

## **CHAPTER II THEORY REVIEW**

### **2.1 Morphology**

Morphology is a branch of linguistics that studies words. Mathew (as cited in Hadiati, 2011, p. 112) states that morphology is a simple term for that branch of linguistics which concerns with the formation of words in different uses and construction. What is learned is the basic form of the word to the combination of several elements that form new words. Morphology is the study of basic forms of words (Yule as cited in Cahyani et al., 2020, p. 70). Lieber (as cited in Christianto, 2020, p. 28) also states that morphology is the study of word formation, as well as the way new forms of words are coined in the languages of the world, and the way forms of words are varied depending on how they are used in sentences. Based on this opinion, it is not only word formation that is studied in morphology but also the use of these words in sentences.

Morphology also studies the rules of how a word is made. Morphology is usually defined as the study of the internal structure of words and the rules governing the formation of words in a language (Oz as cited in Cahyani et al., 2020, p. 70). The same thing was also expressed by O'Grady (as cited in Hadiati, 2011, p. 112) that states that morphology refers to the system of categories and rules that are involved in word formation and interpretation. This is because

words can be broken down into even smaller elements, so that the internal parts of the word itself are investigated in this branch of linguistics. This is also similar to what was said by Booij (as cited in Christianto, 2020, p. 28), that the branch which focuses on the study of word is called morphology, which deals with the internal constituent structure of words.

From the opinions presented above, it can be concluded that morphology is a branch of linguistics that studies words. In learning the word includes the formation of new words, the use of these words in sentences, the rules in word formation, and also the internal parts of the word. The internal parts referred to in morphology are words, morphemes, and terms called base, root, and stem. Below is explained in more detail the internal parts of the word so that it will be easier to understand the basis of what is studied in morphology.

## **1. Word**

The word is a unit that stands alone and has a meaning or a function. O'Grady & Archibald (2016, p. 101) the word is the smallest free form found in language, free form is simply an element that does not have to occur in a fixed position with respect to neighboring elements; in many cases, it can even appear in isolation. So, the word does not have to be tied to the elements in between, because it is a free form.

Words that have been obtained by humans will forever be in the human brain, or stored in the mental lexicon. O'Grady & Archibald (2016, p. 100) say that words are permanently stored in a speaker's mental dictionary, or lexicon. So,

human vocabulary will increase over time, as well as new words will be created and stored in the mental lexicon.

In writing, a word is usually separated by a space before and after it, or separated by a punctuation mark at the end of the word. However, the definition of a word is not that simple, because there is also a word separated by spaces, for example in compound words. The words, *high school*, *living room*, and *ice cream*, in writing they are called two words, but as readers we know that they are one compound word. This is in line with what is explained by Plag (2002, p. 5), namely orthographically defined word is that it may not always coincide with our intuitions. Which is where the reader's intuition is what makes people know that *high school* is a word that means a school that is intended for a level after middle school.

According to Plag (2002, p. 9) words have properties that can be used as definitions of the word itself. These properties are: (1) words are entities having a part of speech specification, (2) words are syntactic atoms, (3) words (usually) have one main stress, (4) words (usually) are indivisible units (no intervening material possible). From this it can be seen that every word has a part of speech which is a class of words, for example *noun*, *verb*, *adjective*, *adverb*, *particle*, and so on. Examples are *go*, *buy*, *take* (verbs); *book*, *pencil*, *ruler* (nouns), *yesterday*, *here*, *carefully* (adverb); *pretty*, *tall*, *narrow* (adjectives), *but*, *and*, *or* (conjunctions); *is*, *am*, *are* (auxiliary verbs); *I*, *she*, *they* (pronouns); *the*, *that*, *my* (determiners). Syntactically or the branch of linguistics that studies sentences, words are the smallest parts that cannot be broken down anymore. Words generally have one main stress (for example: *téxtbook*, *análysis*, *wáter*,

*understand*), except for words with long syllables, they can have secondary stress. Finally, the word is usually an individual unit, cannot be separated by other words, suffixes, or hyphens.

From the explanation above, it can be concluded that the word is a free form, because it can stand alone and does not have to be tied to neighboring elements. Words also have characteristics, namely having a part of speech, having meaning, a word is the smallest part of a sentence, having a main stress, and usually being a unit that cannot be broken down. However, words can have parts called morphemes, which will be explained in the description below.

## **2. Morpheme**

In practice, morphological analysis starts from the internal structure of a word called a morpheme. Morpheme is a word element that cannot be broken down anymore and has meaning in it. The most important component of word structure is the morpheme, the smallest unit of language that carries information about meaning or function (O'Grady & Archibald, 2016, p. 101). In word formation, new words can be created by combining existing words; these words are called complex words.

Complex words can be decomposed into their smallest meaningful units called morphemes (Plag, 2002, p. 12). While words that only consist of one morpheme can be called simple words. Such words are said to be simple and are distinguished from complex words, which contain two or more morphemes (O'Grady & Archibald, 2016, p. 101). For example, the word *teacher* can be decomposed into *teach* and *-er* (-er means the person who does it), so it has two

morphemes, namely *teach* and *-er*. While other word, for example, *neighbor* that cannot be broken down into *neighb* and *or* because they are one morpheme or called monomorphemic.

From the example above, it can be seen that there are morphemes that stand alone (*teach*) and there are also morphemes that cannot stand alone because they must be attached to other morphemes (*-er*). Morphemes that can stand alone are called free morphemes, while those that cannot stand alone are called bound morphemes. Some morphemes can occur only if attached to some other morpheme called bound morpheme, in contrast to free morphemes, which do occur on their own (Plag, 2002, p. 13). A standalone morpheme can also be referred to as a word. A morpheme that can be a word by itself is called free, whereas a morpheme that must be attached to another element is bound (O'Grady & Archibald, 2016, p. 102).

From the explanation above, it can be concluded that a morpheme is a component of a word, or a unit that composes a word, which still contains meaning in it. Morpheme is divided into two, namely free morpheme and bound morpheme. Free morphemes can stand alone and become a word, while bound morphemes must attach to other morphemes to form a word. An example of a bound morpheme is affixes. Furthermore, there is what is called the base, root, and stem which are also internal parts of morphology.

### **3. Base, Root, and Stem**

In relation to morphemes, there are those called root, base, and stem. Base is where an affix attaches. Base can be one or more morphemes. The part of a

word which an affix is attached to is called base (Plag, 2002, p. 13). For example, *approval* is derived from the morpheme *approve* and the suffix *-al*, *approve* is the base for the suffix *-al* to be attached. Root is the word to which other parts of the word are attached. Aronoff and Fudeman (as cited in Luthfiyati et al., 2017, p. 32) a root is like a stem in constituting the core of the word to which other pieces attach, but the term refers only to morphologically simple units. Meanwhile, according to Plag (2002, p. 13), root refers to bases that cannot be analyzed further into morphemes. So, in the *approval* example, *approve* is the root and also the base because the word cannot be broken down anymore. The term 'stem' is usually used for bases of inflections, and occasionally also for bases of derivational affixes (Plag, 2002, p. 13-14).

The word that has been added to the affix will change its class so it is called a derivative. The derived word is often referred to as a derivative (Plag, 2002, p. 14). So from the example, *approval* is called the derivative of *approve*. A clearer example is using the word *colonialization*. *Colonialize* is the base of the *colonialization* derivative (-ation), *colonial* is the base of the *colonialize* derivative (-ize), *colony* is the base of the *colonial* derivative (-al), while *colony* cannot be further divided because it does not contain a suffix, so it is called a root.

From the explanation above, it can be concluded that root is a basic morpheme that can be attached to other morphemes. Base is a morpheme to which an affix has been attached. While the stem is the base for inflections. Root can be attached to many affixes and has many bases where the affixes reside. After discussing the internal parts of words, the next section that will be discussed is the

main topic of morphology called word formation. Word formation is a type of word formation process that has various types in it.

## **2.2 Word Formation**

Word formation is the main topic studied in morphology. Word formation is the formation of new words from already existing words. The formation of new words continues to occur because of the human need for these new words to express their opinions and what they feel. In here also occurs the process of making complex words. The understanding of word formation is also explained by several experts.

Experts generally describe the meaning of word formation in a similar sense. According to Yule (as cited in Luthfiyati et al., 2017, p. 32) defines word formation processes as a way of forming and creating new words from the use of old words. Likewise with Trask (as cited in Ratih & Gusdian, 2018, p. 24) who says that the word formation process is a way to construct new words from existing materials. Hacken and Thomas (as cited in Ratih & Gusdian, 2018, p. 24) state that the word formation process is how to produce the new words based on the some rules. Plag (as cited in Ratih & Gusdian, 2018, p. 24) states that word formation process is the process to create new words from other words. What all opinions have in common is that word formation is the formation of new words from pre-existing words. Every time new words continue to be produced.

According to Monitor (as cited in Ratih & Gusdian, 2018, p. 24), a new word is created every 98 minutes or it can be said that a new word is created about 14.7 words per day. From this data it can be seen that in the world there are 14 to

15 new words that are created every day. The words that are created are mostly created from the process of affixation and compounding. Harley (as cited in Ratih & Gusdian, 2018, p. 24-25) the new words are built by some processes which are affixation, blending, compounding which are more productive to create the new words. While Xhina (as cited in Ratih & Gusdian, 2018, p. 25) stated that the word formation process has two common processes which are derivation and compounding in English and Albanian. Montero-Fleta (as cited in Ratih & Gusdian, 2018, p. 25) also stated that the most productive of word formation processes in scientific registers is suffixes.

There are various kinds of word formation processes. According to Plag (2002, p. 22) these processes are derivation and compounding. Derivation is further divided into affixation which consists of prefixation, suffixation, and infixation; and non-affixation consisting of conversion, truncation, and blending. According to Plag (2002, p. 18) inflexion is not the formation of a new word, in this case no new lexeme is formed, but only the form of the word has changed.

Meanwhile, according to Yule (as cited in Fatmawaty & Anggraini, 2019, p. 165) The processes of word formation consist of coinage, borrowing, compounding, blending, clipping, back formation, conversion, acronym, derivation and multiple processes. Zapata also argues (as cited in Nuraeni, 2018, p. 21) that word formations consist of acronyms, affixation, clipping, compounding, and onomatopoeia.

There is also a theory put by O'Grady and Archibald (2016, p. 107-127) which states that there are 14 types of word formation, namely derivation,

compounding, inflection, internal change, suppletion, reduplication, cliticization, conversion, clipping, blending, backformation, acronyms and initialism, onomatopoeia, and coinage as will be discussed below.

### **2.2.1 Derivation**

Derivation is a way to add a new word by adding a suffix in the word it is based on. Derivation changes the word class it changes. For example, if the verb *teach* is added with the suffix *-er*, it will become a new word, namely *teacher*, which means people who teach, the word *teacher* changes from verb *teach* to noun *teacher*. According to O'Grady and Archibald (2016, p. 107) derivation uses an affix to build a word with a meaning and/or category distinct from that of its base. Meanwhile, according to Stockell and Minkova, (as cited in Fatmawaty & Anggraini, 2019, p. 170), derivation consists in making up new words by adding endings to more basic forms of the word.

There are three types of affixes that can be added in a word, namely prefix, suffix, and infix. An affix that goes before the base is called a prefix (Katamba, as cited in Fatmawaty & Anggraini, 2019, p. 170). An affix that is appended after the base is called a suffix (Katamba, as cited in Fatmawaty & Anggraini, 2019, p. 170). Infix is a bound morpheme which is added to the inside base. Some are inserted inside it, such affixes are called infixes (Katamba, as cited in Fatmawaty & Anggraini, 2019, p. 170). So, the prefix is at the beginning of the base, the suffix is at the end of the base, while the infix is in the base itself. In English, prefixes and suffixes are used more often, while infixes are used less frequently.

In a word, there can be one or more suffixes, as well as a combination of prefixes and suffixes. Examples of derivation words are as follows.

**TABLE 1**  
**EXAMPLES OF DERIVATION WORDS**

<b>Derivation</b>	<b>Change</b>	<b>Examples</b>	<b>Meaning</b>
<b>Suffix</b>			
-al	V-N	Refuse-al, dispos-al	Verbs to which the suffix –al is added becomes a noun
-er	V-N	Teach-er, work-er	Verbs to which the suffix –er is added becomes a noun
-able	V-A	Fix-able, understand-able	Verb to which the suffix –able is added becomes an adjective
-dom	N-N	King-dom	Noun to which the suffix –dom is added still becomes a noun but have different meaning
-ful	N-A	Faith-ful, hope-ful	Noun to which the suffix –ful is added becomes an adjective
-ish	A-A	Green-ish, tall-ish	Adjective to which the suffix –ish is added still becomes an adjective but have different meaning
-ate	A-V	Activ-ate, captiv-ate	Adjective to which the suffix –ate is added becomes a verb
-ness	A-N	Happy-ness, kind-ness	Adjective to which the suffix –ness is added becomes a noun
<b>Prefix</b>			

ex-	N-N	Ex-president, ex-girlfriend	The suffix added does not change the part of speech but it changes the meaning from positive to negative
miss-	V-V	Miss-place, miss-heard	The suffix added does not change the part of speech but it changes the meaning from positive to negative
un-	V-V	Un-tie, un-lock	The suffix added does not change the part of speech but it changes the meaning from positive to negative
un-	A-A	Un-happy, un-fair	The suffix added does not change the part of speech but it changes the meaning from positive to negative
Note: Unlike suffixes, English prefixes typically do not change the category of the base.			

Source: O'Grady & Archibald (2016, p. 108)

### 2.2.2 Compounding

If derivation combines a base with an affix, then compounding combines the two bases. Compound is formed by combining two bases (Katamba, as cited in Fatmawaty & Anggraini, 2019, p. 167). Plag (2002, p. 15) also says that complex words need not be made up of roots and affixes, it is also possible to combine two bases known as compounding. Thus, a compound is two words that are combined and then turned into a new word with a different meaning from the original word. Examples of compound words are as follows.

**TABLE 2**  
**EXAMPLES OF COMPOUND WORDS**

<b>Compound</b>	<b>Bases</b>	<b>Change</b>	<b>Meaning</b>
Noun Compound	Book (N) + Store (N)	Bookstore (N)	Store that only sells books
Verb Compound	Proof(N) + Read (V)	Proofread (V)	An activity to read a book before publishing it to find errors and correct it.
Adjective Compound	Ice (N) + Cold (A)	Ice-cold (A)	Cold that as cold as an ice

From the table, it can be seen that the compounding process occurs when two elements are combined, in this example two words are combined into one new word. The word on the right is head, so the part of speech of a compound word and their meanings follow the head.

### **2.2.3 Inflection**

Inflection is the creation of new words by adding affixes, but what changes from the base is not the word category or its meaning, but the grammatical information. O'Grady & Archibald (2016, p. 115) said that inflection is the modification of a word's form to indicate grammatical information of various sorts. Inflection helps change words so that there is additional information in the form of singular or plural, tenses, and others. According to Plag (2002, p. 19) inflectional morphemes encode grammatical categories such as plural

(teachers), person (works), tense (studied), or case (John's). An example of an inflection is as follows.

**TABLE 3**  
**EXAMPLES OF INFLECTION WORDS**

<b>Nouns</b>	<b>Words</b>
Plural <i>-s</i>	the <b>bags</b>
Possessive (genitive) <i>- 's</i>	Clara's <b>bag</b>
<b>Verbs</b>	
3rd person singular non-past <i>-s</i>	She <b>sings</b> well.
Progressive <i>-ing</i>	She is <b>writing</b> .
Past tense <i>-ed</i>	She <b>arrived</b> yesterday.
Past participle <i>-en/-ed</i>	She has <b>eaten /studied</b> .
<b>Adjectives</b>	
Comparative <i>-er</i>	the <b>taller</b> one
Superlative <i>-est</i>	the <b>tallest</b> one

Source: modified from O'Grady & Archibald (2016, p. 116)

#### 2.2.4 Internal Change

Internal change is part of inflection. It changes the grammar information of a word such as its plural and tenses. However, in the internal change there is no addition of affixes, but changing the vowel part of the word. According to O'Grady & Archibald (2016, p. 119), internal change is a process that substitutes one non-morphemic segment for another to mark a grammatical contrast. Examples of internal changes are in the following table.

**TABLE 4**  
**EXAMPLE OF INTERNAL CHANGES**

sing (present)	sang (past)
sink (present)	sank (past)
drive (present)	drove (past)
foot (singular)	feet (plural)
goose (singular)	geese (plural)

Source: O'Grady & Archibald (2016, p. 119)

### 2.2.5 Suppletion

If in internal change only vowels are changed in a word, then in supplementation the word changes completely to indicate a grammatical change. Suppletion replaces a morpheme with an entirely different morpheme in order to indicate a grammatical contrast (O'Grady & Archibald, 2016, p. 120). Examples of suppletion in English are: tense *go-went-gone*, adjective *good-better-best*, adjective *bad-worse-worst*, and plural *person-people*.

### 2.2.6 Reduplication

Reduplication is a way of changing the grammar of a word by repeating an existing word. A common morphological process in some languages involves reduplication, which marks a grammatical or semantic contrast by repeating all or part of the base to which it applies (O'Grady & Archibald, 2016, p. 120). Reduplication does not occur in English, although there are some examples of expressions such as *hocus pocus*, *razzle dazzle*, and *nitty gritty*, these words do not indicate a grammatical change.

### 2.2.7 Cliticization

Clitics is a morpheme that is united with other morphemes, marked by an apostrophe. Clitics cannot stand alone because it cannot be pronounced if it is not combined with another word called host. Clitics are some morphemes behave like words in terms of their meaning and function but are unable to stand alone as independent forms for phonological reasons (O'Grady & Archibald, 2016, p. 122). O'Grady & Archibald (2016, p. 122) add that clitics that attach to the end of their host are called enclitics; those that attach to the beginning of their host are known as proclitics. Examples of proclitics are *o'clock* and examples of enclitics are auxiliary verbs and possessive –s: *I'm, I've, you're, he'd, he's, they've, John's*.

### 2.2.8 Conversion

Conversion is changing the word class without adding affixes or changing any form. Conversion is used by using a noun as a verb, or using a verb as a noun, also using an adjective as a verb. Conversion is very often used in everyday English. A change in the function of a word, as for example when a noun comes to be used as a verb is generally known as conversion (Yule, as cited in Fatmawaty & Anggraini, 2019, p. 169-170).

Conversion uses an existing word and only changes its category. Conversion is a process that assigns an already existing word to a new syntactic category (O'Grady & Archibald, 2016, p. 122). Even without the addition of affixes, the word class and meaning in the conversion change, so it is often referred to as zero derivation. An example of a conversion is in the following table.

**TABLE 5**  
**EXAMPLE OF CONVERSIONS**

<b>V derived from N</b>	<b>N derived from V</b>	<b>V derived from A</b>
ink (a contract)	(a long) run	dirty (a shirt)
butter (the bread)	(a hot) drink	empty (the box)
ship (the package)	(a pleasant) drive	better (the old score)
nail (the door shut)	(a brief) report	right (a wrong)
button (the shirt)	(an important) call	total (a car)

Source: O'Grady & Archibald (2016, p. 122)

### 2.2.9 Clipping

Clipping is a shortening of words that have long syllables so that they are easier to pronounce or write. O'Grady & Archibald (2016, p. 123) said that clipping is a process that shortens a polysyllabic word by deleting one or more syllables. Clipping is often used in everyday life. The nickname of someone close is also often shortened and this is one of an example of clipping.

In clipping, the word still has the same meaning and word class. Katamba (as cited in Fatmawaty & Anggraini, 2019, p. 169), clipping is the term for the formation of a new word-form, with the same meaning as the original lexical term, by lopping off a portion and reducing it to a monosyllabic or disyllabic rump. Examples of clipping are *zoo* for *zoological garden*, *fax* for *facsimile*, *flu* for *influenza*, *van* for *caravan*, *prof* for *professor*, *psych* for *psychology*, and *doc* for *doctor*.

### 2.2.10 Blending

Blending is the formation of new words similar to compounding, they combine two bases into one word. But in blending, there are parts of the two

words that are omitted. Fromkin et al. (as cited in Fatmawaty & Anggraini, 2019, p. 167) said that blends are similar to compounds in that they are produced by combining two words, but parts of the words that are combined are deleted.

Usually the words used are the beginning of the first word and the end of the second word. Blending creates words from non-morphemic parts of two already existing items, usually the first part of one and the final part of the other (O’Grady & Archibald, 2016, p. 124). Examples of blending are *sitcom* for *situation comedy*, *docudrama* for *documentary drama*, *brunch* for *breakfast and lunch*, *emoticon* for *emotion icon*, *biopic* for *biography picture*, *frenemy* for *friend and enemy*, etc.

### **2.2.11 Backformation**

Back formation is the formation of new words by removing parts of words that are similar to affixes. That is because the word is similar to derivation, even though it is actually the form of the word. Backformation is a process that creates a new word by removing a real or supposed affix from another word in the language (O’Grady & Archibald, 2016, p. 124). Back formation is less commonly the reverse happens and a word is formed by removing affixes from a base (Katamba, as cited in Fatmawaty & Anggraini, 2019, p. 169).

While Plag (2002, p. 48) said that words are analogically derived by deleting a suffix (or supposed suffix), a process called backformation. An example is *editor* that is used as a back formation to become *edit* by analogizing that the word *editor* is the same as *actor* (verb act + suffix –or). Other examples of backformation are *enthusiasm* form *enthusiasm*, *donate* from *donation*, *beg* from

*beggar*, *television* from *television*, *orientate* from *orientation*, *automate* from *automation*, etc.

### **2.2.12 Acronyms and initialism**

An acronym is a word that is formed from words that are abbreviated, or taken initials and made into one word. Acronyms are formed by taking the initial letters of (some or all) the words in a phrase or title and pronouncing them as a word (O’Grady & Archibald, 2016, p. 126). Yule, as cited in Fatmawaty & Anggraini (2019, p. 170) also argues that acronyms are new words formed from the initial letters of a set of other words. Acronyms can also be considered as part of blends, only the initial words are combined. Blends based on orthography are called acronyms (Plag, 2003, p.12). Examples of acronyms are UNICEF for *United Nations International Children’s Emergency Fund*, AHEAD for *Association on Higher Education and Disabilities*, OSERS for *Office of Special Education and Rehabilitative Services*, ERIC for *Educational Resources Information Center*, and AIDS for *Acquired Immune Deficiency Syndrome*.

The opposite of an acronym is initialism. That is an abbreviation that is read letter by letter instead of as a single word. Acronyms are to be distinguished from initialisms all of which are pronounced as a series of letters rather than as a word (O’Grady & Archibald, 2016, p. 126). The examples of initialism are GE for *General Education*, ELL for *English Language Learner*, CBA for *Curriculum Based Assessment*, GPA for *Grade Point Average*, etc.

### 2.2.13 Onomatopoeia

Onomatopoeia is the formation of new words from what humans hear. For example, animal sounds, cooking sounds, knocks, coughs, etc. All languages have some words that have been created to sound like the thing that they name (O'Grady & Archibald, 2016, p. 126). Examples of onomatopoeia are *meow*, *chirp*, *buzz*, *hiss*, *sizzle*, *cough*, *knock*, etc.

### 2.2.14 Coinage

Coinage is the formation of new words from words that have never existed; usually these words take the product brand to refer to the product. Called word manufacture or coinage, this phenomenon is especially common in the case of product names (O'Grady & Archibald, 2016, p. 126). Fromkin et al. (as cited in Fatmawaty & Anggraini, 2019, p. 166) added that example word coinage of the advertising industry has added many words to English. Examples of coinage are *kodak*, *nylon*, *orlon*, *dacron*, *teflon*, etc.

There is also a coinage that comes from the name of an inventor of the item called eponyms (O'Grady & Archibald, 2016, p. 126). Eponyms are usually found in objects discovered by scientists. For example, the *watt* is the unit of electricity from *James Watt*, *newton* is the unit of force from *Isaac Newton*, *Fahrenheit* is the unit of temperature from *Gabriel Fahrenheit*.

From the explanation above, it can be concluded that there are many ways to create new words, all of which come from existing words, except for coinage which is actually from new words. These words are created creatively to fulfill

human needs in expressing themselves, namely by derivation, compounding, inflection, internal change, suppletion, reduplication, cliticization, conversion, clipping, blending, backformation, acronym and initialism, onomatopoeia, and coinage. From all word formations, the researcher chose compounding as the study material in this study. Therefore compound words will be explained in more detail in the description of the subtitles below.

### **2.3 Compound Words**

In simple terms, the definition of compounding is combining two or more elements and forming new words that have categories based on elements that composed them. This compounding is resulting new words that have new categories and new meanings. This is in line with what Spencer said (as cited in Sari, 2013, p. 113) that a compound is a word which consists of two or more words. Likewise, Hudson's opinion (as cited in Jurida, 2018, p. 166) states that compounds really yield new meanings, even though the words they are made of are old and familiar. So, compounds are made from words that already exist before.

While Plag explains in more detail that the compound is a word that consists of two elements, the first of which is either a root, a word or a phrase, the second of which is either a root or a word (Plag, 2002, p. 173). So the compound does not have to consist of two words, but consists of two elements. It can be a combination of root and root, word (with affix) and root, or phrase and root, can also consist of root and word (with affix), word and word, phrase and word.

The definition was made because in nominal compound words, compound extensions can occur and make it more than two words. However, from that long compound, it can be split into two elements, and then further broken down into two elements, until the last two elements. An example of a long compound word is *university teaching award committee member training*. Where *university* is root, *teaching* is word, *award* is root, *committee* is root, *member* is root, *training* is word. This compound consisting of six words can be broken down into two elements, the first is *university teaching award committee member + training*, the second is *university teaching award committee + member*, the third is *university teaching award + committee*, the fourth is *university + teaching award*, and the last *teaching + awards*. If it is written in brackets, it becomes [[[[university [teaching award]]] committee] member] training].

From the example above it can be seen that compounds are binary structures (Plag, 2002, p. 171). Continued Plag (2002, p. 172) also explained that compound formations are able to repeatedly create the same kind of structure called recursivity. This is a common thing in sentence analysis. However, a compound that has too many members (e.g. a six word compound) will be difficult to understand directly by someone, so it is rarely used. The longer a compound becomes the more difficult it is for the speakers/listeners to process (Plag, 2002, p. 172).

Compound words and phrases are two different things, because phrases use one word as additional information for the main word. While compound words actually form new words even though some of their meanings are still

related to the original words. Compound in English is not written in a definite way, therefore compound can be seen from the head and stress. English orthography is not consistent in representing compounds, which are sometimes written as single words, sometimes with a hyphen, and sometimes as separate words (O'Grady & Archibald, 2016, p.113).

Compound words in English generally have a head on the right. Then the compound identity can generally be found on the right. O'Grady & Archibald (2016, p. 112) said that in the most common type of English compound, the rightmost morpheme determines the category of the entire word. Plag (2002, p. 173) also says that compounds in English have a very important systematic property: their head always occurs on the right-hand side (the so-called right-hand head rule). Therefore, *black board* is a noun because the *board* or head is a noun, *spoonfeed* is a verb because the head is a verb, *head waitress* is a noun and a feminine gender, because *waitress* is a noun and a feminine one. As for plural, the same thing applies.

For a compound that is plural, the plural suffix is placed on the right/head, for example, *school committees* means committees are more than one person. When *schools committee* is written, the plural is only the *schools* word, not the compound. While the example of the word *jack-in-the-box*, *good-for-nothing* can be analyzed and declared not a compound. This is because *jack-in-the-box* is neither a kind of box, nor a kind of jack, this word is headless.

From the explanation above, it can be seen that the compound structure is as follows.

The structure of English compounds (Plag, 2002, p. 175)

a[ X Y] <sub>Y</sub>

b. X = { root, word, phrase}

Y = { root, word}

<sub>Y</sub>= grammatical properties inherited from Y

Example:

a. [High School teacher]<sub>s</sub>

X is High School that is a phrase and Y is Teacher that is a word. <sub>Y</sub> is –s that is the suffix added to word/base, or grammatical properties inherited from Y, it means that <sub>Y</sub> belongs to all the words in the bracket.

Meanwhile, based on the stress, the compound is located on the left. While phrases tend to be stressed phrases-finally, i.e. on the last word, compounds tend to be stressed on the first element (Plag, 2002, p. 176). O’Grady & Archibald (2016, p. 113) also said that compounds are characterized by more prominent stress on their first component, while in non-compounds consisting, the second element is generally stressed. The following are examples of stress in compounds and phrases.

**TABLE 6**  
**DIFFERENCE BETWEEN STRESS OF COMPOUND WORDS AND**  
**NON-COMPOUND WORDS**

Compound word	Non-compound expressions
greénhouse ‘a glass-enclosed garden’	green hóuse ‘a house painted green’
bláckboard ‘a chalkboard’	black bóard ‘a board that is black’
wét suit ‘a diver’s costume’	wet suít ‘a suit that is wet’

Source: O’Grady & Archibald (2016, p. 113)

Based on the category, compounds are divided into three types, namely: nominal compound, verbal compound, and adjectival compound which the process of the forming will be explained in the subtitle below.

### **2.3.1 Types of Compound Words**

This compound word category is taken from the word class, which is also taken from the head. In English, the most common compound is nominal compound, while the rarest is prepositional compound. With very few exceptions, the resulting compound word is a noun, a verb, or an adjective (possible examples of compound prepositions include the words *into* and *onto*) (O'Grady & Archibald, 2016, p. 111). Noun-noun compounds are the most common type of compound in English (Plag, 2002, p. 185). Therefore, the researcher only took three categories of compound, namely nominal compound, verbal compound, and adjectival compound.

#### **1. Nominal Compound**

Nominal compound is a compound whose head is a noun. The process is by a combination, it can be combined into noun-noun, verb-noun, or adjective noun. Nominal compounds fall into the three sub-classes involving nouns, verbs and adjectives as non-heads (Plag, 2002, p. 185). So, nominal compounds with head nouns can have noun, verb, and adjective members. Examples of compound noun-nouns are *laser printers*, *book covers*, *letter heads*. Examples of compound adjective-nouns are *redneck*, *loudmouth*, *bighead*. Then examples of compound verb-nouns are *pickpocket*, *cut-throat*, *spoilsport*.

Nominal compounds are mostly right-headed. The vast majority of noun-noun compounds are right-headed (Plag, 2002, p. 185). Even so, there are also nominal compounds that are different because the two constituent elements are equally important and have the same meaning and position. Examples are words like *singer-songwriter*, *scientist-explorer*, *poet-translator*, or *hero-martyr*. The two compilers of these words are both head when viewed from the semantics. Given that no member is semantically prominent, but both members equally contribute to the meaning of the compound, these compounds have been labeled copulative compounds (Plag, 2002, p. 187).

In addition, there are also nominal compounds whose members are in the form of prepositions. Preposition-noun compounds are again of the modifier-head structure and mostly involve the prepositions *after*, *out*, and *under* (Plag, 2002, p. 194). Examples are *afterbirth*, *afterbrain*, *afterlifeout*, *outbuilding*, *outpost*, *outroom*, *underarm*, *underbrush*, and *underhair*.

Other examples of nominal compound are:

verb–noun (VN): *swearword*, *drophammer*, *playtime*

noun–noun (NN): *hairnet*, *mosquito net*, *butterfly net*, *hair restorer*

adjective–noun (AN): *blackboard*, *greenstone*, *faintheart*

preposition–noun (PN): *in-group*, *outpost*, *overcoat* (Carstairs & McCarthy, 2002, p. 62).

So, it can be concluded that nominal compound is a compound that has a head in the form of a noun. The process of compounding in nominal compound can be a combination of noun (noun-noun), verb (verb-noun), adjective (adjective-noun) and preposition (preposition-noun). There are also compound nouns that have an equally important position called copulative compounds.

## 2. Verbal Compound

Compound verbs are compounds that have a verb as the head. Compounds with a verbal head may have nouns, adjectives and verbs as their non-head (Plag, 2002, p. 197). Verbal compound with noun members can be analyzed by back-formation and adjectives as members can be analyzed by conversion. Back-formations from noun-noun compounds with either a verbal noun in -ing or a person noun in -er in head position (e.g. *proof-reading*, *talent-spotter*, *ghost-writer*, *chain-smoker*) (Plag, 2002, p. 197). With regard to adjective-verb compounds, conversion is involved with *to shortcut*, *to blindfold*, *to deep-fry* and *to broadcast* (Plag, 2002, p. 197). Meanwhile, a verbal compound with verb members is the same as a copulative compound because there are two activities that are carried out simultaneously.

An example of a verbal compound is :

verb–verb (VV): *stir-fry*, *freeze-dry*

noun–verb (NV): *hand-wash*, *air-condition*, *steam-clean*

adjective–verb (AV): *dry-clean*, *whitewash*

preposition–verb (PV): *underestimate, outrun, overcook* (Carstairs & McCarthy, 2002, p. 60).

From the explanation above, it can be concluded that a verbal compound is a compound that has a head verb. This process of compounding in this type can consist of verb (verb-verb), noun (noun-verb), adjective (adjective-verb), preposition (preposition-verb). This compound also has a copulative compound like compound noun.

### 3. Adjective Compound

Adjective compound has a head adjective with noun, adjective, and preposition members. Examples of compound adjective-adjectives are *icycold, blueish-green* which are not as many as noun-adjectives. Adjective-adjective compounds with the first adjective as modifier seem not to be as numerous as noun-adjective compounds (Plag, 2002, p. 195). In adjective-adjective compounds there are also copulative compounds. Examples are *sweet-sour* and *bitter-sweet* which both have that taste in food, for example.

Examples of compound adjectives are:

noun–adjective (NA): *sky-high, coal-black, oil-rich*

adjective–adjective (AA): *gray-green, squeaky-clean, red-hot*

preposition–adjective (PA): *underfull, overactive* (Carstairs & McCarthy, 2002, p. 61).

So it can be concluded that the adjective compound has an adjective as its head. Adjective compounds can be formed by combining noun (noun-adjective), adjective (adjective-adjective) and preposition (preposition-adjective). Compound adjectives also have copulative compounds.

Besides the types of categories, compound words can also be distinguished from their semantic headedness. Compound words have two types of semantic headedness, namely endocentric and exocentric. Endocentric is a meaning that can be seen from the the head of the compound, while exocentric is a meaning that cannot be seen from the head of the compound. Below will be explained in more detail the two semantic headedness of compound words.

### **2.3.2 The Semantic Headedness of Compound Words**

#### **1. Endocentric Compound**

In terms of its semantics, compound words have meanings that come from the words that compose them. In its application, the meaning comes from the head compound. This is called an endocentric compound. In most cases, a compound denotes a subtype of the concept denoted by its head (the rightmost component), such compounds are said to be (semantically) endocentric (O'Grady & Archibald, 2016, p. 114). Compounds have their semantic head inside the compound, these compounds are called endocentric compounds (Plag, 2002, p. 186). Examples of this compound are *bookstore* is a type of store, a *mailman* is a type of man, *sky blue* is a type of blue.

## 2. Exocentric Compound

If the compound is semantically headless, or its meaning is outside of its constituent words, it is called an exocentric compound. If their semantic head is outside the compound, they are traditionally called exocentric compounds (Plag, 2002, p. 186). In a smaller number of cases, however, the meaning of the compound does not follow from the meaning of its parts in this way, such compounds are exocentric (O'Grady & Archibald, 2016, p. 114). An example of this compound is *redneck* is a noun (like neck), it denotes a type of person, not a type of neck. Similarly, a *saber-tooth* is a type of tiger rather than a type of tooth.

From this explanation, compound words have two types of semantic meaning based on its head. The first is endocentric compounds; the meaning is directly related to the head in the compound. The second is exocentric compound, which means the meaning of the compound is not too related to the head.

Related to the object of research, the researcher uses newspapers as the object of research. The newspaper will examine the compound words contained in it.

### 2.4 Newspapers

#### 1. Newspapers

In this research, newspapers are used as research objects because newspapers are authentic media. So that in analyzing newspapers, the reader and the researcher also get an understanding of the English language used in society. Also at the same time increase knowledge about the news in the community.

Newspaper is a mass media that contains the latest information concerning the surrounding community to government officials, occasionally also popular news in the world. Newspaper according to Cheyney (as cited in Babalola, 2002, p. 403) is the textbook that provides up-to-date information on local, state/provincial national, and world affairs; the most current analysis and criticism on executive and legislative decision-making. She also said that the newspaper contained the latest in music, theatre, television, and the fine arts and even columns and comics to make people laugh. So, newspapers not only contain news but also entertainment.

Newspapers are published in the form of written news, which includes photography, diagrams, graphs, and so on to support the information conveyed. Bertram et al. (2010, p. 40) said that newspapers carry photographs of recent events, diagrams, graphs, maps and tables of statistics, weather, financial and entertainment information, and political cartoons and editorials linked to the latest news. With photography and others, it will make newspapers more interesting to read and easier to understand.

Newspapers are also a medium available for public, so they are easy to find. This easy availability can be used as an object of the research. Newspapers are among the most accessible texts available to the vast majority of people – literate, illiterate, young and old, students, workers, elites and peasants – in any community (Cheyney, as cited in Babalola, 2002, 403).

From the description above, it can be concluded that the newspaper is a mass media that contains the latest information. Newspapers are available to

various groups of people because they cover a variety of topics. Newspapers are also easy to find around the place of residence. In the newspaper there are various media supporting information ranging from pictures, graphs, to maps that make it interesting and easy to understand.

## **2. The Jakarta Post**

The Jakarta Post is the only newspaper in Indonesia that uses English as its medium of instruction. The Jakarta Post issues an edition every day and includes information about Indonesia and Southeast Asia. Based on information on Wikipedia the paper is owned by PT Niskala Media Tenggara and based in Jakarta.

The Jakarta Post started as collaboration between four Indonesian media at the urging of Information Minister Ali Murtopo and politician Jusuf Wanandi. The paper was one of the few Indonesian English-language dailies to survive the 1997 Asian financial crisis and currently has a circulation of about 40,000.

The Jakarta Post also has an online edition and J+ magazine which is published on weekends. This newspaper is intended for foreign readers, educated Indonesians, as well as other Indonesians who can understand English. The Jakarta Post has become a training ground for local and international reporters, because of that the Jakarta Post has won several awards, it is also called "Indonesia's leading English-language daily". The Jakarta Post is a member of Asia News Network.

From the description above, it can be concluded that the Jakarta Post is a newspaper that issues daily editions. This newspaper uses English even though it is published in Indonesia. This newspaper is also a quality newspaper and has won various awards.

Using this newspaper, the researcher will focus on the articles that the theme is education, or education issue. The researcher will look for the compound words to analyze the compounding process of these words.

## **2.5 Previous Related Research**

As a reference material for conducting this research, there are studies that have been carried out by previous researchers. The first previous related research was research conducted by Karo (2019) entitled *The Process of Compound Words Used in Martin's Novel a Game of Thrones*. She analyzed compound words in a novel. She found that the most compound words used in Martin's novel A Game of Thrones is the nominal compound (noun + noun, noun + adjective, adjective+noun) about 60, 7% or 177 of 292 compound words in the novel. Adjectival compound (adjective + noun, adjective + adjective, adjective + present participle) is the second most used in the novel which is about 39% or 144 of 292 compound words. Verbal compound (adjective + adjective in this novel) is the least used compound in the novel which is about 0, 3% or 1 of 292 compound words in the novel.

The second previous related research is research conducted by Handayani (2020) entitled *A Morphological Analysis of Compound Words Used in Novel 'With Eyes Closed: The Color of Drowning' By Jason Miranda*. She examines

types and the meaning of the compound words used in novel *With Eyes Closed: The Color of Drowning* by Jason Miranda. The research results showed that there are 101 compound words. Based on the type of compound words, there are 51 words categorized as compound nouns, 31 words categorized as compound verbs, and 19 words categorized as compound adjectives. Based on the contextual meaning of compound words, there are 56 words categorized as endocentric compound and 45 words categorized as exocentric compound.

The last previous related research is research by Vinney (2017) entitled *English Closed Compound Words in Articles Related to Kartini Day Found in the Jakarta Post April 2016 and 2017*. She researched a newspaper and found that there are 22 open compounds, 42 closed compounds, and 32 hyphenated compounds. The highest amount of compound is closed compound. Based on the form of structure, there are 17 inflectional compound or 40.48% and 25 uninflectional compound or 59.52% whereas based on the meaning of compound there are 38 endocentric compound or 90.48% and 4 exocentric compound or 9.52%. The conclusion, closed compounds that are mostly found in the articles related to Kartini Day in The Jakarta Post 2016 and 2017 are uninflectional compounds and endocentric compounds.

From the previous researches that have been discussed above, it can be concluded that there are various kinds of research related to compound words. The first study analyzed a novel and the types of compound categories, namely nominal compound, adjective compound, and verbal compound. The second study also analyzed a novel and analyzed the noun compound, verb compound,

adjective compound as well as endocentric compound and exocentric compound.

The third study used the Jakarta Post as an analytical material, which analyzed open compounds, closed compounds, hyphenated compounds and inflectional and uninflectional compounds.