

Syntactic Constraints of Code Switching in Academic Discourse among Iraqi Postgraduate Students in Malaysia

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Abstract: This research explores the use of code switching among Iraqi postgraduate students in their academic discourse. This study utilizes qualitative research methods by using a purposive sampling to recruit the Iraqi postgraduate students who are registered in Malaysian universities for different programs. There are 4 males and 4 females selected for the interviews from different fields of study. Each pair from the same gender is separately included in discussion session. This study showed that the syntactic constraints is occurred within major constituents including the noun phrase, verb phrase, and nouns while, the smaller constituents occurred with conjunction, preposition, determiner and free morphemes. However, the participants are used the code switching within academic and scientific subjects, technology terms, and popular terms related to their Iraqi dialect.

Keywords: Code-switching, Academic discourse, Linguistic factor, syntactic constraints.

I. INTRODUCTION

The code switching can be occurred due to the structural linguistic constraints. The code switch from language to another is influenced by the structural linguistic factors that trigger the speaker to switch by keeping both languages grammatically and syntactically accepted (Becker, 1997). Previous studies on the structural characteristics of code switching states that this phenomenon is involved by a number of syntactic constraints in several aspects. A study by Alhazmi, (2015) investigates the linguistic aspects of CS among Arabic-English bilinguals in Australia. The study found that the nouns with noun phrases, and interjections are the largest number of switched items (Alhazmi, 2015). A study by Mustafa and Al-Khatib, (1994) showed that the majority of the mixes were at single nouns, followed by phrases, and clauses, single adjectives, article, conjunctions, pronouns, single adverbs, single verbs, and prepositions. The alternate of the two languages is a prominent phenomenon by the lectures and happened in different grammatical categories in various degrees. However, the factors suggested in the literature are inappropriate for a grammatical characterization of code switching. It is suggested that further research should be carried out to find the sociolinguistic and psycholinguistic factors involved if a satisfactory describe such mixing to be provided in the academic discourse (Mustafa and Al-Khatib,1994).A study by Kanakri and Ionescu, (2010) investigates the linguistic constraints to illustrate the sociolinguistic conditions of the native Romanian community living in Jordan who speak Romanian and Arabic. This study are from annotations taken during dialogues among four Romanian/Arabic bilinguals in Jordan and also natural chat that happened in a comfortable communication. The code-switching in this study did not break the syntactic rules of either language and where the surface structures of two languages map onto each other. However, the Romanian definite article which the speaker uses for an Arabic word instead of the Arabic article ‘al’ (Kanakri & Ionescu, 2010). A study by Rezaeian, (2009) this study found that the most lexical items switching to English are noun, adjective, infinitive, verb-noun, adverb and preposition. The embedded English items (excepted verb) occurred with the same order where the Persian equivalents are maintained even though English and Persian have different syntactic aspects (Rezaeian, 2009).

II. METHODOLOGY

A. Study Design

A qualitative method is used to explore the use of code switching in the academic discourse of Iraqi postgraduate students in Malaysia. The qualitative approach is used to get in depth understanding about the occurrence of code switching in the academic context. The data was obtained based on an academic discourse among Iraqi students from both genders in different education programs.

B. Study Sample

A purposive sampling method is used to recruit the participants who are registered in Malaysian universities. The postgraduate students who are enrolled in Master and Ph.D in Malaysia are included in this study. The participants are bilinguals of English, speak Arabic as their mother tongue and English as a second language. Students are selected based on their gender from similar field and from different fields of study to give an insight into the academic discourse between students who have different academic subjects. Eight participants are involved in this research including equal numbers of 4 males and 4 females.

C. Data Collection

The following procedure is carried out for the purpose of the study. Firstly, after getting the participants' permission ,the consent form has been obtained from all the participants . The researcher kept in touch with the participants to arrange an appointment with them according to their free time until arranging a natural setting for academic discussion sessions.

Secondly, discussion sessions are used to obtain the data from Iraqi participants by starting an academic discourse related to their academic study. For convenience, two students in discussion session are separately interviewed to maintain the homogeneity of the data based on gender. Each pair is invited to discussion session to be more comfortable for the participants to share their academic topics. In total, four discussion sessions are carried out at different time for two pairs each gender. The discussion session discussed academic subjects related to their fields of study to ensure the academic discourse is maintained. The role of researcher is put some questions are suggested to start the discussion session and to motivate the participants to interact about an academic subject

D. Data analysis

The recorded data was transcribed and analyzed sentence by sentence based on the used switches from English to Arabic and vice versa. The occurrence of code-switching in the academic discourse is highlighted and classified into the respective pattern. The data was analyzed according to the occurrence of code switching between Arabic and English. Content analysis was done manually to determine the content of each code used in the academic discourse.

III. RESULT

The demographic information of the participants presented in Table 1. and Table 2

Table 1: The demographic data of the male participants

	Group 1		Group 2	
	Male 1	Male 2	Male 3	Male 4
Gender				
Age	46	35	33	36
Academic field	Sciences (Pharmacy)	Sciences (Pharmacy)	Sciences (Computer Science)	Sciences (Social Science)
Degree pursuing	Ph.D	Ph.D	Ph.D	Ph.D
Year of study	3 rd year	1 st year	2 nd year	3 rd year

Table 2: The demographic data of the female participants

	Group 3		Group 4	
	Female 1	Female 2	Female 4	Female 3
Gender				
Age	40	30	38	34
Academic field	Sciences (Pharmacy)	Sciences (Pharmacy)	Sciences (Pharmacy)	Humanities (Management)
Degree pursuing	Ph.D	Ph.D	Master	PH.D
Year of study	1 st year	3 rd year	2 nd year	2 nd year

The syntactic constrains are highlighted in the academic discourse of this study including the constituent constraint in verb phrase, noun phrase, preposition constraint, free morpheme constraint, conjunction constraint, adjective, adverb, single noun, adjective-noun phrase, and possessive phrase.

A. The Size of Constituent Constraints

This constraint refers to the major constituents including the noun phrases and verb phrases are more frequent used than the smaller constituents including the single noun, adjective, verb, noun, preposition, quantifiers, and possessives etc (Poplack, 1980; Poplack & Sankoff 1981). In the academic discourse of the current study, the most common code switching is occurred within the phrase and noun phrase boundaries, which is perfectly agree with Poplack's statements. The constituent constraints are occurred with the following boundaries:

-Verb phrase

In example 1, Male1 used the code switching from English to Arabic within a clause boundary in his speech as a constituent constraint of verb phrase in Arabic language order.

Example 1: Male1

Beside the American definition and the European definition of polypharmacy	lazim	asawi	definition
Beside the American definition and the European definition of polypharmacy	should	I make	definition
<i>"Beside the American definition and the European definition of polypharmacy, I should provide a definition"</i>			

The above example shows that the code switching occurred in verb phrase in Arabic order of participle /lazim/ and followed by the subject and verb which violating the English order that the subject must preceded the participle in the verb phrase.

-Noun phrase

The code switching is happened within a phrase from Arabic to English. In example 2, Female 3 switched to English noun phrase as a way of explaining the academic subject.

Example 2:Female3

almushrif	kan	yeda'amni,	hata	qabil	al	proposal defense
The supervisor	was	supporting me,	even	before	the	proposal defense
<i>"The supervisor was supporting me, and even before the proposal defense"</i>						

The constituent constraint in the above sentence shows that the noun phrase /proposal defense/ is constrained by the English NP and prefixed by the Arabic element /al/ as a definite article in Arabic language.

- Preposition + NP

In example 3, Female 4 switched to prepositional object in English which is preceded by the Arabic preposition /min/. This constraint occurred in noun phrase /Construction Company/ followed the English order of NP that the noun modifier preceded the noun which violating the Arabic NP order [noun + noun modifier].

Example 3: Female 4

ana	lazim	adheef	shaghlah	min	al	construction company
I	should	add	work	from	the	construction company
<i>"I should add something from the construction company".</i>						

-Quantifier + NP

In example 4, Female 3 code switched from English to Arabic within a phrase boundary. She switched to Arabic NP /mustalahat tubiya/ which preceded by the quantifier /many/ in English.

Example 4: Female 3

when I collected the data, I found many	mustalahat	tubiya
when I collected the data, I found many	terms	medical
<i>"when I collected the data, I found many medical terms"</i>		

The above example shows that the constituent constraint of NP followed the Arabic order that the noun preceded the adjective /tubiya/ which violating the English order of NP [adj. +n.].

- NP + Possessive

In example 5, Male 2 switched to English NP. The constituent constraint of NP/online submission/followed by the possessive pronoun in Arabic.

Example 5: Male 2

ma	aeruif	tariqat	al	online submission	malt'hum
not	know	method	the	online submission	their
<i>"I don't know the method of their online submission"</i>					

The above sentence shows that the switching occurred in the English NP /online submission/ followed the the English rule of NP [noun modifier + noun] which violating the Arabic NP [noun + noun modifier]. But the English NP followed by the Arabic possessive pronoun /malt'hum/ that constrained to the Arabic rule of pronoun possessive which violating the English pronoun possessive.

- Single Noun

In the academic discourse, the code switching to English noun is in adherence to constituent constraint of single noun. In example 6, the intra-sentential code switching from Arabic to English is happened within phrase boundary. The speaker switched to English noun to explain his point.

Example 6: Male 1:

Jamea	al	data,	akhath	mni	sana	kamilah
collection	the	data,	took	from me	year	complete
<i>"the data collection had taken a whole year"</i>						

The above sentence shows that the constituent constraint followed the Arabic NP structure that the possessed noun /jamea/ preceded the possessor noun /data/ which violating the English rule of possessive phrase [Possessor N + Possessed noun]. The Arabic definite /al/ prefixed the English noun.

- Single Noun+ VP

In example 7, Female1 switched to English single noun within clause boundary. The constituent constraint of single noun /topic/ is conformed to both language that the object is possible to precede the subject and verb [O + S+ V] in Arabic and English.

Example 7: Female1

al	topic	ana	ikhtaritah	leian	hasitah	muhim	limardha	aldhaghith	biliraq
The	topic	I	chose it	because	I feelit	important	for patients	the hypertension	in the Iraq
<i>"The topic, I chose it because I feel it important for the hypertension patients in Iraq"</i>									

- Single noun+ Possessive Pronoun

In example 8, Male 3 switched within sentence boundary by inserting English noun and followed by Arabic possessive pronoun. The code switching is possible in which the possessive pronoun is used in Arabic and its possessive noun in English.

Example 8: Male3

ani	indi	bil	system	mailti	online website
I	have	in the	system	my	online website
<i>"I have an online website in my system"</i>					

The above sentence shows that the Arabic determiner /bil/ which is prefixed the English single noun /system/. The constraint of pronoun possessive /mailti/ followed the subject which is violating the English rule of possessive noun. In addition, the noun phrase /online website/ is instructed to the English order [Adj+ N].

In example 9, Female 3 switched from Arabic to English within a phrase boundary. The code switching happened with English single noun /topic/.

Example 9: Female 3

ani,	topic	mailti	aan	al	caesarean section,	washlon	insawi	pain management
I,	topic	my	about	the	caesarean section,	and how	we make	pain management
<i>"me, my topic is about the caesarean section and how we do pain management"</i>								

The above sentence shows that the possessive pronoun followed the single noun /topic/ which violating the English order of possessive pronoun. In the same sentence, the speaker switched to English NP /caesarean section/, /pain management/ which is constrained by English order and violated the Arabic order of NP. The Arabic bound morpheme /al/ prefixed the English NP /caesarean section/.

- Superlative+ Single Noun

In example 10, Female1 switched to English single noun which preceded by Arabic superlative.

Example 10: Female1

akber	challenge	wajihatah	ani	dirasti	aan	aliraq	waani	adris	fi balad	akhar
biggest	challenge	I faced	I	my study	about	the Iraq	and I	study	in country	another
<i>"The biggest challenge faced me, my study about Iraq and I am studying in another country"</i>										

The above sentence shows that the English single noun /challenge/ followed the Arabic superlative /akbar/ which is syntactically compatible with both languages.

- Determiner + Single Noun

In example 11, Male1 switched within clause boundary by inserting determiner /kul/ to the constituent of English single noun /population/.

Example 11: Male1

nahna	ma niqdar	naa'mal	albahith	alla kul	al	population,	nahna nakhtar	sample
we	not able	do	the research	on all	the	population,	we choose	sample
<i>"We are unable to do the research on the all population, we choose a sample"</i>								

The above sentence shows that the English single noun /population/ preceded by the Arabic determiner /kul/. The constituent of English single noun is compatible with the syntactic role of both languages

- Quantifier + Single Noun

In example 12, Female3 switched to English within a phrase boundary. The code switching is happened with English single noun /list/ and /points/.

Example 12: Female3

ani	aadatn	aswi	list,	waakhli	beha	kam points	lil'as'ilah	alli	areed	atnaqsh beha
I	usually	do	list	and I put	in it	some points	for questions	which	I want	I discuss it
<i>"I usually do a list and I put in it some points for questioning which I want to discuss them"</i>										

From example 12, the constituent constraint of single noun /points/ preceded by the Arabic quantifier /kam/means /some/ in English which is compatible with the structure of both languages.

- Adverb

The code switching of smaller constituents such as adverb, verb, adjective and noun can be occurred in the utterance (Poplack, 1980). In this study, the constituent constraint of adverb is identified in the academic discourse.

In example 13, Female 4 switched to English by inserting English adverb in her utterance.

Example 13: Female4

taalimat'ha	laakin	manually	fi aljameaa	maku	daa'ey	adkhul	workshop	halian
I learnt it	but	manually	in the university	no	need	enter	wordshop	currently
<i>"I learned it but it was manually in the university, no need to take a workshop currently"</i>								

The above sentence illustrates that the code switching is occurred within the English adverb /manually/ preceded by the Arabic conjunction /laakin/ means /but/ in English. The next clause involved English single noun /workshop/ followed by Arabic adverb of time /halian/. The syntactic structure constituent adverb is compatible with Arabic and English languages.

B. Closed-Class Items Constraints

Closed-class items can occur in one language in a sentence of another language such as such as prepositions, determiners, and clitic pronoun. Joshi (1983) refers to this constraint that these items cannot be switched. This constraint applies only to switch into the embedded language.

From the academic discourse of this study, this constraint is violated in Arabic-English CS that the switch is perfectly acceptable in both languages which disagree with Joshi's statement.

- Prepositions

Code switching is occurred within Arabic prepositions in English sentence. It is possible that the Arabic preposition followed by English object. In example 14, Male2 switched to Arabic by inserting Arabic preposition which violating Joshi's assumption.

Example 14: Male2

Communication	ma'a	al	patient	very	important
Communication	with	the	patient	very	important
<i>"the communication with the patient is very important"</i>					

From example 14, the Arabic preposition /ma'a/ followed by the English object which prefixed by the Arabic definite /al/. The syntactic structure is compatible with both languages.

- Determiner

In example 15, Male1 switched to English within phrase boundary by inserting English noun phrase which preceded by the English determiner /the/. This example is in compatible with Joshi's assumption that the determiner should come with the embedded language.

Example 15: Male1:

fi	alhaqiqa	the	actual	outcome	lilbahith
in	the fact	the	actual	outcome	for the research
<i>"In fact, the actual outcome for the research"</i>					

In example 16, Female2 switched to English within English noun preceded by the determiner /al/ which violating the closed-class items constraint.

Example 16: Female2

itha shakhis	daris	nafis	al	field	malti	rah	yea'arifha	mthil
If person	studied	same	the	field	my	he will	know it	like
Centrifuge, Delivery system, surface active agent, method								
<i>"if the person studied the same field of mine, will know it like Centrifuge, Delivery system, surface active agent, method"</i>								

C. Conjunction Constraint

According to this constraint the embedded language conjunction cannot be occurred in the matrix language sentence without being assimilated (Kachru, 1982; Singh, 1981). This constraint does not allow the conjunction to use in a language other than that of the sentence following it (Gumperz, 1982). The example below illustrates sentence that violating the conjunction constraint.

In example 17, Male1 was talking about the challenges that he experienced in his study, he switched to Arabic to explain his idea. The speaker switched to from English to Arabic conjunction /bil'idhafah/ is followed by English conjunct /data and time/. In this example, the conjunction constraint is violated in Arabic-English CS.

Example 17: Male1

The financial issue is challenge	bil'idhafah	illa	al	data andtime	wa muafaqt	almardha
The financial issue is challenge	in addition	to	the	data andtime	and consent	the patients
<i>"The financial issue is a challenge, in addition to the data and time; and the patients' consent"</i>						

D. Adjectival-Noun Phrase Constraint

Pfaff (1979) states that code switching is not allow to happen with adjectives and nouns within a noun phrase (Pfaff, 1979).

This constraint is appeared in Arabic-English CS of the current study which violating Pfaff's statement. In example 18, Male3 switched to English by inserting English noun /system/. The constraint of adjectival-noun phrase is restricted to Arabic rule that the Arabic adjective /muaian/ followed the noun, this violated the English order of adjectival phrase [Adj + N].

Example 18: Male3

ana	bilnisbah illi	dastakhdim	system	muaian	hata	ashuf	altaghayurat	illi	datseer
I	for me	I using	system	specific	to	I see	the changes	that	occurring
<i>"for me, I am using a specific system, to see the changes that can be occurring"</i>									

E. Free Morpheme Constraint

The free morpheme constraint (FMC) requires that a switch is not allowed to occur between a bound morpheme and a lexical item unless the latter has been phonologically combined with the next element (Poplack, 1982).

The examples below show that this constraint is violated in Arabic-English CS when the Arabic bound morphemes are mixed with English. In the examples 19, Male2 switched to English by inserting Arabic bound morpheme as a definite /al/ preceded the English noun /supervisor/. In the same sentence, another switch to Arabic bound morpheme is occurred as a determiner /fil/ for the English noun /proposal/

Example 19: Male2

bilnisbah illi	al	supervisor	fi-l	proposal	jaid	jidan	yeaani
for me	the	supervisor	in the	proposal	good	very	mean

alhilu	illi beh	hua	flexible
the nice	which in	him	flexible
<i>"for me, the supervisor in the proposal is very good, I mean, the nice thing of him is flexible"</i>			

- Free morpheme + NP

In example 20, Female1 used the code switching from Arabic to English within phrase boundaries. The Arabic free morpheme mixed with the English noun phrase which violating Poplack's statement of FMC.

Example 20: Female1

baa'idh	al'adwiya	alati	hiya	la	tusanaif	ka	Pharmacological treatment
Some	the medicines	that	she	not	classify	as	pharmacological treatment

tudaa	bi-l	Complementary and alternative medicines,
called	by the	complementary and alternative medicines,
<i>"Some medicines which are classified as a pharmacological treatment, it called complementary and alternative medicines"</i>		

In the above example, the Arabic bound morpheme /ka/ prefixed the English NP /pharmacological treatment/ which violating the FMC. In the same sentence, the Arabic bound morpheme /bi-l/ mixed with the English NP.

- Preposition + Free Morpheme

In example 21, Female2 switched from Arabic to English by inserting the Arabic bound morpheme to the English noun. The Arabic bound morphemes are mixed with the English noun.

Example 21: Female2

ikhtarina	mawdhuaa	shi	aan	al	cosmetics	min	al	plant	extract
we chose	topic	thing	about	the	cosmetics	from	the	plant	extract
<i>"we chose topic something about the cosmetics, from the plant extract"</i>									

F. The Equivalence Constraint

According to this constraint code switches will tend to occur at points in discourse where the juxtaposition of L1, and L2, elements does not violate a syntactic rule of either language, i.e., at points around which the surface structure of the two languages map on to each other (Poplack,1980).

The examples below illustrate the equivalence constraint in Arabic-English CS which violating to Poplock's statement. In example 22, Male2 switched to English by inserting the English NP to Arabic sentence.

Example 22: Male2

nehna	nqdar	inghair	al	study design	hata	inghair	al sample size
we	able	we change	the	study design	even	we change	the sample size
<i>"We can change the study design to change the sample size"</i>							

From example 22, the noun phrase followed the English order of NP that the noun /study/ preceded the noun modifier /design/ which violating the Arabic order of NP[noun + noun modifier]. The Arabic definite /al/ prefixed the English noun. In the same sentence, the English NP /sample size/is violating the Arabic order of NP.

In example 23, the code switching is happened by inserting English NP to Arabic sentence. The code switching between Arabic and English is involved NP in English order which violating the Arabic order of NP.

Example 23: Male1

nkdar	na'tberh	non-pharmacological treatment
able we	consider it	non-pharmacological treatment
<i>we can consider it a non-pharmacological treatment"</i>		

Inter-Sentential Code Switching

Inter-sentential code switching was used in some places from the academic discourse of the participants. Inter-sentential code switching refers to which the alternating from one language to another language across sentences (Poplack 1980). Inter-sentential code switching occurs between sentences at the sentences boundaries that emphasize a particular point spoken in another language. From the transcription analysis, the inter-sentential code switching is used by the participants in their academic discourse as a strategy of explaining a subject for more details within the same discourse event. The inter-sentential code switching is used to achieve the speech goals at the major syntactic categories which are the declarative with no overt "that", two main clauses, adverbial clauses of reason, in embedded relative, and interrogative. This pattern is shown in the following examples.

- Declarative Without "that"

The code switching occurred in Arabic noun phrase in sentential clause. In example 24, the participant switched at sentence boundary in his utterance by declaring thing without that as a way of giving more explanation.

Example 24: Male1

The outcome is to improve the prescription medication in elderly.				
aku	akhtaa	katherah	bil	wasfah
there	errors	many	in the	prescription
<i>"The outcome is to improve the prescription medication in elderly. There are many errors in the prescription"</i>				

- Two Main Clauses

The inter-sentential code switching is occurred at sentence boundary within two main clauses. In the academic discourse of Female2, this pattern is used to explain a subject and to give more details in Arabic.

Example 25: Female2

I don't have data in my master.								
Jnit	asawi	akthar	min	tariqah	biltahdheer	wa'akhuth	aiynah	min
I was	do	more	from	method	in preparation	and I take	sample	from

kul	wihdah	waaqees	wa ashuf	
each	one	and measure	and see	
<i>"I don't have data in my master. I was doing more than method in the preparation, and I taking a sample from each one, and I measure and I see"</i>				

- Adverbial Clause of Reason

The code switching is occurred within a sentence boundary by inserting an adverbial clause in another language. From the academic discourse of Female1, the code switching is used to explain a point within a sentence in Arabic. In example 26, the code switching is used to emphasize on an important point that the speaker give more clarification about a point in Arabic.

Example 26: Female1

My topic in my master was totally new contribution.						
li'an	ma	kan	mawdhua	matruq,	aanait	beh
because	not	was	subject	popular,	I suffered	it
<i>"My topic in my master had totally new contribution, because it was not a popular subject, I suffered from it"</i>						

- Interrogative

Code switching is happened in sentence boundary within an interrogative clause by inserting a question in another language. In example27, Male2 switched to interrogative syntactic boundary in English language.

Example 27: Male2

raja'it	lel	supervisor	waqlit	lahu,	what do you mean?
I went	for	supervisor	and I said	him	
<i>"I returned to the supervisor and I asked him, what do you mean?"</i>					

In example 28, Female4 switched within a sentence boundary by inserting Arabic interrogative role to her utterance.

Example 28: Female4

The responsibility of social cooperation,							
wshloon	ita'athir	alaa	al	SMS	almawjudah	fi	aliraq
and how	affect	on	the	SMS	the presence	in	the Iraq
<i>"The responsibility of social cooperation, and how does it affect the SMS which presence in Iraq"</i>							

- In Embedded Relatives

The code switching is occurred at sentence boundary by inserting embedded language to the utterance that is related to the main sentence. In example 29, the switching is used in Arabic that is related to the preceded English sentence.

Example 29: Male 4

So it should be similar not that big change,						
lazim	tkoon	alnataij	qaribah	wehdah	min	althaniya.
should	be	the results	near	one	from	the second
<i>"So it should be similar not that big change, the results should be near to each other"</i>						

Example 30: Female 1

waqa'it	fi	akhtaa	kathera.	for the first time in publication. It is very difficult, not easy		
I failed	in	mistakes	many.	for the first time in publication. It is very difficult, not easy		
<i>"I failed in many mistakes, for the first time in publication. It is very difficult, not easy"</i>						

IV. DISCUSSION

In this study, the constituent constraints of the major constituents of NP and VP is adhered to the assumption of this constraint that the code switching can happen in major constituent (NP and VP) and smaller constituents (noun, adverb, adjective, preposition, quantifier and etc.). The constituent constraint is happened with NP which is constrained by the syntactic structure of the guest language. This occurred by applying the English order of NP that the noun modifier follows the noun which violating the Arabic order [noun + noun modifier]. In addition to some places that the constraint

of NP is restricted by Arabic order and violating the English order of NP. Other studies demonstrate that this constraint tend to be switched more frequently than the smaller constituents (Poplack, 1980). A study by Alhazmi (2015) found similar findings that the code switching of NP followed the Arabic in which the adjective follows the noun, in contrast to English that the adjective precedes the noun. The adjective follows the noun they modify thereby violating English grammar (Alhazmi, 2015).

In addition, the present study found that the code switching is involved in constituent constraint of single noun. A study by Alhazmi, (2015) found a similar finding that the level of particular syntactic category of Arabic-English CS, nouns with noun phrases represent the largest number of switched elements in the corpus (Alhazmi, 2015). In this study, the constituent of single noun is occurred frequently in the academic discourse. This explained that the code switching to single noun may not break the syntactic rule that triggered the speaker to use the single noun in his/her discourse. Nouns are used most often since they are relatively free of syntactic constraints (Alhazmi, 2015). Myers-Scotton (2006) supports this result by explaining that verbs tend to occur less as “they are [thematic role assigner] and therefore carry more ‘syntactic baggage’ than nouns, meaning their fit with the recipient language may be harder to make”. Forslund (2009) agrees with this result which considered the nouns to be freer than other word classes in terms of grammatical constraints on their occurrence. Bowers (2006) and Al-Rowais (2012) also found that with content words, nouns make the majority and form the majority of the switched elements. They are easily switched because they often appear in the same syntactic structure in both languages.

In the constituent constraint of VP, the English phrase structure uses one order in verb phrase while in Arabic VP has free word order in the same sentence. A similar finding found in a previous study that the code switching between the subject and main verb: whereas English has a relatively fixed (S-V-O) word order, Arabic has a free word order, either (S-V-O) or (V-S-O) in which the verb may precede the subject, which is not allowed in English (Alhazmi, 2015). In this study, the constituent constraints of Adverb switched in compatible with Arabic and English order. The syntactic structure is a factor triggers the CS to occur in the speech of Iraqi speakers (Mohammed, et al, 2015).

In this study, closed-class items constraint of preposition is violated in Arabic-English CS. This constraint involves that some items such as preposition and determiner are appeared in another language which disagreed with Joshi’s statement that the closed-class items can only switch within the guest language. Previous studies are supporting this finding to violate the constraint of preposition and determiner in English-Arabic CS (Mustafa & Al-Khatib, 1994; Alhazmi, 2015).

In this study, the conjunction constraint is violated in Arabic-English CS that Arabic conjunction followed by English conjunct. Similar finding have been found in the by Redouane(2005) in Arabic-French and Mustafa and Al-Khatib (1994) in Arabic-English that the code switching is happened at clause boundary where the conjunction is used in different places in the guest language followed by conjuncts in another language. These studies violated Gumperz’s statement that switch does not allow to occur with conjunction in a language other than that of the sentence following it (Gumperz, 1982).

The adjectival-noun phrase constraint is violated in Arabic-English CS of the current study that the noun came in the guest language and followed by adjective in the host language. Previous studies of Arabic-French CS by Bentahila & Davies (1983) and Redouane (2005) that the surface structure of the two languages is violated in terms of word order systems as in noun and adjective. The finding of this study is also supported by Rezaeian (2009) stated that the grammars of Persian and English as in noun and its adjective is not compatible with this assumption (Rezaeian, 2009). Similar violation of this constraint is suggested by Bader (2003) where L2 speakers use the order of English adjective-noun in CS to Arabic which it comes against the Arabic order (Bader, 2003).

With regard to FMC, this study found that the code switching in Arabic-English violated the free morpheme constraint that the Arabic free morpheme mixed with the English element. The free morpheme constraint is not allowed the switching to occur between the free morpheme and the next lexical unless the letter is phonologically combined with the next word (Poplack, 1982). Many studies have found similar findings that support our study finding in violating the free morpheme model (Alhazmi, 2015; Bowers 2006; Kanakri & Ionescu 2010; Redouane, 2005; Rezaeian, 2009). A study by Alhazmi (2015) showed that the definite article “the” in English which involves the clitic article “al” in Arabic which leads to a violation in both languages. Another study stated that switches occur across word internal morpheme boundaries involving inflectional morphemes from Arabic, which are attached to stem morphemes from French (Redouane, 2005). In addition, a study by Bowers (2006) explained that this constraint is occurred in verb structure, where in the Afrikaans bound morphemes are used with English verbs (Bowers, 2006). Another study by Rezaeian (2009)

also reported similar findings, where Persian bound morphemes are switched to English nouns or adjectives. Furthermore, a study by Kanakri and Ionescu (2010) on Romanian-Arabic CS also violated the free morpheme constraint, as the switching can be within words between Romanian plural markers and Arabic nouns (Kanakri & Ionescu, 2010). In contrast to our finding that the free morpheme is switched to English noun phrase, the results from Berk-Seligson (1986) supported the free morpheme constraint that the frequent occurrences of large intra-sentential constituents support this constraint (Berk-Seligson, 1986).

In addition, this study found that the code switching in Arabic-English is in violation with the equivalence constraint. This constraint proposed by Poplock (1980) that the surface structure of both languages map on to each other. According to this constraint, various examples show that Arabic has different word order systems compared to English. Even though some switches in Arabic-English structures occur and appear to be acceptable. But, generally, the non-equivalent structures are occurred in Arabic and English (Alhazmi, 2015).

V. CONCLUSION

This study found that the use of code switching by bilingual Iraqi postgraduates student in academic discourse, the data was collected from the interactions between bilingual Iraqi postgraduates during different academic discourse. From the syntactic structures, it is found that the inter-sentential code switching is happened in some places in which the code switching used between two main clauses, for declaratives without 'that', interrogatives, adverbial clauses of reason, and the embedded relatives. The intra-sentential code switching is happened within syntactic constraints of Arabic-English constituents including VP, NP, Adverb, single noun, closed-class items (preposition and determiner), conjunction, adjectival-noun phrase, free morpheme, and equivalence constraint. The noun phrase constrained by English rule which violating the Arabic rule of NP. The Arabic-English CS is in compatible with constituent constraint, but it is in violation of closed-class items constraints (preposition and determiner), adjectival noun phrase constraint, conjunction constraint, free morpheme constraint, and equivalence constraint.

REFERENCES

- [1] Alhazmi, A. (2015). Linguistic Aspects of Arabic-English Code Switching on Facebook and Radio in Australia. *International Journal of Applied Linguistics and English Literature*, 5(3), 184-198.
- [2] Al-Rowais, H. (2012). "Code Switching Between Arabic And English, Social Motivations And Structural Constraints". Published Master thesis, Ball State University Muncie, Indiana. Pp.51-55.
- [3] Bader, Y. (2003). Some characteristics of codeswitching to Arabic among non-English foreign nationals in Jordan. *Damascus University Journal*, 19(3-4), 35-52.
- [4] Becker, K. R. (1997). Spanish/English bilingual codeswitching: A syncretic model. *Bilingual Review/LRevistaBilingüe*, 22(1), 3-30.
- [5] Berk-Seligson, S. (1986). Linguistic constraints on intra sentential code-switching: A study of Spanish/Hebrew bilingualism. *Language in Society*, 15(03), 313-348.
- [6] Bentahila, A., & Davies, E. E. (1983). The syntax of Arabic-French code-switching. *Lingua*, 59(4), 301-330.
- [7] D. L. (2006). Grammatical constraints and Motivations for English/Afrikaans Code switching: Evidence from a local radio talk show (Doctoral dissertation, Department of Linguistics, University of the Western Cape).
- [8] Cook, V. (2013). *Second Language Learning and Language Teaching*. (4th Ed.). Routledge.
- [9] Forslund, K. (2009). Aspects of bilingualism: Code-switching, syntactic and semantic development in abilingual child (Doctoral dissertation, Halmstad University).
- [10] Gumperz, J. J. (1982). "Conversational code switching in discourse strategies". Cambridge: Cambridge University press.
- [11] Joshi, A. (1985). Processing of Sentences with intra sentential code switching. In D.R, L.Kattunen. and A.M.Zwicky (eds.), *Natural Language Parsing; psychological, computational and theoretical perspectives*. Pp.190-205. Cambridge: Cambridge University Press.

- [11] Kanakri, M., & Ionescu, V. (2010). Prototypes of Code-switching in the Speech of Romanian/Arabic Bilinguals in Jordan. *Jordanian Journal for Language Studies and Literary Works*. Yarmouk University.
- [12] Mohammed, M.Q, Hameed, F.W, and Yasin, M.S.M. (2015). Code-switching between Informal Iraqi Dialect and English Language among Iraqi Undergraduate Students at Baghdad University. *International Journal of Education and Research*, 3(6), pp 193-208.
- [13] Mustafa, Z., and Al-Khatib, M. (1994). Code-mixing of Arabic and English in teaching science. *WorldEnglishes*, 13(2), 215-224.
- [14] Poplack, S. (1980). "Sometimes I'll start a sentence in English y termino~ enespan~ol" Toward a typology of code-switching". *Linguistics*, 18, 581-616.
- [15] Poplack, S. (1981). "Syntactic structure and social function of code-switching". In R. Duran (ed.), *Latino language and communicative behavior*, 169-84. Norwood, NJ: Ablex.
- [16] Redouane, R. (2005). Linguistic constraints on code switching and codemixing of bilingual Moroccan Arabic-French speakers in Canada. In *ISB4: Proceedings of the 4th International Symposium on Bilingualism* (pp. 1921-1933).
- [17] Rezaeian, F. (2009). Structural and social aspects of codeswitching among Iranian/Canadian bilinguals (Doctoral dissertation), Department of Linguistics-Simon Fraser University).