Perception and Production of Thai Learners on English Prepositions

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Abstract

In this paper, I adopt Best's (2001) Perceptual Assimilation Model (PAM) to account for how Thai learners acquire English prepositions in prepositional phrases and propose the ranking order of English preposition acquisition into three different categories. The ranking is as follows: Category A is a one-to-one semantic mapping between English and Thai prepositions, therefore ranked first suggesting that they would be the easiest to be acquired. Category B is a one-to-many semantic mapping between English and Thai prepositions. Acquisition of Category B should be more difficult than Category A because one English preposition can have more than one correspondence in Thai. Category C is one-to-null mapping between English and Thai prepositions. A preposition that exists in one language can be null in another language. Category C would rank the lowest in terms of acquisition.

The participants consisted of 20 graduate students in the MA program at a university in Bangkok. They were placed into medium (8-10) and low (6-7) proficiency levels of English by a placement test called the Language and Instructor System (ELLIS) administered via computer. The two tests used in this study were a grammatical judgment test for English prepositions and a writing test. The two tests were exactly parallel in each item. The correlation between their awareness in spotting incorrect prepositions and the ability to use correct ones were measured using Pearson's correlation coefficient.

The results were consistent with the ranking proposed here. It showed that L2 Thai acquirers of English prepositions were able to judge grammatical and ungrammatical sentences correctly with respect to the ranking A>>B>>C. However, no significant difference of the correlation between perception and production in all categories was found. The results further revealed that both medium and low proficient participants were able to perceive and produce dependent prepositions more accurately than independent prepositions.

Keywords: syntax acquisition of English prepositions, Thai L2 acquirers, ranking order

1. Introduction

1.1 Background and Rationale

How Thai students learn English as a foreign language has been long studied with respect to their phonological, morphological, syntactic and semantic errors during the course of their learning (Bennui, 2008; Intratat, 2001; Noojan, 1999; Thep-Akrapong, 2005; Tawilapakul, 2002). Explanations usually fall into three basic categories: frequency of errors, types of errors, and causes of errors. The findings are based on two analyses: contrastive analysis, which focuses on similarities and differences between native language and target language (Buren, 1984) and error analysis, which focuses on identifying patterns of errors in interlanguage grammar (Selinker, 1972). However, the theory of universal grammar and second language acquisition turn to principles and parameters of UG in that UG is accessible in both L1 and L2 acquisition (Felix, 1991) while Tsimpli and Roussou (1991) argues that in some circumstances UG is not accessible with some functional categories in L2 acquisition, be it tense, modals, agreement, plurals, determiners and prepositions (Finney, 2005). This is because functional categories are independent of UG. If this hypothesis holds, second language learners will not have direct access to them. In light of much research on second language acquisition, we are led to be convinced. A number of works; for instance, have investigated how English language learners from Asian speaking countries have acquired English prepositions by adopting CA and EA with participants whose first language are Asian languages (i.e., Kim & Ahn, 2003; Castro, 2013; Al Khotaba, 2013). Kim and Ahn's work looked at how Asian speakers acquire English prepositions following the Natural Approach proposed by Krashen and Terrell (1983).

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Most participants, regardless of their proficiency level, chose the correct answers on the must-be-used prepositions. This suggested that the must-be-used prepositions are easier to acquire than optional and obligatory deletion ones. Castro and Al Khotaba; on the other hand, focused their studies on examining types of errors and causes of errors. Castro found that the majority of the prepositional errors made by Filipino undergraduate students were accounted for by intralingual errors. Khotaba found no differing results on Arab graduate students in Malaysia. The errors in their use of prepositions were diagnosed as interlingual errors.

1.2 Prediction's from Best's Analysis (2001)

In this paper, I assume Best's (2001) Perceptual Assimilation Model (PAM). Best proposes that the assimilation of L2 sounds/phones into the native system of phonemes as follows:

A non-native phone may be perceptually assimilated to the native system of phonemes in one of three ways: (1) as a categorized exemplar of some native phoneme, for which its goodness of fit may range from excellent to poor (2) as an uncategorized consonant or vowel that falls somewhere in between native phonemes (i.e., is roughly similar to two or more phonemes) (3) as a nonassimilable nonspeech sound that bears no detectable similarity to any native phonemes (p. 777).

Assuming PAM, I propose the ranking order of English prepositions acquired by Thai learners into three different categories. The ranking is as follows: 1) Category A is a one-to-one semantic mapping between English and Thai prepositions. This suggests that the direct translation is identical in both languages. The Thai version comes from the first lexicon that appears in a Thai dictionary which is presumably used most frequently. 2) Category B is a one-to-many semantic mapping between English and Thai prepositions. One English preposition can have more than one correspondence in Thai and 3) Category C is one-to-null mapping between English and Thai prepositions.

In Category A, each morpheme is assimilated equally well or poorly to a single native morpheme, in Best's term Single Category assimilation (SG). We predict that Category A will be the easiest one to be acquired due to its identical semantic relationship between English and Thai prepositions.

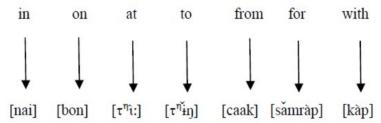


Figure 1. L2 prepositions highly assimilated into those in L1

Category B is a one-to-many semantic mapping between English and Thai prepositions. One English preposition can have more than one correspondence in Thai. Best explains that when there is one of the two fits better than the other, it will be termed a Category Goodness difference (CG).

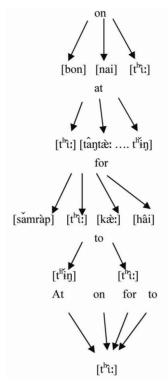


Figure 2. L2 prepositions roughly assimilated into 2 or more in L1

Category C is one-to-null mapping between English and Thai prepositions. If both non-native phones are uncategorized speech segments, they will be termed uncategorized Speech Segments (UU) (Best, McRoberts, & Goodell, 2001).

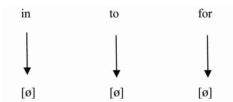


Figure 3. L2 prepositions uncategorized into those in L1

1.3 Hypotheses

Four hypotheses were posited to test the ranking order as follows:

- 1) Degree of accuracy in perceiving prepositional errors in English will correlate with the ranking order A>> B>> C regardless of the participants' level of English proficiency and linguistic backgrounds.
- 2) Degree of accuracy in using English prepositions will correlate with the ranking order A>> B>> C regardless of the participants' level of English proficiency and linguistic background.
- 3) Thai learners of English would be able to perceive and produce dependent prepositions more accurately than independent prepositions.
- 4) There is a correlation between syntactic perception and production.

The hypotheses predict the following:

- 1) Functional categories are independent of UG evidencing from low degree of accuracy in correctly perceiving and producing functional categories.
- 2) Parameters are associated with functional categories. Parametric variation between L1 and L2 results in the transfer of the L1 value to L2 as in the proposed ranking.

2. Method

2.1 Participants

The participants for this study consisted of 20 graduate students in the MA program of Linguistics and Educational Linguistics at the faculty of Humanities, Srinakharinwirot University. Language and Instructor System (ELLIS) administered via computer was used to test the participants prior English proficiency which has 12 levels made up of 3 components; listening, vocabulary and grammar: Level 1-2 (ELLIS Basics) are for the beginners and Level 3-7 (ELLIS Intro) are an introductory course, while Level 8-10 (ELLIS Middle Mastery) are an intermediate course and Level 11-12 (ELLIS Senior Mastery) are an advanced course for prospective English teachers and those whose expertise lie in English. Some students (n = 13) were placed into Level 8-10 (medium competence level in English), while others (n = 7) were placed into Level 3-7 (low competence level in English).

2.2 Instruments

The two tests employed in this study were a grammatical judgment test for English prepositions (see Table 1) and a writing test. The carrier sentences were actually from advertisements seen either on billboards or print magazines in Bangkok. The participants are exposed to the incorrect items on a daily basis. On the error recognition test, there were 10 minimal pairs of sentences made up of 5 pairs of independent prepositions and another 5 pairs of dependent prepositions, which must occur only after some verbs, adjectives and nouns. The subjects were asked to look at them and identify whether they were aware of the wrong use of English prepositions from the carrier sentences and able to identify them. Their options were the followings: 1) one sentence was right. 2) one sentence was wrong. 3) both sentences were right and 4) both sentences were wrong. Those sentences were checked by two English native speakers and corrected. To avoid memory effect, one week later they were asked to translate Thai sentences into English. An English verb, adjective or noun was provided in each sentence to control for the accuracy of preposition use. Also, they were instructed to use prepositions in every single sentence even though no Thai prepositions exist in some sentences. The two tests are exactly parallel in each item. The correlation between their awareness in spotting the incorrect prepositions and the ability to use the correct ones were measured.

The other instrument measured the ranking order of English preposition acquisition proposed for Thai learners. One-to-one mapping ranked above the one-to-many mapping in a tableau. In turn, one-to-many mapping dominates one-to-null mapping. The order is as follows: one-to-one >> one-to-many >> one-to-null. The sentences in the two tests, the first measuring the perception and the second measuring the production, were classified and put into the ranking categories such as A, B, and C.

Table 1. Grammatical judgment test on independent English preposition phrases (PP)

Sei	ntences	Right	Wrong
1.	a. Exclusive Condo <u>in Sukhumvit Soi 23</u>		X
	b. Exclusive Condo on Sukhumvit Soi 23	X	
2.	a. The price starts at 4 million baht.	X	
	b. The price starts from 4 million baht.	X	
3.	b. Six star hotel is located <u>in SukhumvitSoi 45</u> .		X
	c. Six star hotel is located on SukhumvitSoi 45.	X	
4.	a. Reward your dearest mom with fabulous gifts.	X	
	Ladies dept discounts at 10-30%		
	b. Reward your dearest mom with fabulous gifts.		X
	Ladies dept discounts from 10-30%		
5.	a. Lipo Tight for tummy at 90,000 baht	X	
	b. Lipo Tight for tummy for 90,000 baht	X	

Table 2. Grammatical judgment test on dependent English preposition phrases (PP)

Sent	ences	Right	Wrong	
6.	a. Please pay attention <u>at</u> the instructions.		X	
	b. Please pay attention to the instructions.	X		
7.	a. Thanks to using our service		X	
	b. Thanks for using our service	X		
8.	a. You will be satisfied with our service.	X		
	b. You will be satisfied at our service.		X	
9.	a. If you are interested with our product, contact us.		X	
	b. If you are interested <u>in</u> our product, contact us.	X		
10.	a. We are famous <u>for</u> plastic surgery.	X		
	b. We are famous about plastic surgery.		X	

Writing Test

Instruction: Translate Thai sentences into English using a preposition.

- 1. kko:ndo <u>nai</u> soi sukhumwit23

 condo in

 condo on ſukhumwit 23.
- 2. raːkʰaː rə̂ːmtôn caːk 2 lá:n bàːt(start)

 price start from 2 million baht

 The price starts from 2 million baht.
- 3. ro:ŋræm yù: thi: soi sukhumwit 23(locate)

 hotel is on

 The hotel is located on Sukhumwit 23.
- 4. raw lót <u>tântæ</u>: 30 <u>thin</u> 50% (discount) we discount from to

 We discount at 30-50%.
- 5. t^ham camùik raik^ha: <u>Ø</u> 5000 bàit(Nose job...)use a preposition do nose price baht

 Nose job for 5000 baht.
- 6. karuna: táŋcai ?à:n th: khamsàŋ (pay attention)

 please pay attention read at instruction

 Please pay attention to the instructions.
- 7. k^hɔ:pk^hun t^hi: c^hái bɔ:rika:n (Thank...)

 thank at use service

 Thanks for using our service
- 8. k^hun cà? p^ho:cai kàp bo:rika:n k^ho:ŋ raw (satisfy) *You will be satisfied with service of we*You will be satisfied with our service.
- 9. $t^h \hat{a}$: $k^h un$ soncai $\check{sink}^h \acute{a}$: $k^h \check{b}$: η raw (interested)

 If you are interested in product of we

 If you are interested in our product, ...

10. raw mi: chi̇̀:ši̇̀:anki̇̀:awkap?ahȧ̀:n thai (famous)

We have famous for food Thai

We are famous for Thai food.

11. t^ham camù:k (rê:mtôn) t^lî: 5000 bà:t (Nose job)

do nose (start) at 5000 baht

Nose job at 5,000 baht.

Table 3. One-to-one >> one-to-many >> one-to-null

Category A: One-to-One	e Map	ping						
English Sentences		DP		VP		AP	PP	
				V	DP	A	P	DP
1. The price starts at 2 million baht.		The p	rice	starts	-		at	2 million baht
2. The price starts from 2 million baht.		The price		starts	-		from	2 million baht
3. You will be satisfaith our service.	fied	You		will be	-	satisfied	with	our service
4. Nose job starts at 5,0 baht	000	Nose job If you		-	-		at	5,000 baht
5. If you are interested our product,	d in			Are		interested	in	our product
Thai Santanaas		DD		VP		AP	PP	
Thai Sentences		DP		V	DP	A	P	DP
1. ra:kha: rə̂:mtôn 2 lá:n bà:t		ra:kha	ı:	rê:mtôn	-	-	t ^{lî} i:"at"	2 lá:n bà:t
2. ra:kha: rə̂:mtôn cà:k 2 lá:n bà:t		raːkhaː		rê:mtôn	-	-	cà:k"from"	2 lá:n bà:t
3.k ^h uncà?p ^h o:caikàp bo:rika:n k ^h o:ŋraw		k ^h un		cà?p ^h ɔ:cai	-	-	kàp	bə:rika:n k ^h ə:ŋraw
4. t ^h am camù:k (rê:mtôn) t ^h ì: 5000 bà:t 5.t ^h â:k ^h unsoncai šink ^h á:k ^h ŏ:ŋraw		t ^h amcamù:k t ^h â:k ^h un		(nôtm:cn)	-	-	t ^k î:	5000 bà:t
				soncai	-	-	nai "in"	sink ^h á:k ^h ŏ:ŋraw
_								
Category B: One-to-Ma	ny Ma	apping	3					
English Sentences D)P		VP			AP	PP	
English Scholices L	/1	-	V	DP		A	P	DP
1. Condo on Sukhumwit 23	Condo		-	-		-	on	Sukhumwit 23
2. The condo is located on The co		ndo	Is locate	d -		-	on	Sukhumwit 23
3. Thanks for using our service.		3	-	-		-	for	using our service
4. We are famous We			are	-		famous	for	Thai food

sink^há:k^hɔ:ŋraw

for Thai food.							
5. Please pay attention to the instructions.	-	Please pay	Attention		to		the instruction
6. We discount at 30-50%.	We	Discount			at		30-50%
Thei Contours	DD	VP		AP	PP		
Thai Sentences	DP	V	DP	A	P		DP
1. kə:ndo;nai səisukhumwit23	kə:ndo:	-	-	-	nai"in"		soisukhumwit23
2. ko:ndo:yù:t ^h i: soisukhumwit23	kə:ndo:	yù:	-	-	t ^h î: "at"		soisukhumwit23
3. k ^h ð:pk ^h unt ^h i: c ^h ái bo:rika:n	-	k ^h ðːpk ^h un	-	-	t ^l îi: "at"		chái bo:rika:n
4. raw mi: chi̇̃:ši̇̃:áŋki̇́:awkap?a hǎ:n thai	raw	mix	chi: ši:ăŋ	-	ki:awkap "about"		?ahǎ:n thai
5. karuna: táŋcai ʔàːntʰīkʰamsàŋ	-	karuna: táŋcaiʔà:n	-	-	t ^h īi: "at"		k ^h amsàŋ
6. rawlót tâŋtæ:30 thin 50%	raw	lót			tâŋtæ:30 t ^h i:ŋ50% "from to .	,,	
Category C: One-to-N	Null Mapping						
English Sentences			VP		AP	PP	
		DP	V	DP	A	P	DP
1. We are famous for	Thai food.	We	are	-	famous	for	Thai food
2. Please pay attention to the instructions.		-	Please pay	attention		to	the instruction
3. Nose job for 5,000	baht	Nose job	-	-		for	5,000 baht
4. If you are interested in our product,		If you	Are		interested	in	our product
Thai Sentences		DD	VP		AP	PP	
		DP	V	DP	A	P	DP
1. raw mi: chi̇̀:ši̇̀:á thai	ŋrɨːaŋʔahǎːn	raw	mi:	chi: si:ăŋ		Ø	ri:aŋʔahǎ:n tha
2. karuna:táŋcai ʔà:nkʰamsàŋ			karuna: táŋcaiʔà:n			ø	k ^h amsàŋ
3. thamcamù:k 5000 b	oà:t	t ^h am camù:k				ø	5000 bà:t

3. Results and Discussion

4. thâ:khunsoncaisinkhá:khɔ̃:ŋraw

3.1 Hypothesis 1

As predicted, evidence of low degree of accuracy in perceiving prepositional errors among both medium proficient participants (66.98%, 59.62% and 58.76%) and lower proficient participants (62.5%, 51.19% and 46.13%) shown in Figure 5 were correlated with the ranking order A>> B>> C regardless of their level of

soncai

t^hâ:k^hun

English proficiency and linguistic backgrounds. The results revealed that there was a slight difference in their judgment of prepositional error detection at 4.48% from medium to low in category A. As for category B, the gap was further apart at 8.43%, while the medium proficient participants perceived category C much better than (12.54%) the low proficient ones. However, the fact that their means were not high indicated that their English proficiency could be a determining factor of their inaccessibility of UG in functional categories.

The analysis correctly predicts that the participants performed better in category A because there is no parametric variation between L1 and L2; in category B, it gets more difficult to perceive the errors as parametric variation increases. The most difficult environment in correctly identifying errors is in category C, in which certain English prepositions do not operate in L1 at all.

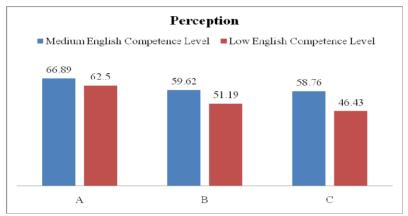


Figure 4. The means that showed percentages of medium and low proficient participants' perceptions of English prepositions

A one-way ANOVA Test revealed significant differences in perception as follows: category A and B (p < .05) and category B and C (p < .05), while category A and C showed insignificant difference (p > .05).

3.2 Hypothesis 2

Evidence from the difference in performance between perception and production in category A, B, and C further indicate that acquisition of production is more difficult to be than perception. Both groups of participants produced English sentences using correct prepositions in the order predicted A >> B >> C. There was no difference between the medium proficient participants and the low proficient ones in category A. The former performed moderately better than the latter at 5%. Interestingly, both groups' performance substantially decreased in category B from 35.9% to 23.81%. However, the medium ones were still able to use more correct English prepositions than the low ones at 12.09%. Notice that the medium group performed category C (51.28%) much better than category B (35.9%). The low group's performance considerably dropped at 23.81% and 21.43% in category B and C respectively. The Thai L2 acquirers perform in ways that conform to the model

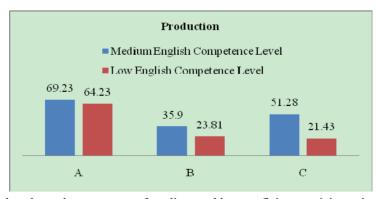


Figure 5. The means that showed percentages of medium and low proficient participants' productions on English prepositions

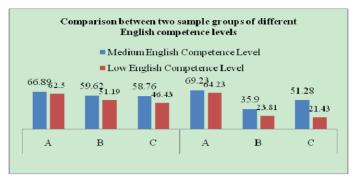


Figure 6. A comparison between medium and low proficient participants

A one-way ANOVA Test revealed significant differences in perception as follows: category A and B (p < .05); category B and C (p < .05) and category A and C (p < .05).

3.3 Hypothesis 3

The third hypothesis was confirmed as shown in Figures 7 and 8. Both medium and low proficient participants were able to perceive and produce dependent prepositions more accurately than independent prepositions except that the low proficient ones produced independent prepositions more accurately than those with dependent ones on the test sentences in category A.

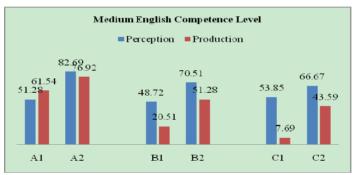


Figure 7. The means that showed percentages of medium proficient participants' perceptions and production of English independent and dependent prepositions

A1, B1, C1 = independent prepositions

A2, B2, C2 = dependent prepositions

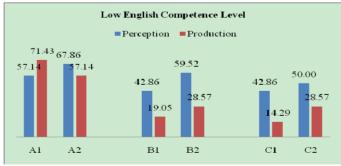


Figure 8. The means that showed percentages of low proficient participants' perceptions and production on English independent and dependent prepositions

A1, B1, C1 = independent prepositions

A2, B2, C2 = dependent prepositions

Table 4 gives us insightful data on how Thai participants were more accurate in their grammatical judgment of dependent English Preposition Phrases than the independent ones in category A e.g. "You will be satisfied with our service." and "If you are interested in our product, contact us." As for category B, they were able to perceive (95%) and produce (85%) significantly better in the phrase "Thanks for using our service." than the other sentences of all categories. This high accuracy can be accounted for by frequency of exposure which impacts the choice of preposition.

However, the participants performed worst on judging the use of the preposition in the sentence "Reward your dearest mom with fabulous gifts. Ladies dept discounts at 10-30%." And none of them was able to use the correct preposition in the sentence "We discount at 30-50%." They all chose the preposition "from10 to 30%". In light of this result, we can conclude that the participants employed direct translation of the preposition used in their L1 when such translation was there to grasp. In Schieber's psycholinguistic experiment (2013), she found that when there was a mismatch between L1 and L2 translation of the preposition, the reaction time was longer and accuracy was less correct. The explanation basically comes down to conceptualization how second language learners can conceptualize the language.

Table 4. Score ranking of the two tests

	Grammatical Judgment task		Written task		
	Items	% of Accuracy	=	Items	% of Accuracy
A	You will be satisfied with our service.	95	A	Nose job at 5,000 baht.	90
A	You are interested in our product, contact us.	75	A	The price starts <u>at</u> 4 million baht.	85
A	The price starts at 4 million baht.	70	A	If you are interested in our product, call us.	80
A	Lipo tight for tummy at 90,000 baht.	50	A	You will be satisfied with our service.	60
A	The price starts <u>from</u> 4 million baht.	40	A	The price starts <u>from</u> 2 million baht.	55
В	Thanks for using our service.	95	В	Thanks <u>for</u> using our service.	85
В	Please pay attention to the instructions.	70	В	The hotel is located <u>on</u> SukhumwitSoi 23.	45
В	Exclusive condo on Sukhumwit Soi 23.	55	В	Please pay attention <u>to</u> the instructions.	25
В	Six star hotel is located <u>on</u> SukhumwitSoi 45.	65	В	Condo on SukhumwitSoi 23.	25
В	We are famous <u>for</u> plastic surgery.	45	В	We are famous <u>for</u> Thai food.	10
В	Reward your dearest mom with fabulous gifts. Ladies dept discounts at 10-30%.	30	В	We discount at 30-50%	0
C	If you are interested <u>in</u> our product, contact us.	75	C	If you are interested <u>in</u> our product, call us.	80
C	Please pay attention to the instructions.	70	C	Please pay attention \underline{to} the instructions.	25
C	Lipo tight for tummy for 90000 baht.	50	C	Nose job for 5000 baht.	10
C	We are famous for plastic surgery.	45	C	We are famous <u>for</u> Thai food.	10

Shaded cells are on test sentences with independent prepositions.

3.4 Hypothesis 4

To test whether the relationship between perception and production is bidirectional , Pearson's correlation coefficient was performed. There was no support for hypothesis 4 in all categories, which predicted a correlation between ease or difficulty in perceiving ungrammatical or grammatical use of English preposition associated with producing them. No significant difference was found from the correlation between perception and production of category A (r = -.062, p = .796) and C (r = .135, p = .569). There was, however, a weakly positive correlation between perception and production of category B (sig = r = .261, p = .266). Flege, Takagi & Mann (1995) stated if one cannot perceive a speech sound in a language, s/he will not be able to produce that speech sound either. This suggests that the perception and the production of speech sounds are correlated. Conversely, some prior studies conducted, such as by Chanintaratheip (2013), indicated that the perception and the production of English final consonants by Thai learners of English did not bear any relationship to each other. Likewise, Altenberg (2005) revealed that the perception and the production of English consonant clusters by native speakers of Spanish acquiring English were not correlated. The research findings, therefore, are tacitly consistent with those of the two research studies mentioned above. The results support a view that functional categories in L2 acquisition are independent of UG and L2 learners, regardless of their proficiency level, are not yet able to master prepositions.

4. Conclusions

In this paper, I adopt Best's Perceptual Assimilation Model to account for the acquisition of English prepositions by Thai learners. Best's model is extended to three ranking categories of L2preposition acquisition according to their semantic correspondence between L1 and L2 prepositions. The results show that the more L1 and L2 are assimilated, the easier it is for native speakers to perceive and produce English prepositions. However, when there is a greater degree of parametric variation between L1 and L2, functional categories in L2 are evenmore difficult to acquire. One methodological flaw was the researcher's assumption that English native speakers as a control group would score 100% and this might pose to be problematic in validating the research results.

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