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# Aspects of The Semantics and Pragmatics of Verb-Noun Selection Restrictions in Igbuzo-Igbo

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#### **Abstract**

This paper discussed the semantic as well as the pragmatic properties of the Igbo language that are responsible for the co-occurrence possibilities of verbs and their objects. It examines the linguistic and extra-linguistic information inherent in this interesting phenomenon attested in the language. Using the binary feature format of Componential Analysis, the paper revealed the semantic components that constitute the meaning of the nouns in the NP<sub>2</sub> position select or impose restrictions on the nouns that can co-occur with them. The paper also analysed some sentences in Igbuzo-Igbo to demonstrate that the semantic combination of words and phrases in abstraction from context often fall short of being the complete meaning of an utterance. The paper therefore argued that the interplay of the semantic and pragmatic components of meaning is needed to achieve effective communication.

#### 1.1 Introduction

Verb-Noun selection restriction, (a type of collocation) is an essential feature of natural languages. In fact, it is a predominant feature in the semantic and pragmatic structures of Igbuzo-Igbo. It refers to the co-occurrence possibilities that exist between lexical items. It has been observed that the verb imposes a very strong restriction on the elements that can co-occur with it. Brown and Miller (1985:85), notes that "In normal use of language, all linguistic forms do not freely co-occur with all other linguistic forms". Other linguists such as Leech (1974) Palmer (1976) Radford (1988), and Saeed (2003) among others all agree that selection restriction exists in natural languages. Palmer observes that in the English Language, the word blond always co-occurs with hair, but not with door or 'dress', so the expressions, "a blond dress" and "a blond door" do not collocate. In Igbo studies too, Emenanjo (1975), Umeasiegbu (1979), Uwalaka (1981), Anoka (1983), Nwachukwu (1983), Oweleke (1996), Ndimele (1997)

Agu (2016) and Onyegbuchulam (2017), among others have also identified the ability of the Igbo verb to select specific complements and reject others. It is interesting to note that selection restriction is quite pervasive in the Igbo language. In English, it is observed that a verb can select the nouns that can co-occur with it, for example, the verbs 'harvest' and 'plant' can select all crops as objects and the verbs 'buy', 'cut' and 'peel' can equally select all 'buyable', 'cutable', and 'peelable' nouns as objects. In contrast, in the Igbo language, the verb imposes a very strong selection restriction on the nouns that can co-occur with it. For illustration, let us look at some varieties of the verbs of planting:

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    igbò ògèdè 'to plant plantain' ikū ōkà 'to plant corn' igbū jī 'to plant yam' iyā osè 'to plant pepper'
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The selection restrictions in the language block the constructions below:

```
2. *igbū osè *igbū okà *igbū ògèdè *ikū jì 
*ikū àkàsì *ikū ògèdè *igbò ji *ivā akpu
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We see from the examples above that the verbs select different nouns as objects. A competent native speaker of Igbuzo is intuitively aware of this phenomenon in the language.

#### 1.2 Selection Restriction Rules

The selection restrictions between lexical items or between nouns and verbs are governed by the selection restriction rules which reside in the lexicon, and which specify the semantic and pragmatic properties of lexical items. These properties determine the collocational possibilities of the items. Sub-categorization rules describe the syntactic environment in which verbs can occur. So, a verb can be categorized as transitive (that is, requiring an NP complement), a ditransitive (requiring two objects), or transitive locative (requiring an NP followed by a locative prepositional phrase) etc. Selection rules, on the other hand, specify the semantic features of lexical items. For example, they specify the features of lexical items as  $[\pm \text{Animate}]$ , [± Human], [± Adult], [± Count], [± Abstract], [± Size], [± Weight] etc., and so provide the environment for the possible co-occurrence of items. Selection restrictions refer to the semantic possibilities that manifest in the combination of lexical items, that is, they specify the semantic properties of the verb and other constituents in the sentence. Selection restrictions hold between the verb and the nouns that can co-occur with it as Subject and Complement. Two lexical items must therefore be semantically compatible for them co-occur. The verb "admire" and "murder" in English will be syntactically subcategorized as a transitive verb in the [-NP] frame and semantically constrained as [+Human] subject. So, the sentences below are syntactically well formed, but semantically anomalous and unacceptable:

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3a. ? The stone admired John.b. ? The stick murdered the man.c. ? John drank bread.
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Sentences (3a) and (3b) are semantically unacceptable because the verbs "admired" and "murdered" are constrained to co-occur with a [+Human] Subject while (3c) is unacceptable because the verb is specified semantically to co-occur with a [+Liquid] Object. The sentences although syntactically well formed, they are semantically anomalous and unacceptable because the verbs impose strict selection restrictions on their choice of accompanying nouns.

#### 1.3 Section Restrictions: What selects what?

On the argument whether the verb or the noun determines co-occurrence restrictions, we agree with Chafe (1970) and Brown and Miller (1985) that the verb determines what nouns should follow it, that is, the verb selects the noun and not vice versa. Thus, if a verb is copular, monotransitive, ditransitive, intransitive, etc., it is expected to choose a particular kind of subject or object or reject it. This means that the verb is the centre of any sentence; it determines the nouns that can co-occur with it as Chafe (1970, p. 97) rightly pointed out:

The nature of the verb determines what the rest of the sentence will be like. The verb determines what nouns will accompany it, what relation of these nouns to it will be and how these nouns will be semantically specified.

Chafe adds that, it is the verb that dictates the presence and character of a noun rather than vice versa. Leech (1974) further argues that the predicate determines both the number of arguments (nouns) and their composition. For example, the verbs 'give', 'sell' and 'buy' are ditransitive and so obligatorily require two objects. We argue that the verb is the most important grammatical word category and so determines what nouns co-occur with it.

#### 1.4 Meaning in Co-occurrence Restriction

Semantics and pragmatics are two complementary fields in the study of meaning, and the complete interpretation of any sentence/utterance calls for an interplay of both levels of meaning. Whereas semantics studies the linguistic meaning of the verb and its accompanying nouns abstracted from context, pragmatics studies meaning in actual usage of or specific context. The context of an utterance is an undeniably important factor in communication. It is the context that determines the complete meaning of an utterance. By context, we mean the background knowledge available to both speaker and hearer at the time of speaking. This would include among other things, information about immediate physical environment, religious belief, speaker/hearer's beliefs and world views, cultural assumptions and attitudes and the mental state of the participants and even their intentions. Given these situations, it is difficult or almost impossible to achieve complete meaning of a sentence in abstraction of context. Participants in a speech act always presuppose something about their surroundings which they bring to bear on their utterance. So semantic information alone cannot account for the complete meaning of sentences; the interplay of both levels of meaning is therefore imperative, if effective communication must be achieved. In this paper, we argue that both semantic and pragmatic reasons are found for the possible co-occurrence of verbs and their accompanying nouns.

## A Semantic Analysis of Verb-Noun Selection Restrictions in some Igbuzo Verb Clusters

In this section, we examine the co-occurrence possibilities in the Igbuzo Verb Phrase to capture the intricate semantic properties that characterize these restrictions. The manner in which an action is performed, the time or duration of the action, the physical nature of the nouns themselves, (that is, the size, weight and number of the item) all have strong roles to play in determining verb-noun compatibility in adjacent syntactic position. The lexical items therefore have inherent semantic properties that determine their selectivity. For example, the different forms in Igbuzo of the verb "peel" select different nouns as objects and reject others depending on the semantic properties of the nouns. Using the verbs of planting in section (1.1), as illustration, we observed that the nouns selected by each verb of planting share some common semantic features. The nouns selected by the verb, -ku has these specifications: [+ Plantable],

[ $\pm$  Light], [ $\pm$  Grain/Seed], etc., while the nouns selected by -gbu are [ $\pm$  Plantable] [ $\pm$  Tuber crops], [ $\pm$  Difficulty] and [ $\pm$  Instrument].

The degree of selectivity between verbs and nouns vary extensively. Some collocations are narrow; some others are wide while others are fixed. A collocation is narrow where the verb selects a limited number of nouns as objects. It is wide where the choice of accompanying nouns is unlimited, and fixed where the verb selects only one noun as object. For example, the verbs of buying have the following collocational range:

4.	Narrow	Wide	Fixed
	- kpọ	-go	kù

The following co-occurrences are possible:

-kpo akwà	'buy cloth'	-go akwà	'buy cloth'
-kpo nchà	'buy soap'	-go anū	'buy meat'
-kpo anwùlù	'buy tobacco'	-go nchà	'buy soap'
		-go akwukwo	'buy book'

In Igbuzo,  $-k\dot{u}$  also meaning buy is used only with  $oh\dot{u}$  'slave'. On no occasion is  $-k\dot{u}$  used to mean 'buy' except in the context of a slave deal. So  $-k\dot{u}$  has a fixed collocation with  $oh\dot{u}$  in Ìgbuzò Igbo. The verb -go can also be described as the nuclear verb since it can co-occur with all the "buyable" nouns, while the verb -kpo and  $-k\dot{u}$  can be seen as the non-nuclear since their collocation is restricted to just few nouns.

#### Methodology

Two clusters of verbs from the Igbuzo variety of Igbo are chosen for the semantic analysis. They are 'carry' and "harvest" clusters. Igbuzo sentences of the structure: #S NP<sub>1</sub>+ V+ NP<sub>2</sub># have been chosen for the analysis, and so we limit our discussion to the behaviour of transitive verbs in Igbuzo. Feature specifications of NP<sub>2</sub> are given to show their inherent semantic properties. To make the analysis clearer, sets of ungrammatical sentences similar in form to the grammatical ones are compared and reasons given for their ungrammaticality/unacceptability. The relevance of this method is to show that the semantic import of the items in the NP<sub>2</sub> position is of immense significance in Igbuzo-Igbo selection restriction and thus prove that the co-occurrence is not accidental. We also include semantic specifications of the nouns in NP<sub>2</sub>. Thereafter, in section 3, we examine some sentences/utterances to show that their semantic representations fall short of being complete interpretation in context. Some sentences already analysed semantically are also pragmatically analysed to demonstrate that both meaning of words in abstraction and meaning in context interact for effective interpretation of meaning.

#### Semantic Analysis of verbs of "carrying" and "harvesting"

These verbs have been found to exhibit a good number of varieties in the language. They impose selection restrictions on the nouns that co-occur with them as Complements. Below are the co-occurrence possibilities of these verbs and the componential analysis of the nouns.

# Verbs of "carrying"

In this cluster, we have the following verb forms:  $-bu \sim -kwa \sim -kwo \sim -pa \sim -se$ . Each verb selects appropriate "carryable" objects. The semantic feature of  $[\pm]$  Weight] is of great significance to this selection. The verbs exhibit the collocations shown below:

```
nku 'firewood'; ochè 'chair''
-bu
                                                    akpu mmili 'fermented cassava'
                 (any heavy object)
            ibu 'property'; 'ngwo olū 'tools''
-kwa
                                                    àkù 'inheritance' (plenty, and heavy)
            ibu 'load";
                            'nnwa 'child",
-kwo
            nnwa 'child'; mmadu 'a person';
                                                    afele-akwa-òkùkù 'breakable plate'
-pa
-sè/wè
            afele 'plate';
                            'akwukwo 'book',
                                                    ngàii 'spoon',
                                                                     akpa 'bag'
```

The semantic feature specifications of nouns that can co-occur with verbs in this cluster are also given here. This is done to highlight the meaning components common to the classes of nouns that are selected by the different verbs. We formalize these thus:

```
i) -bu + NP_2; [+ carryable], [+Heavy], [+Difficult], [-Care]

ii) -kwa + NP_2; [+ carryable], [+ heavy], [+ plenty], [\pm animate]

iii) -kw\dot{o} + NP_2; [+ carryable], [+ Heavy], [+Care], [+Back], [\pm Animate]

iv) -pa + NP_2; [+ carryable], [\pm Heavy], [Care], [Contact with Body], [\pm Animate]

v) -s\dot{e} + NP_2; [+carryable], [+Light], [+Portable], [-Effort]
```

Below, we give illustrations in sentences to demonstrate the semantic possibilities of these verbs:

- 6. *Ònye sèlì akwukwo m.*Who carry-PST-MOT book 1SG
  Who took/carried my book?

  7. *Ngozi sèlì-PST àkpà m.*PN carry-PST MOT 1SG
  Ngozi took/carried my bag.
- 8. Bikō bulu àkpa à.
  Please carry-MOT bag this
  Please carry this bag.

Note the difference in meaning in sentences (7) and (8). Even though the noun "bag" is not specified as heavy or light, the choice of the verb specifies the weight of the bag. The verb -bu suggests that the bag is heavy while -se suggests that it is light. Thus, in the verb -se is encoded the feature [+ light].

- 9. (a) Sèli akwukwo à. (b) Bulu akwukwo à carry-MOT book this Carry (take) this book. (b) Bulu akwukwo à carry-MOT book this Carry this book.
- 10. (a) Sèli ìtè à. (b) Bulu ìte à. Carry this pot. Carry this pot.

Note that the English translation does not bring out this meaning distinction.

Below also are the selection restrictions for the verbs -kwa and -pa.

- 11. Wa àkwagaa ibu òkpòhò woò si Asaba.3PL carry-PRF load (property) woman DEF to Asaba.They have carried the woman's property to Asaba.
- 12. *Ndi oshī kwa ife àkù a niinē*. 13. *Bikō pali nnwa à nibe n'enu àkwà*. People thief carry property 3SG all Thieves carried all his/her property. Please carry this child and put him/her on the bed.
- 14. *?Bulu nnwa nibe n'akwa*Carry the child and put her on the bed.

It should be noted here that even though nnwa "child" is considered heavy, -bu is not an appropriate collocate of nnwa. The verb -pa is more appropriate since the handling of a child involves some tenderness, affection and care. Note also the use of -pa in sentence (15) below:

15. *Ndi nkuzi n'àpa akwukwo wa*. People teacher Aux carry book 3PL Teachers carry their books.

This is semantically appropriate because books are considered valuable and precious to teachers.

16. O nà-àkwoo nnwā ā n'àzu a.3SG HAB-Carry child 3SG PREP back 3SG.He/she carries her child on her back.

The special feature of  $-kw\dot{o}$  is [+ on the back], so sentence (21) below is acceptable.

17. Onye alā nà-akwòo osisi n'azu a.
Person mad HAB-carry stick back 3SG.
A mad man carries a stick on his/her back.

#### **Verbs of Harvesting**

The verbs in this cluster include -bù "uproot", -gbu "cut", -ho "uproot", -ke "cut",

-kpa, -tutù "pick" and -wo "pluck". These verbs also have other meanings which suggest the manner of harvesting. Below is a list of the verbs with the nouns they select and their feature specifications.

- -bù mkpòlògwù 'root'/ 'stump', akpu 'cassava', àkàsì 'cocoyam', adù 'a species of root crop'.
- -gwu ji "yam", akpu 'cassava'.
- -ke okwùlù 'okra', ògèdè 'plantain'.
- -kpa mkpaakwukwo 'leafy vegetables', ugu 'pumpkin leaf', nti oke 'a type of vegetable, ujùjù, gbòlògi isikèlè, alulu isi- (vegetable/herbs)
- -gbu ògèdè 'plantain', akwu 'palm kernel bunch', osisi 'tree'.
- -ho elō "mushroom", ashishia "grass/wead".

The nouns that co-occur with these verbs have the semantic features specified below:

```
-bù + NP<sub>2</sub> [+ Harvestable], [+Root Crop], [± Instrument], [-Ease]
-gwu + NP<sub>2</sub> [+ Harvestable], [+Root Crop], [+Instrument], [+Dig]
-gbu + NP<sub>2</sub> [+Harvestable], [+Cut Down], [+ Instrument]
-ho + NP<sub>2</sub> [+Harvestable], [+ Uproot] [+Ease], [+Instrument]
-ke + NP<sub>2</sub> [+ Harvestable], [+ Knife/Cutlass], [+Cut]
-kpa + NP<sub>2</sub> [+ Harvestable], [+Leafy Vegetable], [± instrument] [+ Ease]
-tutù + NP<sub>2</sub> [+ Harvestable], [+ Pick/Gather], [+ Creeping Plants], [-Instrument]
-wo + NP<sub>2</sub> [+Harvestable], [+Fruit], [+ Ease], [+ Instrument]
```

Below are examples of constructions showing selection restrictions in this cluster. Sentences (18) - (24) do not violate the selection restriction rules of the language.

- 18. *Ònye wò ùbe ndi à niinē*.

  Who harvest-PST (pluck) pear these all
  Who harvested all these pears?
- 19. Egbutugea m̄ akwu cha acha.

  ISG havest (cut)-PRF palm kernel ripe ripe
  I have harvested the ripe palm bunch.
- Ngozi gà-èhota elō di n'ògìgè.
   PN FUT-harvest (uproot) mushroom is PREP garden
   Ngozi will harvest the mushroom in the garden.
- 21. Ànyi jèkò n'ugbō gà àtutū ògìlì.
  3PL INCEP. PREP farm ANT harvest melon
  We are going to the farm to harvest some melon.
- 22. Ndi Ogbeowele egwubegea ji.People PN harvest-INCEP-PRF yamOgbeowele people have started harvesting yam.
- Jee ga-akpata onugbu.GO-IMP-FUT. harvest-MOT bitter-leafGo and harvest some bitter leaf.
- 24. Àdaekē kètè okwùlù o bù je ashiā.
  PN harvest-PST-MOT. okra 3SG carry PST go market
  Adaeke harvested the okra she carried to the market.

Considering that *-ho* selects nouns that are [+ Harvestable], [+ Uprootable], [+ Ease] and [- Resistance] the sentence below is semantically deviant:

- 25. (a) ?Ònye hò akpu m?
  - (b) ?Ònye hò okwùlù mì

To harvest cassava one requires to dig the ground with some kind of instrument and this requires exerting some energy. The following sentences are therefore deviant because they do not possess the relevant semantic properties required.

- 26. (a) ?Wa gà-àtutù akpu taàtà.
  - (b) ?Ànyi gwùtè elō n'oshia.
  - (c) ?Awòtà m ji.
  - (d) ?O bùtà okà.

## 3. Pragmatic Analysis of Selection Restrictions

In this section we demonstrate the interplay of both linguistic and extra-linguistic information in selection restriction. Some collocation possibilities examined semantically in section 2 are now analysed pragmatically.

### 3.1 Contextual Analysis of Some Verbs and their Accompanying Nouns

In section 2, we saw that the verb -bu selects nouns that are [+ Heavy], [+ Difficulty], [- Care] etc. The nouns that fit into these specifications in Igbuzo are nku "firewood, oche "chair", akpu mmili "processed cassava" etc, i.e. heavy objects. The sentence below is therefore worthy of note:

27. Okafo wètè egō nwunyè a. PN bring-PST.MOT wife 3SG Okafor brought his wife's money.

We need the background knowledge of the utterance to be able to disambiguate the sentence. We noted earlier that the context of an utterance includes all the extra-linguistic information, such as cultural beliefs, world views, attitudes, among others, needed for complete meaning interpretation. Considering only the semantic representations, the sentence could mean that Okafor brought some money on behalf of his wife. But if the speaker means that Okafor brought (paid) his wife's bride price then the above sentence would be semantically anomalous. The acceptable sentence in this regard would be:

Okafo bute ego nwunye a.
 PN carry. PST. MOT money wife 3SG
 Okafor paid his wife's bride price.

Here, the sentence is pragmatically acceptable because, even though bride price does not suggest the feature [+ Heavy], the verb -bu does not describe the physical weight of the bride price but rather describes it in terms of the value and importance attached to marriage in the culture, as part of its meaning.

Let us consider the contextual implication of the verb -ho "uproot" as part of the meaning of the sentence.

29. *Ìkùkuu nnyaà holu nkwu à.*Wind yesterday uproot PST palm tree DEF.
Yesterday's wind uprooted the palm tree.

The verb -ho semantically co-occurs with such nouns as  $el\bar{o}$  "mushroom", ashishia "grass",  $aw\bar{o}$  "grey hair" etc, that is, nouns that are [+ Uprootable], [+ Ease], [- Implement]. Following these feature specifications, the sentence above is semantically anomalous. However, it is pragmatically acceptable. The verb semantically appropriate for palm tree is -gwu, which selects the nouns that are [+ Uprootable], [+ Implement], [+ Difficulty]. In this sentence, the verb -ho has therefore been used pragmatically to suggest that the wind was very strong and so uprooted the palm tree with so much ease.

The sentence below is worthy of note because of the semantic-pragmatic interplay.

30. *O nà-akwali anū* 3SG PROG. eat meat He is eating some meat.

The verb -kwali "eat" in Igbuzo co-occurs with ji "yam", àkàsì "cocoyam, ògèdè "plantain. These items are usually cooked or roast without peeling the skin. The sentence, "O na akwali anu is therefore used uncharacteristically but pragmatically to mean that the person is eating plenty of meat. When one is eating with just one or two pieces of meat in Igbuzo, the verb -ta "chew" or "eat" rather than -kwali is chosen. This interpretation is achieved because the background information for the use of the verb -kwali instead of -ta is available to both speaker and hearer. A corresponding sentence in English would be:

31. He is feasting on meat.

A similar analysis can be made of the sentence below:

32. *Wa nà èkpoli ùwà*.
3PL PROG. gather eat life.
They are enjoying life.

The verb -kpo has the meaning "gather" and -li has the gloss "eat", therefore -kpoli means "gather something to eat". The verb characteristically co-occurs with nouns that are [+[+Grain], [+ Plenty], [+ Processed] such as rice, beans, shredded corn, soya beans and other kinds of grains, hence the sentence below is semantically acceptable:

33a. *O na ekpoli òsìkapa* 33b. *O na ekpoli oka*. He is eating rice. He is eating (shredded) corn.

So, the sentence, "O na ekpoli uwa", would be semantically unacceptable as the noun uwa (that co-occurs with the verb kpoli), does not have the features specified above. But it is pragmatically acceptable when interpreted in the light of enjoying life as one enjoys gathering rice and eating. Moreover, in the past a rice meal in Igbuzo was an exclusive reserve of the opulent.

The sentence below is also equally striking for its pragmatic undertones:

34. ??Uchè chù Àba n'izu ga aga
Uche fetch PST PREP week past
Uche fetched Aba last week
Uche went to Aba several times last week.

The sentence is semantically anomalous, because *-chu* semantically co-occurs with *iyi* "stream" or "river", an *mmili* "water". It is the tradition in Igbuzo to travel some distance, and many times in a day to fetch water from the stream. On the other hand, characteristically, *-je* "go" or

"travel" co-occurs with Aba or any other place. So, by the choice of -chu rather than -je, the speaker intends to stress the importance and frequency of the journey.

Let us consider the interpretation of another sentence in its context:

- 35. *Nna Azuka bu agadi nwoke n'agwo ofe.* Father PN is old man PROG scoop soup
  - (a) Azuka's father is an old man that scoops soup.
  - (b) Azuka's father is morally bankrupt.

Literally, sentence (37a) means that Azuka's father takes more soup than is necessary to swallow his balls of foofoo. But pragmatically, it means that he is an adult delinquent, that is, he still enjoys what children love doing. In Igbuzo, it is expected that an adult should be disciplined and so be able to finish his foofoo with the available soup. From the foregoing, it is evident that quite often, interpretation of sentences /utterances falls short of semantic representations. This means that literal meaning is different from non-literal.

#### Conclusion

In this paper we have shown that there exist strong selection restrictions between verbs and their complements and that the semantic specifications of the nouns in NP<sub>2</sub> position are of immense importance to verb-noun co-occurrence in the language. The paper also shows that the verb is the most semantically potent category in the language as it determines its complements. It is evident from our analysis that although verbs select their complements from a wide range of nominals, pragmatic rules of the language quite often interfere with the semantic rules to create new meaning. The paper therefore concludes that both linguistic and non-linguistic aspects of meaning are relevant for the complete interpretation of meaning.

#### References

- Agu, P. M. (2016). *Verb-noun collocation in Isu-Igbo*. Unpublished M.A. Dissertation. University of Port Harcourt.
- Anoka, G. M. K. (1983). Selection restrictions: The verb meaning 'to buy'. In Nwachukwu, P. A. (ed.). *Readings on the Igbo verb*. Onitsha: African-Feb Publishers. (PP 171-205).
- Brown, E. K. & Miller, J. E. (1985). *Syntax: A linguistic introduction to sentence structure*. London: Hutchinson.
- Chafe, W. (2003). Oneida-English/English-Oneida Dictionary. Michaelson, K. & M. Doxtator. International Journal of American Linguistics, 69.3.
- Emenanjo, E. N. (1975b). *Aspects of the Igbo verb*. In Ogbalu, F. C., & Emenanjo, E. N. (eds.). *Igbo Language and Culture*. Ibadan: Oxford University Press. (160-173).
- Leech, Geoffrey (1974). Semantics: The study of meaning. England: Pengium Books Ltd.
- Ndimele, O-M. (2007). *A concise grammar of Echie*. Port Harcourt: Emhai Printing and Publishing Co.
- Nwachukwu, P. A. (1983a). Towards a classification of Igbo verbs. In Nwachukwu, P.A. (ed.). *Readings on the Igbo verb*. Onitsha: African-Feb Publishers. (17-24).

- Onyegbuchilam, A. C. (2017). *Collations in Mbieri dialect of Igbo*. Unpublished M. A. Dissertation. University of Port Harcourt.
- Oweleke, E. N. (1996). *Verb-noun selectional restriction in Igbuzo-Igbo*. Unpublished M. A. Dissertation. University of Port Harcourt.
- Palmer, F. R. (1981). Semantics. Cambridge: Cambridge University Press.
- Radford, A. (1988). Transformational grammar: Cambridge: Cambridge University Press.
- Saeed, J. I. (2003). Semantics. Second Edition. Oxford: Blackwell Publishing.
- Umeasiegbu, T. O. (1979). A Semantic Approach to the Igbo verbs meaning "to buy". Kiabara. A *Journal of the Humanities*, University of Port Harcourt. 2: (127-138).