

Magnitude of productivity: inflectional affix or derivational affix

¹Noah Napare Emayakre, ²Cornelius Kuufaar and ³Jessica Khadi Gimode

^{1,2} Languages Department, Bagabaga College of Education, P. O. Box 35 E/R, Tamale-Ghana

³Department of Linguistics, Literature & Foreign Languages, Kenyatta University, Kenya

¹<https://orcid.org/0000-0002-2048-6496>, ²<https://orgid.org/0000-00020197-0274>

³<https://orcid.org/0000-0001-9284-1883>

Abstract: - *This paper discusses the level of efficiency in terms of productivity between the two main affixes in the English Language with regard to their ability to create new words when they are attached to bases. These affixes are: inflectional affix and derivational affix. The paper looks at how dynamic each of these affixes is in the manner in which they can create new forms of words in the language. To be able to measure the magnitude between the two affixes in terms of their productivity levels, they were both applied to the same randomly selected words. A simple random technique was used to select seven (7) words each from the four (4) major word class items for the analysis. The paper focuses on the major word class category because members of the major word class admit new members unlike the minor word class category which does not readily admit new members. The four (4) major word class members are nouns, verbs, adverbs and adjectives. Both the inflectional affix and the derivational affix were applied on each of the selected words to determine their level of productivity in each word category. In the word category, percentages were used to show the level of effectiveness of each affix. At the end of the category analysis, the percentages obtained by each of the affixes at the various stages were computed and used as the overall percentage for the final analysis in the paper. The paper equally looks at the differences between the inflectional affix and the derivational affix with regard to the characteristics of the new words that they create. Accordingly, an inflectional affix does not change the core lexical meaning or the lexical category of the base to which it is attached. On the other hand, derivational affix may or may not change the lexical category of the base it is applied to but typically changes the meaning of the base. Based on this literature, affixation (attaching affixes to bases) was applied to each of the selected words to find out the kind of the new forms or words that would be created. For example, if the new word formed was a different variant or form of the base, then it meant that the inflectional affix was used to create that particular new word. On the other hand, if the new word formed was in a different semantic category from the base, then the derivational affix was used in creating that new word. This was how the paper identified the new words as to whether they were created by the inflectional affix or the derivational affix. It was established that the derivational affix was more productive than the inflectional affix on the randomly selected words.*

Key words: Derivational Affix; Inflectional Affix; Productivity; Magnitude

Introduction

An affix is a morphological segment which is normally attached to a word. Usually, they are attached to bases to create new words. An affix has an abstract meaning and therefore cannot stand

on its own (Haspelmath, & Sims, 2010, p. 19-20). The name given to an affix depends on its position with regard to the base to which it is attached. They can occur before the base (prefix) or after the base (suffix). For instance, a prefix is an affix that is put in front of a base. As it is in: **redo**, **unhappy**, **unkind** and **indecent**. On the other hand, when an affix appears after the base it is attached to, it is known as a suffix. This can be seen in: **childhood**, **quickly**, **bags** and **kingship**. It can also occur inside the word. In this way, it is called **infix**. Finally, an affix that occurs on both sides of the base is known as **circumfix**. The two main types of affixes in English are the inflectional affix and the derivational affix. Affixes as morphological segments are usually attached to the bases to create new words which could be in the same word category as the base or the new word formed could also be in a different word category.

Inflectional affix creates the different forms or variants of the base to which it is attached. In this case, the new item formed is in the same word class as the base. It is basically used for the grammatical purpose in the construction. Derivational affix on the other hand may or may not change the word class of the base from which the new item is formed. Thus, the new word formed may be in the same word class as the base to which it is attached or may be in a different word class category. This is a means by which one word is derived from another. Aronoff, & Fudeman (2011, p. 169) says that derivational affixes tend to occur closer to the root or stem of the base than the inflectional affix when both of them occur in the same word. Katamba (1993, p.205) mentions that affixes can be divided into two major functional categories. Namely, derivational affix and inflectional affix. According to Katamba, these two affixes are the principal word building processes in English. In Rochelle (2010, p. 108), it is argued that in a word where both derivational affixation and inflectional affixation occur together, derivational affix normally occurs inside the inflectional affix.

The process of lexeme formation by which the native speakers form new lexemes is called productivity (Rochelle, 2010, p.61). In productivity, the native speakers modify the existing language resources in order to come up with new linguistic signs. The paper compares the level of magnitude between inflectional affix and the derivational affix to find which of them is more productive in terms of their ability to create new words when attached to bases in the English Language.

Literature Review

Affix

Katamba (1993, p. 44-51) says an affix is a morpheme which only occurs when attached to some other morphemes such as a root, stem or base. Similarly, (Hanafi, 2006) posits that an affix is a bound morpheme which can only occur if attached to a word or stem. According to (Plag, 2002), affixes are bound morphemes that attach themselves to bases. Obviously, by definition, affixes are bound morphemes which cannot stand on their own to portray meaning, and therefore they need to be attached to other forms such as roots and bases. Affixation is a morphological process which entails attaching affixes bases to create new lexemes by applying morphological rules. Sutarman (2017, p.121) affirms that affixation has two functions; first, it is used to form one part of speech from another and two; it functions to change the lexical meaning of the same part of speech. The

new lexemes formed can either be a variant form of the base or a semantically different version of the base it is attached to. The two main types of affixes are the inflectional affix and the derivational affix. Siboro, & Bram (2020) argue that the exploration of the affixes is urgent because it will assist the learners of English to acquire new vocabulary items. In the study, it was affirmed that the derivational affix could be used to form nouns, adjectives, verbs and adverbs when attached to bases. The paper does not limit itself to the functions of the affixes in creating new words as pointed out by the literature above but it also compares the derivational affix with the inflectional affix to establish which of the two is more productive in terms of their word creativity.

Types of affix according to their semantic category

Rochelle (2010, p. 40) mentions that affixes fall into a specific semantic category depending on the role they play when attached to a base. The following are some of the semantic categories based on affixes.

- **Personal Affixes:** These are the affixes that create ‘people nouns’. They are usually attached to verbs to create nouns. For example, the suffix **-er** which forms nouns such as **doer**, **runner** and **writer** is a personal affix.
- **Negative Affixes:** As the name suggests, these affixes add negative value to the bases they are attached to. They add the meaning ‘not’ to any base they attach themselves to. Thus, they add a negative value to the base. Some of these negative affixes are: **un-**, **in-**, and **non-**. This can be seen in **unlucky**, **inactive**, **nonsense** and **unwise**.
- **Privative Affixes:** These affixes add a value of ‘without X’ to the base that they are attached to.

Examples of privative affixes are **-less** and **de-**. As in the case of **lifeless**, **hopeless** and **debone**.

- **Prepositional and Relational Affixes:** These category of affixes convey the notions of space and or time to the bases that they are attached to. Some of the affixes that perform this function are **over-** and **out-**. As it is demonstrated in: **overflow**, **overcoat** and **outrun**.
- **Quantitative Affixes:** Semantically, these affixes add the value of ‘amount’ to any base that they attach themselves to. In English, affixes such as **-ful** and **mult-** perform this all important role. This can be seen in words such as **handful**, **helpful** and **multifaceted**.
- **Evaluative Affixes:** These category of affixes consist of diminutives (affixes that signal a smaller version of the base they are attached to) and augmentatives (these affixes signal a bigger version of the base that they are attached to). Affixes **-let** and **mega-** perform the role of diminutive and augmentative respectively. These affixes can be seen in words such as **droplet**, **megabyte** and **megastore**.

Inflectional Affix

Inflectional affix is the type of affix which creates different variants or forms of the base to which it is attached. Normally, the new form or variant is in the same word class as the base. Additionally, the new forms created after attaching the inflectional affix to the base do not differ semantically from the base it is created from. According to Aronoff, & Fudeman (2011, p. 159-160), the inflection as a term originated from traditional Latin grammar, **flect** which means **bend** in English.

They further argue that speakers bend or alter the shape of a word for it to fit a particular position in a sentence. In their view, every sentence is a syntactic frame with a series of words occupying specific positions. To be able to construct grammatically sound sentences, speakers take a lexeme from the lexicon and skillfully bend it so that it can appropriately fit its position in the sentence. In their argument, inflectional morphology is determined by syntax.

Lyons (1968, p.195) argues that an inflection is a change made in the form of a word to express its relation to other words in the sentence. In this way, inflection as a linguistic term is determined by syntax. By principle, the form of a word changes depending on the environment of its construction. Some examples of inflectional affixes in sentences are shown below:

1. Kofi has ten balls.
2. She goes to Nairobi.
3. The baby **cries** all the time.

From the examples above, ‘-s’, ‘-es’ and ‘-ies’ are the inflectional affixes for sentence 1, 2 and 3 respectively. In these examples, it is clear that by adding the inflectional affix ‘-s’ to the word ‘ball’ to make it ‘balls’ does not change its word class as a noun neither does it change its meaning but only marks its grammaticality as plural form 1. In the same vain, attaching the inflectional affix ‘-es’ to the word ‘go’ in example 2 to form ‘goes’ does not also change it from its word class as a verb neither does it change its meaning. It only serves a grammatical purpose in the construction. Similarly, attaching the inflectional affix ‘-ies’ to the word ‘cry’ in example 3 does not change its word class as a verb and does not also change its meaning. In this regard, it is evident that an inflectional affix has a grammatical function and not for a semantic purpose.

Derivational Affix

Derivational affix is an affix that produces new lexemes when attached to a base Aronoff, &Fudeman (2011, p. 160). The new lexeme created by the derivational affix can either be in the same word class as the base to which it is attached or it can be in a different word class category. But the new lexeme is always semantically different from the base to which it is created. This means that a derivational affix changes the meaning of the base to which it is applied as shown in the examples below:

1. She has been sick since **childhood**.
2. This is my **kingdom**.
3. The **runner** has come.

From the above examples, ‘-hood’, ‘-dom’ and ‘-ner’ are the derivational affixes for example 1, 2 and 3 respectively. In example 1, the derivational affix **-hood** is attached to the word, **child** which is a noun and changes it to **childhood** which is an adjective. It is clear that the base (child) and the derived lexeme (childhood) are semantically different. In example 2, the derivational affix **-dom** is attached to the base **king** to create **kingdom**. The base (king) and the new lexeme (kingdom) are both nouns but they are semantically different. Similarly, in example 3, the derivational affix **-er** is attached to **run** to create **runner**. In this example, it could be seen that the base (run) and the new form (runner) are neither the same word class category nor share the same semantic property.

While **run** is a verb, **runner** is a noun. From the above examples, it can be categorically stated that a derivational affix always changes the semantic property of the base it is attached to. However, it should either maintain the word class of the base it is attached to or change it. Zainuddin (2016, 148) describes the grammatical meaning of words formed in the process of derivational affixes of Indonesian noun-formation. In the study, it was indeed established that derivational affix is capable of changing the meaning of the base when it attached to it.

Differences between inflectional affix and derivational affix

The literature in this section demonstrates that there are a number of differences between the inflectional affix and the derivational affix. According to Aronoff, & Fudeman (2011, p.168-169), the following are the differences between the inflectional affix and the derivational affix.

1. Inflectional affix does not change the word class of the base it is attached to but derivational affix may or may not change the word class of the base it is attached to.
2. Inflectional affix is determined by syntax while the derivational affix is not determined by syntax rather, semantics.
3. When both an inflectional affix and a derivational affix occur in the same word, the derivational affix tends to occur closer to the base than the inflectional affix.
4. Inflectional affix adds grammatical meaning to the base while derivational affix adds semantic meaning to the base it is attached.
5. Derived lexemes are likely to be stored in the lexicon of a language than the inflected forms.

Productivity

Productivity is a process through which the native speakers create new lexemes in their language. It is viewed in terms of generality. In this case, the more general a word-formation process is, the more productive it will be assumed to be. It is a matter of degree in that, some word-formation processes are more productive than others. It is also subject to the dimension of time. By this principle, a word-formation process may be more productive at a particular point in time but less productive in another point in time (Katamba, 1993, p. 66). According to Bauer (1983, p.78), productivity is that part of a language which allows native speakers to produce an infinitely large number of sentences in their language.

Factors that contribute to productivity

Research indicates that there are certain factors that contribute to the manner in which the native speakers create new lexemes in their language. Rochelle (2010, p. 61) states that the following factors contribute immensely to productivity.

- **Transparency:** This principle seeks to explain that the process used to form the new lexemes should not be cumbersome. Thus, there should be a phonological and semantic correspondence between the meanings of the affix and the base to which it is attached. In this way, the new lexeme can easily be segmented in the lexicon of the language.
- **Frequency of the base:** The argument here is that certain bases do not accept certain affixes in order to create new words. The more a base accepts many affixes to create new words, the more that base contributes significantly to productivity.

- **Usefulness of the new lexeme:** The native speakers create new words only when there is the need for those words otherwise, productivity does not take place. So, the more the new lexemes are needed, the more native speakers produce more lexemes in their language.

Factors that put restriction on productivity

Certain factors impede the rate at which the native speakers create new words in their language. Some of these factors are:

- **Categorical Restrictions:** In English Language, almost all the affixes have the specific bases that they can be attached to in order to create new lexemes. Apart from these specific bases, those affixes cannot be attached to any other base in order to create new words.
- **Phonological Restrictions:** In this situation, some affixes can only attach themselves to bases that meet a particular phonological pattern or else, productivity does not occur between the two.
- **The meaning of the base:** Before an affix is attached to a base to create a new word, the meanings of the base and the affix matters a lot. For example, an affix which has a negative meaning cannot attach itself to a base which also has a negative meaning to create a new word.
- **Etymological Restrictions:** In English, some affixes can only attach themselves to words that are native in origin to produce new words. On the other hand, there are other affixes that can only attach themselves to the bases that are borrowed into English to produce new words.
- **Syntactic Restriction:** By this principle, some affixes can only be attached to bases that have a restricted syntactic structure.
- **Blocking:** The focus of this restriction is that, certain lexemes are blocked to be created because there are already existence of other words that have the same meaning as they (Rochelle, 2010, p. 64).

Word Class

Dion (1991, p.7) mentions that at the level of grammar, words are arranged in semantic types, with a common meaning element. This arrangement is called Word Class which is traditionally known as Parts of Speech. A group of words in a particular word class share a common morphological and syntactic properties. There are two (2) types of word classes; minor word class and major word class. Words in the minor word class have a limited membership because they do not readily accept new members. They are technically known as closed class of items. Pronouns, conjunctions, prepositions, auxiliary verbs, determiners and interjections form the minor word class. These word class are as said to be finite because they do not accept new members into their category. Additionally, they do not share common inflectional rules.

The major word class is also known as the open class because they admit new members into their category. Thus, they are infinite; they readily accept new members. Finegan (2008, p.104) says that in some societies, there is always the need for new nouns, adjectives and verbs. And this urgency calls for new members into this word category. For this reason, nouns, adjectives, adverbs

and verbs are called open class and they also share common inflectional rules.

Nouns

Radford, & et al (2009, p.129) says that nouns are words used to name concrete and nonconcrete objects in the world. They are used to name places, people, objects, ideas and animals. Nouns are basically grouped into proper nouns and common nouns. Proper nouns name specific people, places and things. Examples of proper nouns are: **Nairobi, Mt Kilimanjaro, Noah and Kenya.** Proper nouns begin with capital letters no matter where they occur in a sentence. Common nouns on the other hand are used to name general classes of items surrounding us. Some of the examples of common nouns are table, woman, tree, school and road. Common nouns do not start with capital letters unless they are used at the beginning of a sentence. In the view of (Eastwood, & Mackin 1982, p. 67) nouns are naming words and can be regular or irregular. In addition, nouns can also be concrete or abstract. Concrete nouns name objects that can be perceived by our senses such as stones, trees, and cars. On the other hand, abstract nouns name things that cannot be perceived by our senses. Examples of abstract nouns are: kindness, harmony, innocence and love. Other types of nouns are count nouns and non-count nouns. Count nouns name units that can be counted such as stones, tables, and houses while non-count count nouns name units that cannot be counted. Examples of non-count nouns are: water, salt, sand and soup.

Verbs

Verbs are words which typically refer to activities (Radford, & et al (2009, p. 129). Verbs are words that express physical action and show a state of being. They could be main verbs such as go, sweep, read walk and or axillaries such as can, may, shall and would. Main verbs are either regular verbs or irregular verbs. Examples of regular verbs are: cook, walk, open and kick. Some of the irregular verbs are: sweep, go, see and drink.

Adverbs

Adverbs are words basically used to modify verbs, adjectives or even another adverb. Adverbs modify other words by indicating how, when or why something happens or the degree at which the action takes place (Radford, & et al 2009, p. 130). According to (Eastwood, & Mackin, 1982, p. 102), adverbs add more meaning to the verbs by telling us how, where, how often and the degree at which an action takes place. Some of the examples of adverbs are: badly, fast, quickly, heavily, gently and slowly. Most adverbs normally end with ‘-ly’ or ‘-lly’.

Adjectives

Adjectives typically refer to properties which people or things possess and they are used to modify nouns and pronouns (Radford, & et al 2009, p. 130). Adjectives give clear picture about nouns and pronouns by telling us which noun or pronoun is being referred to. Because they describe nouns and pronouns, adjectives are sometimes called describing words. Semantically, adjectives give us more information or meaning about people, animals and things. Examples of adjectives are: kind, bad, happy, noisy, dirty, red and clean.

Materials and Methods

The **descriptive research design** was used to describe the new items that were created after the affixation had been applied on each of the selected words (bases). A simple random technique was

used to select seven (7) words each from the four (4) major word class category. All the selected words received affixation individually. After this, the new words or items created were examined thoroughly to find out which specific affix was used in creating them. The affixation as a process was carried out on each of the selected words one after the other until all the selected words had been illustrated and explained.

In order to determine which specific affix was used in creating a particular new item, the syntactic and semantic properties of the new items were the focus of analysis. For example, if the new item was a different variant or form of the base to which the affixation was applied, then it meant that the inflectional affix was used in creating that particular new item. On the other hand, if the new item was semantically different from the base to which the affixation was carried on, then it implied that the derivational affix was used to create that particular new item. At each word category, counting of the new words was performed to find out how many new words were created by each of the affixes. The category percentages for each affix were collated and used for the final analysis.

Affixation on the randomly selected nouns

The seven nouns that were selected for the analysis are: Boy, House, King, Table, Tree, Bag and Child.

➤ **Affixation on ‘Boy’**

(boy + s=boys, boy + ish = boyish, boy + hood = boyhood)

Total number of new words created = 3

Number of word(s) created by inflectional affix: Boys (noun) =1

Number of words created by derivational affix: Boyish (adjective), Boyhood (adjective)=2

➤ **Affixation on ‘House’**

(house + s = houses, house + hold=household, house + ing = housing)

Total number of new words created = 3

Number of words created by the inflectional affix: houses (noun), housing (noun, can also be an adjective, but for the sake of its word class in this analysis) = 2

Number of word(s) created by the derivational affix: household (adjective) =1

➤ **Affixation on ‘King’**

(king + s = kings, king + ship = kingship, king + dom = kingdom)

Total number of new words created = 3

Number of words created by inflectional affix: kings (noun), kingdom (noun) =2

Number of word(s) created by derivational affix: kingship (adjective) =1

➤ **Affixation on ‘Table’**

(table + s = tables, table + d = tabled)

Total number of new words created = 2

Number of word(s) created by inflectional affix: tables (noun) = 1

Number of word(s) created by derivational affix: tabled (verb) = 1

➤ **Affixation on ‘Tree’**

(tree + s = trees)

Total number of new word(s) created = 1

Number of word(s) created by inflectional affix: trees (noun) = 1

No word was created by derivational affix

➤ **Affixation on ‘Bag’**

(bag + s = bags, bag + ed = bagged)

Total number of new word(s) created = 2

Number of word(s) created by inflectional affix: bags (noun) = 1

Number of word(s) created by the derivational affix: bagged (verb) = 1

➤ **Affixation on ‘Child’**

(child+ ren = children, child + ish = childish, child + hood = childhood, child + dishly = childishly)

Total number of new words created = 4

Number of word(s) created by inflectional affix: children (noun) = 1

Number of words created by derivational affix: childish (adjective), childhood (adjective), childishly (adverb) = 3

Analysis of affixation on the selected nouns

From the information above, it is revealed that eighteen (18) new words were created from the total number of seven (7) nouns after each of the selected words had gone through affixation process. Out of this number, nine (9) words were created by the inflectional affix and the remaining other nine (9) words were also created by the derivational affix.

Affixation on the randomly selected verbs was done as shown below:

➤ **Affixation on ‘Eat’**

(eat + er = eater, eat + ers = eaters, eat + s = eats, eat + ing = eating, eat + en = eaten, eat+(past tense) = ate, eat + able = eatable)

Total number of new words created = 7

Number of words created by the inflectional affix: eats (verb), eating (verb), eaten (verb), ate (verb) = 4

Number of words created by the derivational affix: eater (noun), eaters (noun), eatable (adjective) = 3

➤ **Affixation on ‘Sing’**

(sing + s = sings, sing + (past tense) = sang, sing + (past participle) = sung, sing + er = singer, sing + ers = singers, sing + ing = singing)

Total number of new words created = 6

Number of words created by inflectional affix: sings (verb), sang (verb), sung (verb), singing (verb) = 4

Number of words created by derivational affix: singer (noun), singers (noun) = 2

➤ **Affixation on ‘Write’**

(write + s = writes, write + past tense=wrote, write + past participle=written, write + er= writer, write+ ers = writers, write + ing = writing, write+ ings = writings)

Total number of new words created=7

Number of words created by inflectional affix: writes (verb), wrote (verb), written (verb), writing (verb), = 4

Number of words created by derivational affix: writer (noun), writers (noun), writings (noun) = 3

➤ **Affixation on ‘Cook’**

(cook + s = cooks cook + ed = cooked, cook + ing = cooking, cook + er = cooker, cook + ers = cookers)

Total number of new words created = 5

Number of words created by inflectional affix: cooks (verb, can also be a noun, but because of its word class in this analysis), cooked (verb), cooking (verb), =3

Number of words created by derivational affix: cooker (noun), cookers (noun) = 2

➤ **Affixation on ‘Dance’**

(dance + s= dances, dance + ing = dancing, dance + ed = danced, dance + er = dancer, dance + ers= dancers)

Total number of new words created = 5

Number of words created by the inflectional affix: dances (verb), dancing (verb), danced (verb) =3

Number of words created by the derivational affix: dancer (noun), dancers (noun) = 2

➤ **Affixation on ‘Run’**

(run + er = runner, run + ers = runners, run+(past tense) = ran, run + ing = running, run + s=runs)

Total number of new words created = 5

Number of words created by inflectional affix: runs (verb), ran (verb), running (verb) =3

Number of words created by derivational affix: runner (noun), runners (noun) = 2

➤ **Affixation on ‘Sweep’**

(sweep + s = sweeps, sweep + (past tense) = swept, sweep + ing = sweeping, sweep + er=sweeper, sweep + ers = sweepers)

Total number of new words created = 5

Number of words created by the inflectional affix: sweeps (verb), swept (verb), sweeping (verb) =3

Number of words created by the derivational affix: sweeper (noun), sweepers (noun) = 2

Analysis of affixation on the randomly selected verbs

After the affixation had been applied to all the seven (7) verbs selected for the study, it was realized that a total number of forty (40) new words were created. Out of this number, twenty-four (24)

words were created by the inflectional affix while the derivational affix was used to create sixteen (16) words.

Affixation on the randomly selected Adverbs is shown below:

➤ **Affixation on ‘Fast’**

(fast + er = faster, fast + est = fastest, fast + ing = fasting)

Total number of the new words created =3

No word was created by inflectional affix

Number of words created by the derivational affix: faster (adjective), fastest (adjective), fasting (verb) =2

➤ **Affixation on ‘Quickly’**

No new word was created

➤ **Affixation on ‘Nicely’**

No new word was created

➤ **Affixation on ‘Beautifully’**

No new word was created

➤ **Affixation on ‘Slowly’**

No new word was created

➤ **Affixation on ‘Properly’**

No new word was created

➤ **Affixation on ‘Badly’**

No new word was created

Analysis of affixation on the randomly selected adverbs

It was identified that only three (3) new words were created by affixation after all the seven (7) adverbs selected for the analysis had gone through affixation process. Specifically, all the three (3) new words were created by the derivational affix.

Affixation on the randomly selected adjectives is as follows:

➤ **Affixation on Clean**

(clean + s = cleans, clean + ed = cleaned, clean + ing = cleaning, clean + er = cleaner, clean

+ est = cleanest, clean + ers = cleaners)

Total number of new words formed=6

Number of words formed by the inflectional affix: cleaner (adjective; can also be a noun but for the sake of its word class in this analysis), cleanest (adjective) = 2

Number of words formed by the derivational affix: cleans (verb), cleaned (verb), cleaning (verb), cleaners (noun) = 4

➤ **Affixation on Red**

(red + en = redden, red + ish = reddish, red + dening = reddening, red + dens = reddens, red + dened = reddened)

Total number of new words formed=5

Number of word(s) created by the inflectional affix: reddish (adjective) =1

Number of words created by the derivational affix: redden (verb), reddening (verb), reddened (verb), reddens (verb) = 4

➤ **Affixation on Deep**

(deep + en = deepen, deep + er = deeper, deep +ly = deeply, deep + ened = deepened, deep + est = deepest, deep + ens = deepens, deep + ening)

Total number of new words formed=7

Number of words formed by inflectional affix: deeper (adjective), deepest (adjective) = 2

Number of words formed by derivational affix: deepen (verb), deeply (adverb), deepened (verb), deepens (verb), deepening (verb) =5

➤ **Affixation on Dangerous**

(dangerous + ly = dangerously)

Total number of new word(s) created = 1

No word was created by the inflectional affix

Number of word(s) created by the derivational affix: dangerously (adverb) =1

➤ **Affixation on Wide**

(wide + en = widen, wide + er = wider, wide + ns = widens, wide + est = widest, wide + ned = widened, wide + ning = widening)

Total number of new words created=6

Number of words created by the inflectional affix: wider (adjective), widest (adjective) = 2

Number of words created by derivational affix: widen (verb), widens (verb), widened (verb), widening (verb) = 4

➤ **Affixation on Fat**

(fat + er = fatter, fat + est = fattest, fat + ed = fatted, fat + en = fatten, fat + ens = fattens, fat+ening = fattening)

Total number of the new words created = 6

Number of words created by the inflectional affix: fatter (adjective), fattest (adjective) fattening

(adjective) = 3

Number of words created by the derivational affix: fatted (verb), fatten (verb), fattens (verb) = 3

➤ **Affixation on Pure**

(pure + ity = purity, pure + fy = purify, pure + fying = purifying, pure + fies = purifies, pure + fied = purified, pure + fication = purification, pure + est = purest, pure + er = (purer))

Total number of the new words created = 8

Number of words created by the inflectional affix: purest (adjective), purer (adjective) = 2

Number of words created by the derivational affix: purity (noun), purify (verb), purifying (verb), purifies (verb), purified (verb), purification (noun) = 6

Analysis of affixation on the randomly selected Adjectives

From the information above, it is observed that a total number of thirty-nine (39) new words were created from the seven (7) adjectives selected for the analysis. Out of this number, twelve (12) words were created by the inflectional affix. On the other hand, twenty-seven (27) of the new words were also created by the derivational affix.

Word class category analysis

The following paragraphs explain the sub-categorical analysis of affixation on the four (4) word class items selected as a sample for the paper.

➤ **Analysis on the randomly selected nouns**

After affixation had been applied to all the seven (7) nouns selected for this analysis, it was identified that a total number of eighteen (18) new words were created. Out of this number, inflectional affix was used to create nine (9) words representing fifty percent (50%) of the total number of the new words while the remaining fifty percent (50%) for the other nine (9) words went to the derivational affix.

➤ **Analysis on the randomly selected verbs**

A total number of forty (40) new verbs were created after each of the seven (7) verbs selected for the analysis had gone through affixation process. Out of this number, it was identified that twenty-four (24) of the new verbs representing sixty percent (60%) were formed by the inflectional affix. Derivational affix on the other hand, was used to create sixteen (16) new verbs which represents forty percent (40%) of the total number of the new words created.

➤ **Analysis on the randomly selected adverbs**

Three (3) new words were created out of the total number of the seven (7) adverbs selected for the analysis in this paper. It was observed that all the three (3) new words representing hundred percent (100%) of the total new words formed were created by the derivational affix. This means that no new adverb was created by the inflectional affix.

➤ **Analysis on the randomly selected adjectives**

After all the seven (7) adjectives had received the affixation process, it was identified that a total number of thirty-nine (39) new adjectives were formed. Out of this number, twelve (12) of the new words which represents thirty-point eight percent (30.8%) were created by the inflectional affix while twenty-seven (27) of the remaining words representing sixty-nine-point two percent (69.2%) were also created by the derivational affix.

Results

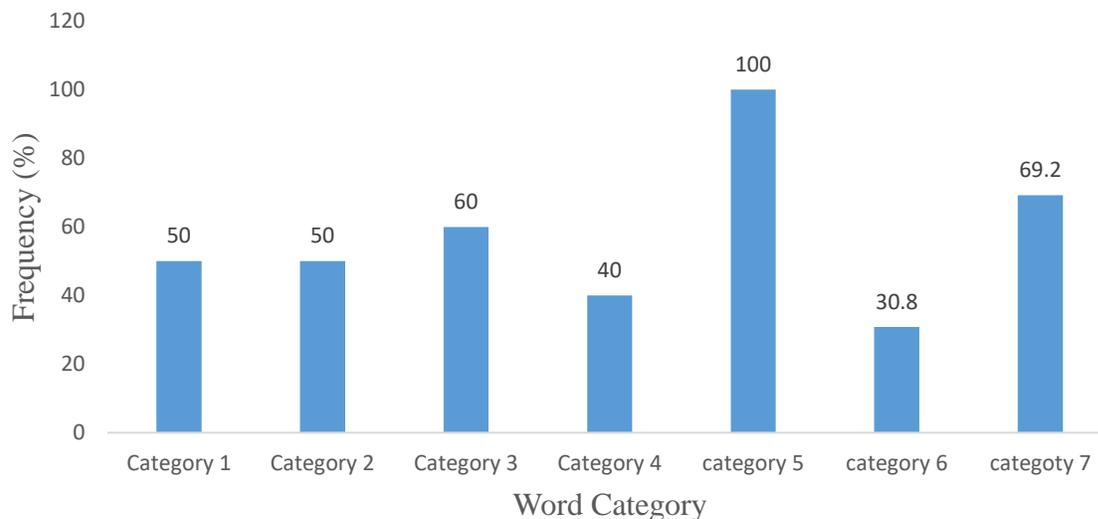
After applying affixation to all the twenty-eight (28) words selected for the study, it was identified that a total number of eighteen (18) new nouns were created and forty (40) new verbs were also created. Also, three (3) new words were formed as adverbs. Finally, a total number of thirty-nine (39) new words were created as adjectives. In all, one hundred (100) new words were created out of the twenty-eight (28) words that were selected for the analysis.

Statistically, nine (9) nouns representing fifty percent (50%) of the total eighteen new nouns created were formed by the inflectional affix while other fifty percent (50%) of the nouns was formed out of the derivational affixation. It was discovered that out of the forty (40) new verbs created, inflectional affix was used to form twenty-four (24) of them which represents sixty percent (60%). On the other hand, derivational affix was also used to create sixteen (16) of the new verbs representing forty percent (40%). In addition, all the three new adverbs were created by the derivational affix. Finally, twelve new adjectives which represents thirty-point eight percent (30.8%) were created by the inflectional affix while the derivational affix created the remaining twenty-seven (27) new adjectives representing sixty-nine-point two percent (69.2%).

Finally, out of the total number of the hundred new words created as a result of the affixation, forty-five (45) of them which represents forty-five percent (45%) were created by the inflectional affix. Derivational affix on the other hand was used to create fifty-five (55) new words and this represents fifty-five percent (55%). The frequency tables below show the summary of the analysis.

DIAGRAM 'A'

The frequency table below shows the category percentages obtained in productivity by the inflectional affix and the derivational affix on the randomly selected words.



KEY:

Category 1 – Percentage of new nouns created by the inflectional affix

Category 2 – Percentage of new nouns created by the derivational affix

Category 3 – Percentage of new verbs created by the inflectional affix

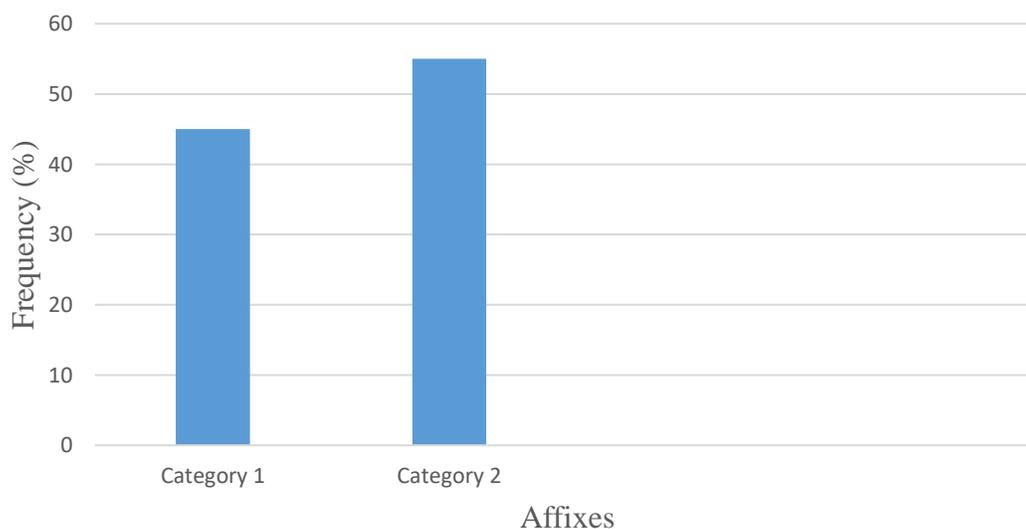
Category 4 – Percentage of new verbs created by derivational affix

Category 5 – Percentage of new adverbs created by the inflectional affix

Category 6 – Percentage of new adjectives created by the inflectional affix

Category 7 – Percentage of new adjectives created by the derivational affix

DIAGRAM ‘B’: The frequency table below shows the total percentages obtained in productivity by the inflectional affix and the derivational affix.



KEY:

Category 1 – Percentage obtained by the inflectional affix

Category 2 – Percentage obtained by the derivational affix

In conclusion, after the affixation process on all the twenty-eight (28) selected words, total of one hundred (100) new words were created. The article identified the derivational affix as more productive than the inflectional affix. Its efficiency was demonstrated through the number of the new words it created. Practically, out of the one hundred (100) new words created through affixation, forty-five (45) of them which represents forty-five percent (45%) were created by the inflectional affix. The remaining fifty-five (55) new words representing fifty-five percent (55%) were also formed by the derivational affix. In summary, it is revealed that the derivational affix is more productive than the inflectional affix on the sample of the words selected for the analysis in this paper.

Discussion

Productivity as a morphological process is very pertinent because through it the native speakers are able to create new lexemes in their language. Research indicates that affixation is one of the ways by which the native speakers create new words to expend the lexicon of their language. Affixation simply means attaching affixes to the bases to form new words. The two main types of affixes in English are: the inflectional affix and the derivational affix. Inflectional affix creates new forms or variants of the base to which it is attached while the derivational affix forms new words which are semantically different from the base it is attached to. This paper compares the degree at which the two affixes are able to create new words by using twenty-eight (28) words as a sample. The twenty-eight words were sampled randomly from the four major word class items. Thus, nouns, verbs, adverbs and adjectives. Affixation on the selected nouns revealed that both of the inflectional affix and the derivational affix were equally productive. On the selected verbs, inflectional affix was seen to be more productive than the derivational affix. It was also observed that productivity was a bit dormant on the selected adverbs even though the derivational affix was more productive as compared to the inflectional affix in that regard. On the aspect of the selected adjectives, derivational affix was seen to be more productive than the inflectional affix.

Conclusion

In conclusion, after all the randomly selected words had received the affixation proses, it was established that the derivational affix was more productive than the inflectional affix. A total number of hundred (100) new words were created out of the twenty-eight (28) randomly selected words. Out of this number, fifty-five (55) of the new words which represents fifty-five percent (55%) were created by the derivational affix while the remaining forty-five (45) of them representing forty-five percent (45%) were also created by the inflectional affix.

Recommendation

It is recommended that other potential researchers who may have interest in word building process in English to investigate why affixation as a word building technique is so dormant on the selected adverbs. Maybe, there could be a reason to that effect.

Declaration

We the authors of this paper declare that apart from the few citations which are dully acknowledged, the issue presented in this paper is our own original idea. We solemnly pronounce that; we have not submitted this paper to any journal or any publishing institution for consideration.

Acknowledgement

We, the authors of this article thank Almighty God for giving us the requisite knowledge and wisdom to come out with this piece of writing. We are also grateful to PAC University Journal of Arts and Social Sciences for accepting our manuscript for publication.

Conflict of interest

The authors of this article accept that there is no conflict of interest with regard to the submission of the article for publication

Authors' Contribution

Apart from the corresponding author, the other two co-authors made the same level of contribution towards the successful writing of the paper.

Funding

Any funding with regard to the publication of this article will be done by the authors.

REFERENCES

- Aronoff, M. & Fudeman, K. (2011). *What is Morphology?* Blackwell Publishing Ltd, UK.
- Dion, R. M. W. (1991). *A Semantic Approach to English Grammar*. Oxford University Press, New York.
- Eastwood, J. & Mackin, R. (1982). *A Basic English Grammar*. Oxford University Press, New York.
- Finegan, E. (2008). *Language, its Structure and Use*. Michael Rosenberg Publishing, USA.
- Hanafi, N. (2006). *Morphology*. Mataram: Mataram University Press.
- Haspelmath, M. & Sims, A. D. (2010). *Understanding Morphology*. Hodder Education, New York.
- Katamba, F. (1993). *Morphology*. THE MACMILLAN PRESS LTD, London.
- Lyons, J. (1968). *Introduction to theoretical Linguistics*. Cambridge University Press.
- Plag, I. (2002). *Word-formation in English*. University Siegan. Cambridge University Press.
- Radford, A. & et al (2009 2nd ed). *Linguistics: An Introduction*. Cambridge University Press.
- Rochelle, L. (2010). *Introducing Morphology*. Cambridge University Press.
- Siboro, E. & Bram, B. (2020). *Morphological Analysis of Derivational Affixes in Brothers Grimm's the Story of Rapunzel*. Academic Journal of English and Education, 4 (1).
- Sutarman, S. (2017). *Derivational and Inflectional Affixation in Menu-Meni Dialect of Sasak Language*. Journal of Language and Literature, 4 (2), 121-136.
- Zainuddin, Z. (2016). *A study on derivational affixes of Indonesian noun-formation in newspaper editorials: A Semantic Perspective*. International Journal of English Linguistics, 6 (3). 148-155.