pt	/pt/
pse	/ps/
pth	/pθ/
x	/ks/
dze	/dz/
xt	/kst/
xth	/ksθ/
mpt	/mpt/
mpse	/mps/
nce	/nts/
ltz	/lts/
rpse	/rps/
rtz	/rts/
rld	/rld/
Charles	/r(p)θ/

Thai

Initial consonant clusters: The maximum Thai consonant cluster at the beginning of the words is formed with only two consonants (McKenzie-Brown, 2006; Ariyapitipun, 2003).

Final consonant clusters: There are no consonant clusters in Thai word endings (McKenzie-Brown, 2006; Smyth, 2001; Sumon Ariyapitipun, 2003).

Table 9: Thai Consonant Clusters in the Initial Position

Thai Letter	Phonetic Symbol of Consonant Cluster
	Initial
ปร-	/pr/
ปล-	/pl/
ตร-	/tr/
กร-	/kr/
กล-	/kl/
กว-	/kw/
พร-, ผร-	/phr/
พล-, ผล-	/phl/
คร-, ขร-	/khr/
คล-, ขล-	/khl/
คว- ขว	/khw/

2.3.3 Vowels

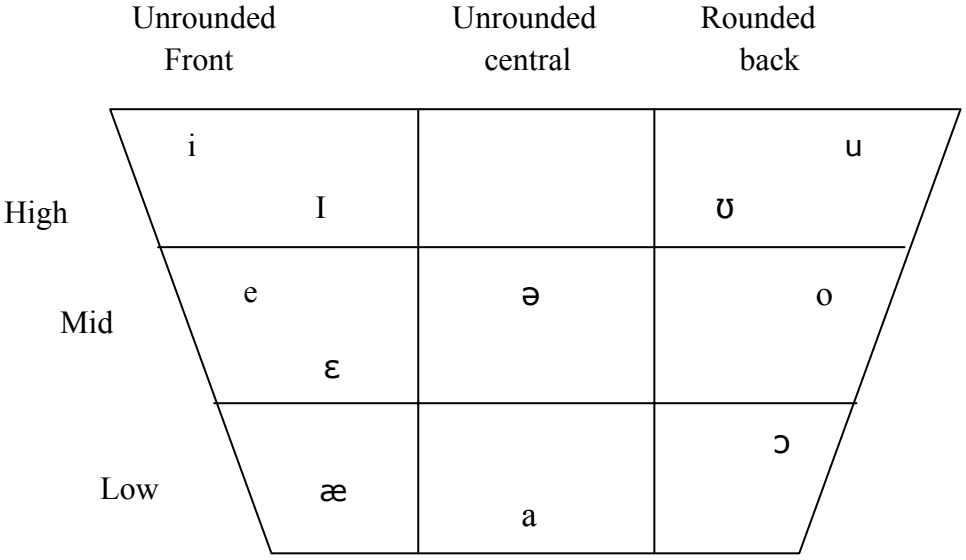
A vowel is a type of sound for which there is no closure of the throat or mouth at any point where vocalization occurs. In nearly all languages, words must contain at least one vowel (McGuigan, 2007). Sumon Ariyapitipun (2003) describes that the two components which make each vowel different are 1) the changes in the position of the tongue (front, center, back) which is raised towards the hard or soft palate and 2) the shape of the lips (spread, neutral, rounded). If the sound is produced at one position then it is called a monophthong but if it is made by gliding from one vowel position to another then it is called a diphthong.

English

The vowel sounds are produced with vibration of the vocal cords but there is no difference in manner of articulation, so it's all about where the air flow is obstructed. Vowels in English are mostly monophthongs and diphthongs (Sumon Ariyapitipun, 2003).

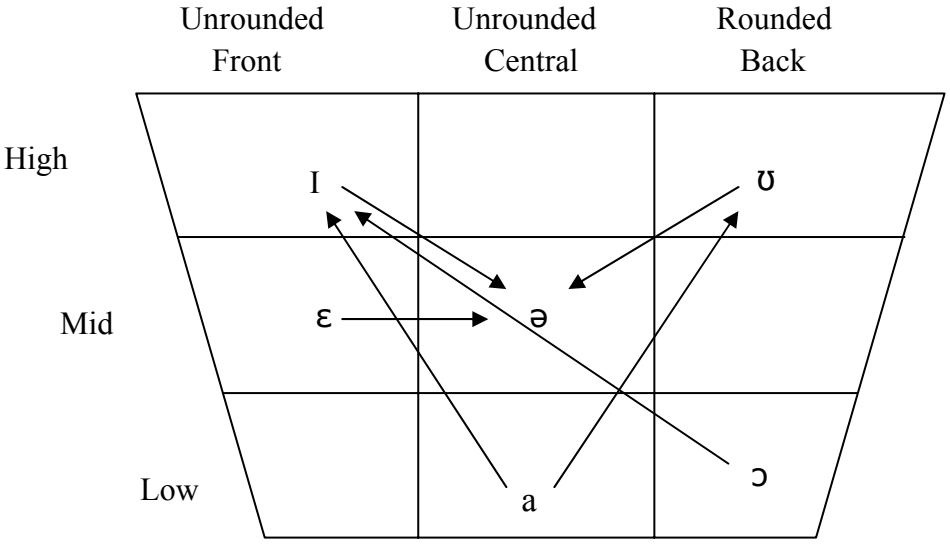
Monophthongs: English monophthongs or pure vowels are /i/ as in 'peel', /ɪ/ as in 'pill', /e/ as in 'pail', /ɛ/ as in 'pet', /æ/ as in 'pat', /a/ as in 'pot', /ə/ as in 'putt', /ɔ/ as in 'Paul', /o/ as in 'pole', /ʊ/ as in 'pull' and /u/ as in 'pool' (Lane, 1993).

Figure 1. American usage symbols for some English vowel phonemes used by Fries and Pike



Diphthongs: As shown by Lane (1993), there are only three true diphthongs in English. The first two are produced by gliding the tongue towards /ɪ/ to create /aɪ/ (as in 'cite') and /ɔɪ/ (as in 'boy), and another one is produced by gliding the tongue towards /ʊ/ to create /aʊ/ (as in 'how'). However, Sumon Ariyapitipun (2003) suggested in her study that there are three more diphthongs in English which are produced by gliding the tongue towards /ə/. Those diphthongs are /ɪə/ (as in 'fear'), /ɛə/ (as in 'care') and /ʊə/ (as in 'sure').

Figure 2. The English diphthong diagram. The arrows indicate the movements of the tongue in producing the diphthongs

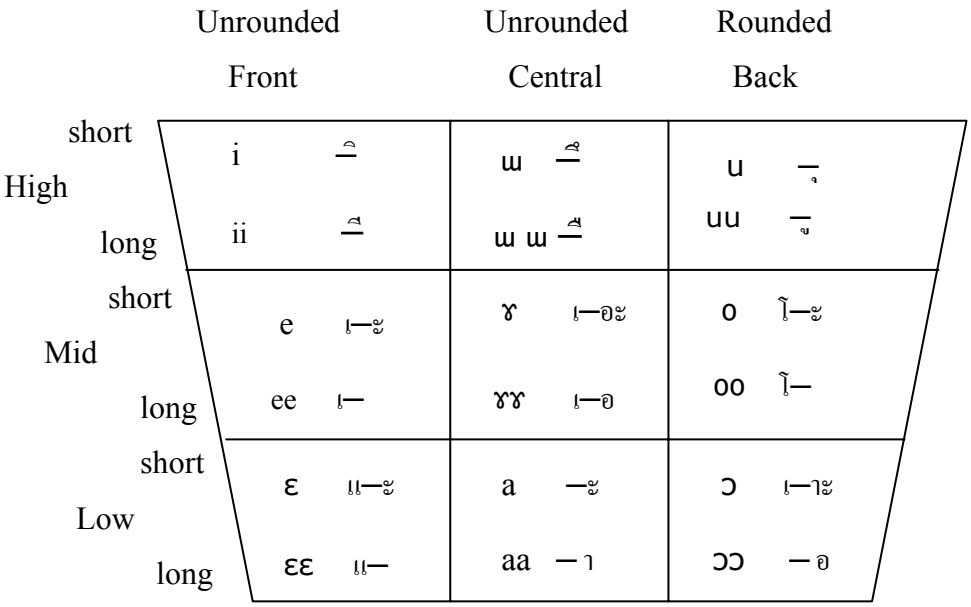


Thai

The vowel system of Thai language is composed of 18 monophthongs and 6 diphthongs. The length of the vowel sounds, short and long, is an important characteristic used to distinguish the meaning of words (Sumon Ariyapitipun, 2003). In writing Thai vowels are placed differently from English because instead of being placed after the initial consonant, some are placed *before* the initial consonants, some *after* the consonants, some *above* the consonants, and some *underneath* the consonants. The vowels that are **"complex"** forms (i.e. composed of more than one part such as เ–ียะ, and เ–ือะ) can be placed around the consonants (Yuphaphann Hoonchamlong, 2007). Thai pronunciation is heavily dependent on vowels. Thai has many more vowel sounds than English, and in Thai it is important to pronounce vowels distinctly (McKenzie-Brown, 2006).

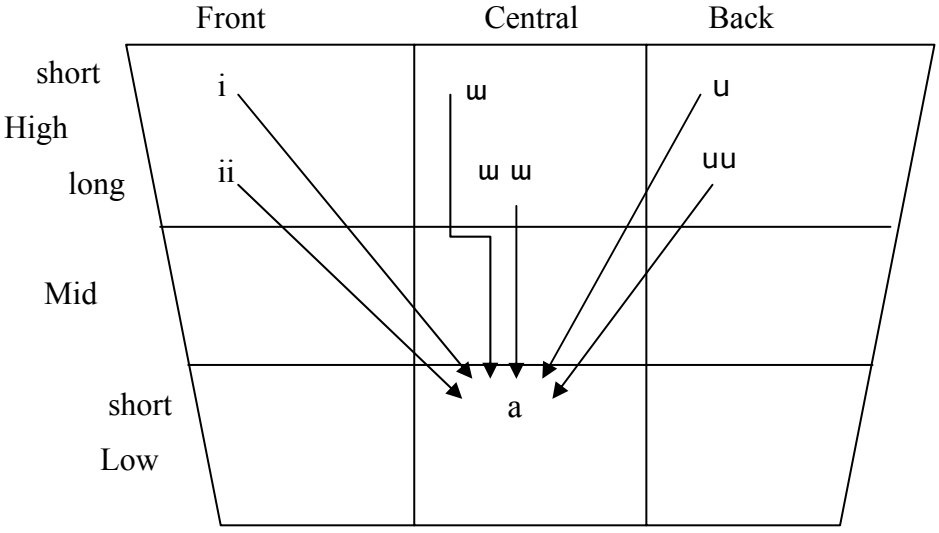
Monophthongs: Monophthongs in Thai also have short and long length in the vowel sounds. The dash (–) indicates the position of the initial consonant after which the vowel is pronounced (Sumon Ariyapitipun, 2003).

Figure 3. Phonetic symbols for Thai vowel phonemes



Diphthongs: Diphthongs in the Thai vowel system are called “falling diphthongs” because they are made by gliding down from high vowel positions to the low vowel position.

Figure 4. Thai diphthongs



The following are the six diphthongs in the Thai language system. Note that they are paired. Each pair is composed of a short and long vowel.

/ia/ →	เ◌ียะ	[iia] →	เ◌ีย
/ɯa/ →	เ◌ือะ	[ɯɯa] →	เ◌ือ
/ua/ →	◌ัวะ	[uua] →	◌ัว

(Sumon Ariyapitipun, 2003)

2.3.4 Stress

Stress is the amount of muscular energy given to some syllables in relation to others (Sumon Ariyapitipun, 2003). A stressed syllable is a syllable produced by pushing more air out of the lungs relative to others. Thus, it has a greater amount of energy than the unstressed syllables (Ladefoged, 1982).

English

Ohata (2004) states that the stressed syllables in English are marked primarily by making vowels longer and louder and it is often referred to as a "stressed accent language" (Gimson, 1989). Apart from the loudness and length, if a word or a syllable in a word is produced with higher pitch or with more quality, it will be perceived as stressed. Stress is put on a syllable when the syllable is pronounced with such emphasis in order to give it more importance than the surrounding syllables and to make it stand out among them (Sumon Ariyapitipun, 2003).

Lane (1993) stated that in some languages, the stressed syllables always are at the same place. This kind of stress is called, fixed word stress (such as Czech, Polish and Swahili) (Ladefoged, 1982). However, stress in English is characterized as "free stress", or variable word stress, because the stress can occur on any syllable depending on various factors, not the place in the utterance.

According to Sumon Ariyapitipun (2003), there are no perfect rules for determining which syllable of a word should be stressed but she suggested some as below:

- The two-syllable words (at least three out of four) are mostly stressed on the first syllable.

  Examples: BREAKfast

  SANDwich

- A group of words which can be used either as nouns or verbs without a change in their spelling. If it is a noun, stressed on the first syllable but if it is a verb, stress on the second syllable.

  Examples:

Noun	***Verb***
CONduct	conDUCT
IMport	imPORT

- Polysyllabic English words that ends in -al, -ate, -ble, -lly, -lar, -ment, -y, -ty, -fy, -ize, and –ise are stressed on the third syllable counted from the end.

  Examples:

ecoNOmical	OPtical
reLIable	POSsible
NAturally	ACtually

- Polysyllabic English words that end in –ian, -ic, -ish, -sion, -tion, -tive, -tor, and –ten are stressed on the second syllable counted from the end.

  Examples:

barBArian	hisTOrian
disTINguish	acCOMplish
satisFACtion	ocCAsion

- Numbers ending in –teen receive a primary stress on the last syllable to distinguish clearly between “forty” and “forteen”.

  Examples:

THIRty	thirTEEN
FIFty	fifTEEN

<u>Thai</u>

Since Thai is a tonal language, every syllable in Thai carries a certain fixed tone. Thais tend to give equal weight and timing to each syllable together with the fact that tonal pitch is located on single syllables (Smyth, 2001). And because the high and low pitch in every syllable in Thai is depended on tone not stress, Thai language then does not seem to have a stress pattern.

2.3.5 Intonation

Intonation is the rising and falling of the voice as we speak (Lane, 1993) or the change of pitch (as cited in: Fact Sheet-What is Pronunciation website). And the functions of intonation are not always the same in all languages (Wilkins, 1976).

English

In English, intonation is a pattern of the rising and falling pitch of the voice at the sentence level which conveys emotions, feelings and attitudes of the speakers (Ariyapitipun, 2003). As Wilkins (1976) added that other than to express emotions, English intonation can also be used to express grammatical meaning. Therefore, by intonation, we can change the function of a sentence, turning a declarative sentence into a question or an interrogative in to an exclamation. There are five major patterns of tones identified of how intonation works, and those are:

- A falling pattern used to indicate that the speaker has finished.
- A rising intonation signals a question or continuation.
- A fall-rise tone signals definiteness combined with some qualification.
- A rise-fall is usually used to signal strong feelings of surprise or approval or disapproval.
- A level tone signals boredom, routine or triviality.

Ladefoged (1982) has also summarized the possible intonation patterns and demonstrated on a single word as below:

Yes	falling	=	“The answer is yes.”
Yes	high (rising)	=	“Did you say ‘yes’?”
Yes	low (rising)	=	“Please go on, I’m listening.”
Yes	falling-rising	=	“I’m doubtful.”
Yes	rising-falling	=	“I’m certain.

As for intonation in sentences, Ariyapitipun (2003) used a system that divides the pitches into four types as below (Prator and Robinett, 1985):

4 = extra-high

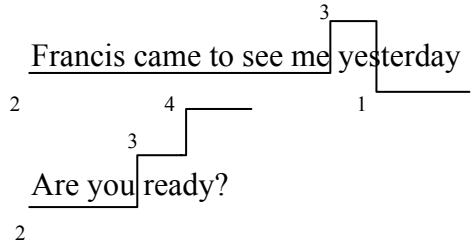
3 = high

2 = normal

1 = low

She also shows the movements of the voice up or down by drawing lines at four different levels over or under the passage being explained.

Examples:



Ariyapitipun (2003) claimed that the two most important intonation patterns in spoken English are rising-falling intonation and rising intonation.

Rising-Falling Intonation: It usually indicates finality and is used at the end of the following kinds of sentences:

- *Simple Statements of Fact*

  Example: I have no idea who the boy is.

- *Commands*

  Example: Do what I tell you.

- *Wh-Questions*

  Example: How are you feeling?

- *Exclamations*

  Example: Good heavens!

- *Tag-Questions (agreement expected)*

  Example: You like the shirt, don't you?

- *Short Yes-No Questions (as a response)*

  Example: (A: I met Ken last night at the movie.)
  B: Did you?

Rising Intonation: It normally used at the end of the following kinds of sentences:

- *Simple Yes-No Questions*

  Example: Is he your friend?

- *Statements Intended as Questions*

  Example: You like it?

- *Tag-Questions (real questions) and Tag-Questions after commands*

  Example: Your teacher's name isn't Sofia, is it?

- *Requests*

  Example: One more time, please.

Thai

Thai is tonal, but no intonation. Each word has its tone but the tone will never change syntactically because if the tone changes, so does the meaning. So the tones in Thai will never change wherever they occur in a sentence.