English Loanwords Adaptation in Kelantan Dialect

Abstract

English language has a strong influence in human interaction. In linguistics, the influence of English language could be seen through loanwords. English has largely been borrowed by other languages including Malay and its dialects particularly the Kelantan dialect. Thus, this study intends to discuss the adaptation strategies when the Kelantan dialect borrows words from English. Secondly, this study examines the source of input involves in the loanwords process, which could either be perception, phonology or perception-phonology and then constructs a model for Kelantan dialect loanwords. A total of 185 data obtained from both Shapri (1980) and supplement data from fieldwork in Kota Bharu, Kelantan were analysed. From the analysis of how Kelantan speakers adapt English consonants and vowels, it is revealed that consonant substitution, consonant deletion, debuccalisation and vowel epenthesis are the strategies adopted by the speakers in the adaptation process of the loanwords. The data and loanwords adaptation processes are related to the issue of how perception and phonology play its role as a source of input in the Kelantan dialect loanwords adaptation. In addition, this analysis also illustrates how the loanword adaptation incorporates perception and phonology and how these two could be modelled. This study has contributed to the information on the phonological competency among the speakers of the Kelantan dialect and the understanding towards the loanwords process.

Keywords: loanwords adaptation; Malay; Kelantan dialect; phonology; perception.

INTRODUCTION

Language is human communication tool which functions as a tool to interact and communicate with one another. It symbolizes the identity of the speech community and reflects the values and traditions of its members. The blending of socio-cultural, colour, language and political events have resulted in diversity of every aspect of human life, which then leads to a transfer of linguistic features which is known as language contact. Thomason (2001) claims that anything could be borrowed in prolonged language contact, "As long as the contact situation is intense enough and lasts long enough, anything can be borrowed especially if there is a dominance asymmetry between the groups in contact".

One of the consequences of language contact is borrowing words from one language to another. Lian-Hee Wee (2008) states that, "... when languages come in contact, as they have for so long, one of the most obvious of the many interesting things that happen is borrowing." This view is shared by Campbell (2004: 57) who asserts that, "It is common for one language (actual speakers of the language) to take words from another language and make them part of its own vocabulary; these are called loanwords and the process is called linguistic borrowing". Given that borrowing words are common and there is a close relationship between different linguistic communities, one could not avoid this phenomenon/situation (Hashemi et al. 2014).

The process of borrowing words from one language to another is not an uncommon process as every language in the world has borrowed from other languages, although the degree of borrowing might be different from one to another. As the consequence of borrowing words, English has a much larger vocabulary and has become an international language. The same applies to Malay whereby this language has been influenced by other languages such as Sanskrit and then was followed by Arab in the 11th century. Since the 21st century, English has been a dominant international language which influences many other languages and Malay is one of them.

Hence, this study intends to discuss one of the aspects on how Malay could be affected by the dominance of English through loanwords. The discussion of English loanwords will be focusing on one of the Malay dialects namely, the Kelantan dialect (henceforth, KD). This

study then seeks to examine three other objectives which are: (1) to discuss the adaptation strategies employed when the KD borrow words from English and (2) to examine the source of input involved in the loanwords process either perception, phonology or perception-phonology, and (3) to construct a model for the KD loanwords.

ENGLISH LOANWORDS IN WORLD'S LANGUAGES

Sohn (2001) discusses English loanwords in Korean by focusing on words ending with coronal consonants /t, t^h, s, s', c, c^h, and c'/. When English words are borrowed into Korean, coronal consonant at word-final position would change to [t] for example, /robot/ and /format/ are realised as [ropot] and [p^ho:met], respectively. Apart from that, vowel epenthesis also occurs when English words are borrowed as in /head/ becomes [hetɔ]. However, there is a problem when the coronal consonant is followed by [-i] 'nominative' or [-e] which are realised as [s], as shown below:

TABLE 1. English loanwords in Korean

[p^hiramitɔ]	→	[p^hiramit] 'piramid'
[p^hiramitɔ-ka]	→	[p^hiramis-i] 'piramid-nominative'
[p^hiramitɔ-e]	→	[p^hiramis-e] 'piramid-locative'

In the analysis, Sohn (2001) claims that coronal consonants [t] and [s] in a word-final position which occur before the surface level is influenced by the speakers' perception. He further claims that English loanwords in Korean are kept in the lexicon as a free noun, regardless of the word class in the source language. Sohn (2001) stresses the importance of perception as a source of input when it is retained in the lexicon as a free morpheme as it fulfils the prosodic requirement and is not bounded to any syllable structure requirement.

Labrune (2002) examines the prosodic structure of simple abbreviations of English loanwords in Japanese such as /terebi/ → [terebizyon] 'television' and /mentamu/ → [mensoreetamu] 'mentholetum'. Meanwhile, Kenstowic (2007) discusses word stress in English loanwords adaptation in Fiji by focusing on the auditory salience and similarity. The analysis of 800 words stress by Schutz (1999) showed that strategies such as lengthening and rhyme were applied to maintain the stress, as exemplified below:

TABLE 2. Strategies of English loanword Adaptation in Fiji

Stress adaptation	English	Fiji
lengthening	bazáar	bazá:
	cábin	kè:bíni
lapse via vowel lengthening	whísky	wísikí:
	dóctor	dòketá:

Other adaptation strategies such as consonant clusters, vowel epenthesis and voiced plosive substitution were also discussed by Kenstowic (2007). Consonant clusters have always been resolved by vowel epenthesis, while the final consonant in the cluster would always be shortened when it is in word-final position, as shown below:

TABLE 3. Consonant cluster adaptation in Fiji

English	Fiji

1)	Vowel epenthesis	**st**eak	sitéki
		u**lc**er	àlasá:
		fi**lm**	fi:límu
2)	Shorthening	sergea**nt**	sà:tíni
		almo**nd**	à:módi

Besides Korean, Japanese and Fiji, English is also borrowed into Burmese. According to Chang (2009), four main adaptation strategies were utilised in the borrowing practice. Firstly, non-native phoneme would be replaced by the native form when it does not exist in the Burmese phoneme inventory. The following examples, illustrate how English phonemes such as /f/, /ʒ/, /ae/ and /ɔi/ would become [p^h], [ʃ], [ɛ] and [wãĩ], respectively in Burmese.

TABLE 4. English Phonemes adaptation in Burma

Phonemes substitution	English	Burma
/f/ → [p^h]	feeling	[p^hi.lĩ]
	film	[p^hə.lĩ]
/ʒ/ → [ʃ]	Asia	[ʔà.ʃa]
	Malaysia	[mə.léí.ʃá]
/ae/ → [ɛ]	Jack	[ʤɛʔ]
	captain	[kɛʔ.pə.tèĩ]
/ɔi/ → [wãi]	boy	[bwáí]
	joy	[ʤwãi]

Secondly, the presence of consonant in a coda position would be transformed into: (1) Obstruent in a coda position would be substituted by a glottal stop. In this case, all types of obstruent consonants would undergo debuccalisation, regardless of its voicing feature, (2) nasal segment in this position would change into a nasalised vowel and (3) the lateral consonant would be deleted. The three consonant adaptation strategies are presented below:

TABLE 5. English Coda consonant adaptation in Burmese

Coda consonant	English	Burmese
1) Coda obstruent	make-up	[meʔ.kʌʔ]
	tibet	[ti.bɛʔ]
	march	[maʔ]
	club	[kəlʌʔ]
2) Coda nasal	auntie	[ʔã.ti]
	rum	[jã]
3) Coda lateral	April	[ʔèì.pji]
	e-mail	[ʔi.méí]

Thirdly, there are two ways to solve consonant cluster in English loanwords in Burmese: (1) schwa epenthesis occurs to break up consonant cluster when the cluster is in the onset position, and (2) debuccalisation or deletion occurs when the consonant cluster is at the coda position. These two adaptation strategies can be clearly seen in the examples below:

TABLE 6. Consonant cluster adaptation in Burmese

Consonant cluster	English	Burmese
1) Onset position	glider	[gə.laiʔ.dà]
	sprite	[sə.pə.jaiʔ]
2) Coda position	golf	[gauʔ]
	Egypt	[ʔi.ʤɪʔ]

Similar to Burma, Punjabi also applied strategies like epenthesis and phoneme substitution in their loanwords. According to Rashid et al. (2011) the adaptation strategies could occur simultaneously, as exemplified below:

Table 7. Types of adaptations of English loanwords in Punjabi

Type of adaptation	**English**	**Punjab**
Epenthesis	[spi:d]	[səpi:d]
Epenthesis	[ku:lə(r)]	[ku:lər]
Epenthesis and substitution	[kreɪn]	[kəre:n]
Epenthesis and substitution	[peɪpə(r)]	[pe:pər]
Epenthesis and substitution	[træktə(r)]	[təræktər]
Epenthesis and substitution	[draɪvə(r)]	[dərævər]

METHODOLOGY

Data for this study were taken from (1) secondary data obtained from Shapri (1980) and (2) fieldwork through observations carried out in Kota Bharu, Kelantan. Shapri (1980) has listed as many as 130 words which have been borrowed into the KD. All the words were listed based on the word class, for examples, noun, verb and adjective. However, not all of the words were used as they were not relevant to this study. All the 130 words have undergone a screening process based on two criteria, which are (1) not an affixed word – only a root word, and (2) not an acronym. Thus, this is the reason why not all of the secondary data from Shapri (1980) were not considered as part of the data for this present study.

The observations were carried out by participating in the community. It was conducted in Kota Bharu, Kelantan and the surrounding areas particularly at shopping malls, markets and public transportation stations for five days. All the data from the observations were jotted down and recorded. There were about 55 words obtained from the observations and some of them were the same as listed by Shapri (1980) and some were not, as presented in Table 8 below. The total number of data which was obtained from Shapri (1980) and the observations were 185 words.

TABLE 8. Data from the observations in Kota Bharu, Kelantan which were not listed by Shapri (1980)

English		KD	
Words	Phonetic representation	Words	Phonetic representation
absorber	əbzɔ:bər	saksoba	saʔsɔba
adjust	əˈdʒʌst	ejah	ejah
bag	bæg	bek	beʔ

The pronunciation of English words in the KD has been modified and changed particularly for words which contain nasal segment in the coda position of a syllable. The modification in the pronunciation of the borrowed words is relatively common when borrowing words from other languages. As highlighted by Cruttenden (2013; 62), the pronunciation of a language is always changing. Likewise, English has undergone a lot of modifications thousand years ago whereby this has affected every aspect of the language namely, morphology, syntax, vocabulary and its pronunciation. For instance, the English word 'poor' was pronounced as /Ʊə/ by the older generation, but as [ɔ:] by the younger generation. This notion was also maintained by Trask (1994: 19) who states that, "like other aspects of language, pronunciation changes over time". Therefore, it is not surprising that different pronunciations also occur in loanword. Taking this into account, all the secondary data obtained from Shapri (1980) were verified by the speakers of the dialect themselves who confirmed whether the words are pronounced the same as stated by Shapri (1980). Some of the words which being verified are as follows:

TABLE 9. The Confirmed Data from Shapri (1980)

Data from Shapri (1980)	English		KD	
	word	Phonetic representation	word	Phonetic representation
ɛgremin	agreement	əˈgriːmənt	egrimen	ɛgremiŋ
bolpeːn	ball pen	ˈbɔːlpɔɪnt	bolpeing	bolpeːŋ
tʃɛkə	checker	ˈtʃekər	cheko	tʃɛkɔ

ENGLISH AND KELANTAN PHONEMIC INVENTORIES

This section presents and compares the inventories of consonant phonemes for English and the KD. Phonemes inventory is fundamentally important in analysing loanwords. This is because it explains how segment adaptations occur and forms a background about the adaptation process. Hayes (1986) states that the basic sounds; that is the minimal units which differentiate the basic sounds and the words which are the phonemes should be the first to be examined before initiating any phonological analysis. Furthermore, phonemes inventory is necessary when the consonant and the phonotactic systems of the borrower's language are different from the donor's language (Smith 2006: 82). Thus, the discussion on the phonemes inventories in this paper will be the starting point for analysing English loanwords into the KD.

ENGLISH PHONEMIC INVENTORY

Ladefoged (2001) has listed 24 consonant phonemes in English. The phonemes put in categories based on the places of articulation (POA) and the types of consonants (TOC), as shown below:

TABLE 10. The phonemes inventory for English consonant

POA / TOC	Bilabial		Labiodental		Dental		Alveolar		Palatal-Alveolar		Palatal		Velar		Glottal stop
Stop	p	b					t	d					k	g	ʔ
affricate									ʧ	ʤ					
Nasal		m						n						ŋ	
Fricative			f	v	ɵ	ð	s	z	ʃ	ʒ					h
Approximant		(w)						r				j		w	
Lateral								l							

The above chart shows that English has as many as 26 consonant phonemes. This number contradicts from the one which previously claimed that this language has 24 consonant phonemes only. This is because of the phonemes [tʃ] and [dʒ] are not in the included in the inventory. Ladefoged (2001) classifies [ʧ] and [ʤ] as phonemes that are articulated through stop. Besides, these two phonemes were not included in the English's inventory chart by Ladefoged (2011: 43) due to the confusion of putting them either at the place of articulation of palatal-alveolar or alveolar. In the above chart, [ʧ] and [ʤ] have been classified as affricates since both are articulated through the combination of stop (plosive) and fricative, as mentioned by McMahon (2002), "*the subclass of affricatives consists of sounds which starts as stops and end up as fricatives,…the two relevant sounds for English are [ʧ],…., and its voiced equivalent [ʤ]*…". Meanwhile, the phoneme [w], as shown in the inventory chart above, has been classified as belonging to two places of articulation i.e. bilabial and velar. This is because this phoneme is articulated by narrowing the bilabial and by rising the back of the tongue towards velar (Ladefoged & Johnson 2011: 43).

KELANTAN DIALECT PHONEMIC INVENTORY

The KD has 20 phonemes, as claimed by Ajid (1985). In his discussion, Ajid (1985) categorises the phonemes [t] and [d] as *alveo-dental.* According to him, these two phonemes are produced by making a closure with the tongue to alveo-dental to hinder the air. Then, the air is released immediately. When the air is released, the velum is raised to block the air from passing through the nasal tract. According to Ladefoged & Maddieson (1996), the term *alveo-dental* refers to the consonants which are produced with a flat tongue raises to the upper dental, the same as how Spanish and French pronounce them. Shown below is the inventory chart for the KD:

TABLE 11. The phonemes inventory for consonants in the KD

POA / TOC	Bilabial		Labiodental		Dental		Alveolar		Palatol-Alveolar		Palatal		Velar		Glottal stop
Stop	p	b					t	d					k	g	ʔ
affricate									ʧ	ʤ					
Nasal	m						n				ɲ			ŋ	
Fricative							s	z						ɣ	h

Approximant	w										j				
Lateral								l							

As presented in TABLE 10 and TABLE 11 above, English has more consonants than the KD. This language has extra six consonants compared to the KD. Nevertheless, English and the KD also share the same number of consonant phonemes, specifically 16 phonemes. The shared phonemes are /p, b, t, d, ʧ, ʤ, k, g, m, n, ŋ, s, z, j, l, w/. Meanwhile, there are eight English consonant phonemes which are not found in the KD, which are, /f, v, ɵ, ð, ʃ, ʒ, (w), r/. English, however, has no consonant phonemes /ɣ/ and /ɲ/ as the KD.

In terms of the place of articulation, the KD has no consonant phonemes which are articulated at both labiodental and dental. Therefore, the dialect has no phonemes /f, v,ɵ, ð/ as these phonemes are produced at the labiodental and dental place of articulation. Consequently, these phonemes would either be retained or replaced with other phonemes which have similar features when foreign words are borrowed into the KD. English consonants which have their correspondent phonemes in the KD show no adaptation. This means that consonants which exist in both languages would remain the same when borrowing occurs, while those which are not, need to be replaced with the native phonemes. The adaptation of English consonants in the KD supports Steriade's (2001) claim that "*the least distinctive contrast whose modification resolves the violation*."

STRATEGIES OF ADAPTATION

Based on the data observed, this study reveal a number of adaptation strategies utilised when English words were borrowed into the KD. The strategies are consonant substitution, consonant deletion and debuccalisation, as discussed subsequently. All of the adaptation strategies were categorised based on the same phonological behaviour shown by the data.

CONSONANT SUBSTITUTION

Consonant substitution is a term used in linguistic particularly in phonology to refer to a situation when one item is replaced or substituted by another item in a particular domain and structure (Crystal 2008: 463). In phonology, this process is known as a substitution. In loanwords context, phoneme or consonant substitution occurs when a phoneme is substituted with another phoneme in the lexical. Phoneme substitution is a strategy used in a language to retain a sound from being deleted. Phoneme substitution yields an output that is very similar to its input. The very similar output, however, is not permitted in the borrower's language[1]. Therefore, the phoneme has to be replaced by another phoneme that is very close to the borrower's language (Hock 1991). According to Peperkamp & Dupoux (2003), the input sound in the donor's language would be mapped to any sound which is closer to the recipient's language when the adaptation process occurred. If the sound could not be found in the recipient's language, hence it would be replaced by any sound which is closer to the recipient's language.

In the case of the KD, not all consonants could be substituted when English words are borrowed into the dialect. English consonant /f/ for example, is used and retained in the KD, while other consonants would undergo substitution, as shown in the table below:

[1] The use of recipient language and donor language refer to the term loanword given by Cambell (2004:63). He defines loanword as borrowing lexical from donor language and it is adapted to recipient language as a part of the borrower's dictionary.

TABLE 12. English consonant substitution in the KD

Bil	Consonant substitution	English		KD	
		word	Phonetics representation	word	Phonetics representation
i	b → p	fire brigade	faɪər **b**rɪgeɪd	faye preget	faje **p**ɣɛgɛʔ
ii	r →ɣ	trip	t**r**ɪp	trek	t**ɣ**əʔ
		trawler	t**r**ɔ:lə(r)	trela	t**ɣ**ɛla:
iii	f →p	office	o**f**ɪs	opih	O**p**ih
		form	**f**ɔ:m	pom	**p**ɔm
iv	v→ b	navy	neɪ**v**i	nebi	nɛ**b**i
		driver	draɪ**v**ər	dreba	dre**b**a
v	ʃ →s	show	**ʃ**əʊ	so	**s**o:
		machine gun	mə**ʃ**i:n gʌn	mesen gan	me**s**eŋ gɛn
vi	k→s	clear	**k**lɪə(r)	slie	**s**lio:
vii	t →ç	tear	**t**eə(r)	ce	**ç**ɛ:

As demonstrated in TABLE 12, consonants in (ii) to (v) display the English consonants which have undergone substitution to other consonants that are very similar to those in the dialect. This situation is called nativisation, a state described by Trask (2000: 200) as:

> "When there is widespread bilingualism between speakers of two closely related languages, speakers will often be keenly aware of the phonological and morphological correspondences holding between the two languages. In such circumstances, a loan word may be nativized replacing each of its segments with the regularly corresponding segment in the borrowing language [...] As a result, the borrowed items may be indistinguishable from native formations [...]."

According to Trask (2000), words borrowed from other languages would normally undergo nativisation by substituting the non-native phoneme with a native phoneme. As substitution occurred, the borrowed foreign words would be difficult to distinguish from the native words. Besides Trask (2000), Hock & Joseph (2009: 241) have also discussed substituting non-native segments to native one particularly when the sound is not found in the borrower's language since it is not included in the borrower's inventory phoneme. When this occurs, the foreign sound would be replaced by a very similar sound to the borrower's language.

The occurrence of consonant substitution is to obey the coda condition in the dialect. As claimed by Adi Yasran (2005), three consonants which are allowed to be at the coda position of the dialect, are, [ʔ, h,ŋ], as shown in the following examples:

TABLE 13. Substitution to [h]

phonemes	English		KD	
	word	Phonetics representation	word	Phonetics representation
s→h	adjust	əˈdʒʌ**s**t	ejah	edʒa**h**
f→h	golf	gɔ:l**f**	goh	gɔ**h**
k→h	big work	bɪg wɜ:**k**	bekwoh	bɛʔwɔ**h**
z→h	pause	pɔ:**z**	poh	pɔ**h**

v→h	reserved	rɪˈzɜːvd	ghizeh	ɤize**h**
t→h	so hot	səʊ hɒ**t**	sooh	sɔ.o**h**
ʃ→h	switch	swɪt**ʃ**	suih	su:wi**h**

TABLE 14. Substitution to [ʔ]

phonemes	**English**		**KD**	
	word	Phonetics representation	word	Phonetics representation
t → ʔ	chocolate	çɒklə**t**	coklak	çɔkla**ʔ**
g → ʔ	bag	bæ**g**	bek	be**ʔ**
k → ʔ	tractor	træ**k**tə(r)	trekta	tɣe**ʔ**ta:
b → ʔ	club	klʌ**b**	klak	kla**ʔ**
d → ʔ	fire brigade	faɪər brɪˈgeɪ**d**	faye preget	fajə pɣɛgɛ**ʔ**
p → ʔ	trip	trɪ**p**	trek	tɣə**ʔ**

TABLE 15. Substitution to [ŋ]

phonemes	**English**		**KD**	
	word	Phonetics representation	word	Phonetics representation
n → ŋ	line	laɪ**n**	laing	lajiŋ
m → ŋ	time	taɪ**m**	taing	tajiŋ

The adaptation process discussed above can be generalised as, (1) the consonant substitution depends on the place of articulation of the substituted consonant, (2) the pronunciation, and (3) voicing features. Alveolar consonant is substituted by velar consonant, as in (b), an alveolar consonant is adapted to a palatal consonant, as in (vii), labiodental consonants are adapted to bilabial consonants, as in (c) and (d), while velar consonant is changed to alveolar consonant, as shown in (e) and an alveolar-palatal is adapted to an alveolar, as in (vi). The consonant adaptation process also affects the pronunciation when the consonant type changes. For examples, the plosive sound is changed to fricative consonant, as in (v) and (viiɨ) and the fricative to a plosive consonant. The same scenario applies to the consonant voicing feature namely when voiced consonant is changed to a voiceless consonant, as in (i) whereby [b] is changed to [p]:

[faɪər **b**rɪˈgeɪd] → [fajə **p**ɣɛgɛʔ**]**

CONSONANT DELETION

The second adaptation strategy employed in the KD loanwords is known as consonant deletion. The KD speakers also delete some of the consonants when English words are borrowed into the dialect. In the case of consonant deletion, the consonant which is deleted would not be replaced by other consonants in the KD unless if the consonant were /r/ which would then be adapted to /ɣ/. As can be observed in the following examples, deletion could occur at any position of the word.

TABLE 16. Consonants deletion

phonemes	English		KD	
	word	Phonetics representation	word	Phonetics representation
r→ ∅	carrier	kæ**r**iə**r**	karia	ka**ɣ**ija
	checker	ʧekə**r**	cheko	ʧɛkɔ
	corner	kɔ:**r**nə**r**	kona	kɔna
	colour	kʌlə(**r**)	kala	kala
	driver	draɪvə**r**	dreba	dreba
	tractor	t**r**æktə(**r**)	trekta	t**ɣ**eʔta:
h → ∅	handball	**hæ**ndbɔ:l	ebo	**ɛ**bo
	handle	**hæ**ndl	enda	**ɛ**nda
	heading	**he**dɪŋ	eding	**ɛ**diŋ
l → ∅	bulb	bʌ**l**b	bo	bo
	cancel	kæns**l**	kese	kɛsɛ
	double	dʌb**l**	daba	daba
	golf	gɔ:**l**f	goh	gɔh
d → ∅	adjust	əˈdʒʌst	ejah	edʒah
	mudguard	mʌ**d**gɑ:d	magad	magaʔ
	sound	saʊn**d**	saung	sauŋ

The consonant deletion which occurs in English loanwords in the KD as discussed beforehand relates to the syllable structure of the dialect. As can be seen above, /r/ deletion occurs at word-medial and word-final positions. Nevertheless, the /r/ which is retained as in **[**draɪvər] 'driver' is realised as [dreba] or be replaced to /ɣ/, as in [træktə(r)] 'tractor' which is realised as [t**ɣ**eʔta:] when it is the second consonant of the word. Whilst for /h/, the deletion of this consonant occurs at the word-initial position. For example, both /h/ and the vowel follows it is replaced by /ɛ/ as in [hændbɔ:l] 'handbag', which is pronounced by the KD speakers as [**ɛ**bo]. Meanwhile, the deletion of consonant /l/ at the word-final position is replaced by a vowel. However, /l/ is deleted when it appears as the second final consonant. The deletion of /d/ occurs when this consonant is at word-medial and word-final positions. In short, the deletion of consonants in English loanwords in the KD has two different patterns that are, deletion with no replacement or with replacement. Deletion with replacement occurs either by replacing the deleted consonant with a vowel or with a native segment.

DEBUCCALISATION

Debuccalisation is a process that affects the sounds whereby the consonant loses its original place of articulation and becomes [h] or [ʔ]. Sanskrit, Germany, Proto-Greek and many others are some of the world's languages which have debuccalisation (O'Brien 2012). To some Malay scholars, this phonological process however, is regarded as a process that changes the voiced velar plosive /k/ to glottal stop [ʔ] and it is identified as Glottal Stop Formation in rule-based approach.

In the case of English loanwords in the KD, the changes of articulation places of some consonants have resulted in the consonants to become either [h] or [ʔ]. It has been claimed that plosive consonants like /p/, /t/ and /k/ in word-final position in the KD would change to [ʔ] (Adi Yasran 2012). The English loanwords data however, reveal that there are other consonants which could also change to [ʔ] in the KD; specifically, /g/ and /b/ as in 'plug' and 'bag' which

are pronounced as [plaʔ] and [beʔ], respectively. The following are examples of consonants that undergo debuccalisation when the KD borrows words from English.

TABLE 17. Adaptation to [h]

phonemes	English		KD	
	word	Phonetics representation	word	Phonetics representation
s →h	adjust	əˈdʒʌst	ejah	eʤah
f →h	golf	gɔːlf	goh	gʔh
k →h	big work	bɪg wɜːk	bekwoh	beʔwɔh
ç →h	tear	tear	ce	çɛː
z →h	pause	pɔːz	poh	pɔh
v →h	reserved	rɪˈzɜːvd	ghizeh	ɤizeh
t →h	so hot	səʊ hɒt	sooh	sɔ.oh
ʃ →h	switch	swɪtʃ	suih	suːwih

TABLE 18. Adaptation to [ʔ]

phonemes	English		KD	
	word	Phonetics representation	word	Phonetics representation
t →ʔ	chocolate	çɒkləʊt	coklak	çɔklaʔ
g→ʔ	bag	bæg	bek	beʔ
k→ʔ	tractor	træktə(r)	trekta	tɤeʔtaː
b→ʔ	club	klʌb	klak	klaʔ
d →ʔ	fire brigade	faɪər brɪˈgeɪd	faye preget	fajə pɤɛgɛʔ
p →ʔ	trip	trɪp	trek	tɤəʔ

The above examples show that there are a number of consonants that could be adapted to [h] or [ʔ].These consonants are not limited to /p/, /t/ and /k/ only, as previously claimed. It should be noted that work done by Adi Yasran (2012) is slightly different from other Malay scholars in the sense that he claims both /s/ and /h/ could also undergo debuccalisation as well as /p/, /t/, /k/. Adi Yasran (2012) however, claimed only /s/ and /h/ are debuccalised. This study asserts that other consonants such as /f/, /z/, /v/, /ç/ and /ʃ / also involved in the adaptation strategy, as presented in the above examples.

CONSONANT CLUSTER

In the context of English loanwords in the KD, vowel epenthesis and consonant deletion are the strategies employed in breaking up the consonant cluster. As can be seen in the following examples, vowel epenthesis occurs at any position of the word. This is in contrast with consonant deletion whereby this process only occurs at the word-final position.

TABLE 19. Vowel epenthesis in a consonant cluster of the KD English loanwords

Vowel epenthesis	**English**	**KD**

	word	Phonetic representation	word	Phonetic representation
Word-initial	frust	frʌˈst	prah	p**e**ɤah
	glee	gliː	geli	g**ə**li
	scarf	skɑːf	sekah	s**ə**kah
	smart	smɑːt	semak	s**ə**maʔ
	switch	swɪtʃ	suih	s**uː**wih
Word-medial	signal	sɪgnəl	signa	sig**ə**naː
Word-final	bottle	bɒtl	boto	bɔt**ɔ**
	cancel	kænsl	kese	kɛs**ɛ**
	lable	leɪbl	lebo	lɛb**ɔ**

TABLE 20. Consonant deletion in a consonant cluster of the KD English loanwords

English		**KD**	
word	Phonetic representation	word	Phonetic representation
accident	ˈæksɪdənt	eksiden	eʔsiden
agreement	əˈgriːmənt	egrimen	ɛgremiŋ
attendant	əˈtendənt	itande	ĩtandɛ
ball pen	ˈbɔːlpɔɪnt	bolpein	b̃olpeːn
current	ˈkʌrənt	karen	karəŋ
double breast	dʌbl brest	daba breh	daba bɤɛh
second hand	ˈsekənd hænd	sekenhen	sɛkeŋhɛn
shake hand	ʃeɪk hænd	sekenhen	sɛʔkeheŋ

SOURCE OF INPUT

There have been three major approaches to the adaptation of sound-based loanwords. They are the Perception Approach, the Phonology Approach and the Perception-Phonology Approach. The Perception Approach, asserts that the changes of non-native sounds only occur at the perceptual level while the role of phonology is indirect as it is not involved in the changes (Peperkamp & Dupoux 2003, Peperkamp, Vendalin & Nakamura 2008). However, based on the Phonology Approach, the input of the adaptation process requires access to the phonology of the donor's language, while loanwords adaptation follows category preservation/proximity principles where segment matching is based on phonological categories (Paradis & LaCharité 1997, LaCharité & Paradis 2005, Paradis 2006, Rose &Demuth 2006, Uffmann 2005).

Paradis (2006: 977) explains the differences between the Perception Approach and the Phonology Approach as follows:

> "The major difference between the two approaches lies in the code(s) to which borrowers have access during the online adaptation of a borrowing: for supporters of the phonological stance, borrowers have access to both linguistic codes, the LI and donor language (L2) codes, whereas for supporters of the perceptual stance, borrowers have access to the LI code only, their access to L2 being turned off during the adaptation process"

According to Paradis (2006), the main differences regarding the sources of input are, when the source of input is perception, speakers only have their own linguistic knowledge. In contrast to perception, when phonological input is concerned, speakers have linguistic knowledge of both languages – donor's and borrower's languages.

Under the Perception-Phonology Approach, the input of the adaptation process is based on how the borrower perceives the acoustic signals of the source language. The perception-based input then would be modified by the phonological grammar of the borrower's language (Silverman 1992, Yip 1993, 2005, Steriade 2001, Kang 2003, Kenstowic 2005). In this study, English-based loanwords in the KD are examined in light of the three models illustrating how loanwords are adapted.

It is observed that the input of English loanwords could derive from two sources, namely perception and phonology. Lin (2009) emphasises that perception can be clearly seen as the source of input through varieties of vowel adaptation. In the context of English loanwords in the KD, perception plays a crucial role in the variation patterns of the KD loanwords. Vowels from the donor language are adapted through perception given the difficulties faced by the speakers from the borrower 's language to hear the original sounds of the words they borrowed. It is assumed that speakers of the KD may not have considerable linguistics knowledge of English; hence, vowels adaptation occurred through perception which resulted in variation. The following table shows the perception of the KD speakers when vowels are pronounced:

TABLE 21. Variation in vowels adaptation

Vowel adaptation	**English**		**KD**	
	word	Phonetic representation	word	Phonetic representation
e → ɛ	ready	r**e**ady	redi	ɤ**ɛ**di
e → e	test	t**e**st	the	the
i → e	agreement	əˈgr**iː**mənt	egrimen	ɛgr**e**miŋ
i → ɛ	ceiling	s**iː**lɪŋ	seleain	s**ɛ**len
i → i	glee	g**liː**	geli	gəl**i**
ɪ → e	accident	æks**ɪ**dənt	eksiden	eʔs**i**den
ɪ → i	big work	b**ɪ**g wɜːk	bekwoh	b**e**ʔwɔh
ɪ → ɛ	jail	dʒe**ɪ**l	Jey	dʒ**ɛː**
ɪ → a	style	sta**ɪ**l	Stae	st**aː**

It is shown that the phonological system of English is also involved in the adaptation when the source of input concerns phonology. This is because English lexical are adapted freely but at the same time, the phonological system of the borrower's language is still preserved. This can be seen when English word [ˈæksɪdənt] 'accident' is pronounced in the same way as [eʔsiden] 'eksiden'. As this word contains disfavoured syllable structure of Malay, that is, CVCC at its final position, thus consonant deletion is adapted to conform to the Malay syllable structure. Besides that, the [s] and [h] are mostly adapted to match the English phoneme [ʃ]. The adaptation is because of the phoneme /ʃ/ which does not exist in the phonemic inventory of the KD.

In view of the adaptation strategies discussed and the phonological processes involved in matching the native system, a model for the KD loanwords adaptation can be constructed as shown below:

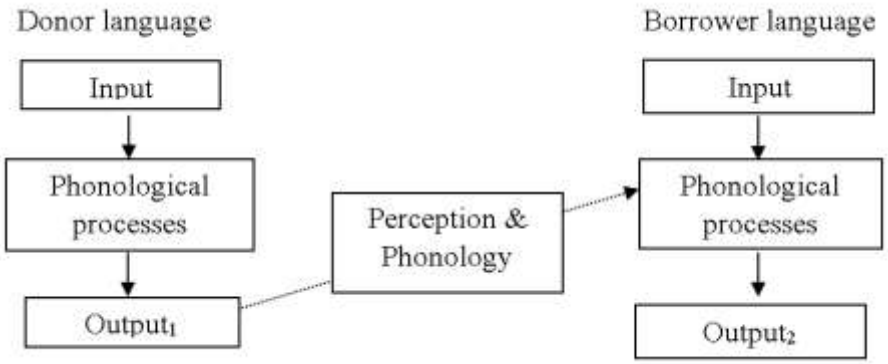

FIGURE 1. Model for English loanwords in the KD

The above model explains that in the donor language, every input would undergo a number of phonological processes before the word is used by the speakers. This is called the optimal output (henceforth, $Output_1$). The $Output_1$ is derived after the application of phonological processes used by the borrower's language as the input for its loanwords adaptation. Speakers of the borrower's language receive the $output_1$by perception and phonology and they are linked as the input for the KD speakers to form their native words.

The input from the English source undergoes some phonological processes again before $output_2$ is derived. At this stage, the phonological processes applied to the English words are mainly to ensure that the loanwords conform to the native sound system. At this stage the adaptation strategies take place. Final $output_2$ which is derived from this, are words that have conformed to the KD sound system. An example of an English loanword in KD is modelled as follows:

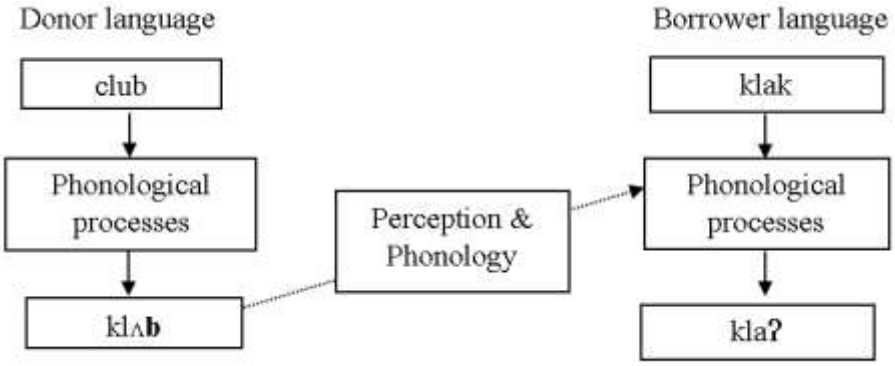

FIGURE 2. Example of model for English word borrowed into the KD

CONCLUSION

This paper discusses the major adaptation strategies resulted from the analysis of 185 data of loanwords from English into the KD obtained from Shapri's work (1980) and fieldwork in Kota Bharu, Kelantan. The first part of this paper analyses the adaptation strategies observed

in the KD loanwords. The findings of this study reveal that there are three major strategies found in the KD loanwords which are consonant substitution, consonant deletion and debuccalisation. It is also observed that consonant substitution occurs to produce loanwords which are more native sound like by adapting the non-native consonants to the native one. On the other hand, consonant deletion is mainly applied to ensure that loan words are conformed to the native phonological system particularly when it affects the syllable structure of the borrower's language. Debuccalisation is another adaptation strategy employed in ensuring only certain consonants are allowed to be at the coda position.

In addition, this study discusses the source of input for the KD loanwords. The KD loanword data seem to suggest that the input of loanwords adaptation strategies is caused by perception and phonological factors. As discussed above, the KD speakers have a minimum level of English language linguistics knowledge and thus, this affected the sounds of the English words that they hear which then becomes the input of the loanwords before they are adapted into the KD system. The new output derived from the English source is represented in a model constructed for the KD loanwords adaptation process.

The findings from this study called for a look in a different light the status of English in Malaysia and the grammar system of Malay, particularly the phonological aspects of the language. Since English being mixed up with non-standard Malay, it produces so-called 'New Englishes' – another variety of English that exists in postcolonial countries (Yamaguchi and Yeo 2016). This correlates with the notion raised by scholars like Leimgruber (2013) and Schreier (2005) who claimed that different varieties of New Englishes result in new grammar and lexicon. However, with regards to Malay grammar, borrowing words from other languages into Malay result in a number of adaptation processes to match the system of the donor's language with the Malay system. Nevertheless, it should be noted that the phonotactics of non-native words could not be totally adapted to the phonotactics of native words. Hence, Malay scholars should not discuss the grammar of the language prescriptively.

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