Determination of Meaning for Derivative Words in Malay Language for Malay-English Translation

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1 Introduction

Derivation word is used widely in Malay language especially in written sentences. Therefore, determining the meaning of a derivative word is essential in performing a translation system for Malay language. In our attempt, we specify the classes of the root word to determine the meaning of the derivative word. We have developed a more specific Malay language derivative word analysis system, which identify the affixes and root word meaning by classifying the root word according its groups. The system is then applied to the Malay-English translation system.

2 Derivation

Derivation is a process where affix is added to a root word. Derivation is also called affixation. In our attempt we verified the meaning for prefix, suffix and combination of prefix and suffix of a derivation word. The affixes can be divided into affixes for noun, verb and adjective. For example, the affix *meN-* is an affix for verb while the affix *se-* is an affix for adjective.

3 Determination of Meaning

Affix itself have it own meaning. In our work, we determined the meaning of an affix by which group of root word it combined. The base word can be divided into three main group; noun, verb and adjective. Below these three

main groups, we split it into a number of small groups.

3.1 Classifying Noun

Noun is mainly divided into proper noun, common noun and pronoun. However, noun that can be combined with affixes is only common noun. Under the common noun, we divided it into a number of groups as below.

(i) Living things
→ human [e.g: *guru*(teacher), *ibu*(mother), *pelajar*(student), *peguam*(lawyer)]
→ non-human [e.g: *gajah*(elephant), *burung*(bird), *kucing*(cat), *ikan*(fish)]

(ii) Non-living things
→ organization [e.g: *sekolah*(school), *hospital*(hospital), *universiti*(university)]
→ non-organization
  ✧ Concrete
    ➢ Place [e.g: *rumah*(house)]
    ➢ Object
      - Attire[e.g: *baju*(clothes)]
      - Transportation[e.g: *kereta*(car)]
      - others[e.g: *batu*(stone)]
  ✧ Abstract
    ➢ Event/occurrence
      [e.g: *ketibaan*(arrival)]
    ➢ Intention
      [e.g: *pendapat*(opinion)]

3.2 Classifying Verb

Verb can be classified into two groups. They are transitive verb and intransitive verb.

(i) Transitive verb

This verb is not able to stand by itself and need to be completed by an object. For example; *makan*(eat), *lihat*(see), *basuh*(wash).

(ii) Intransitive verb

This verb is able to stand alone together with its subject. For example; *tidur*(sleep), *menangis*(cry), *berdiri*(stand).

3.3 Classifying Adjective

Adjective can be divided into nine main groups. The groups are as follows.

(i) Character [e.g: *kuat*(strong), *lemah*(weak)]

(ii) Sense [e.g: *lembut*(soft), *keras*(hard)]

(iii) Measurement [e.g: *tebal*(thick),*nipis*(thin)]

(iv) Color [e.g: *hijau*(green), *biru*(blue)]

(v) Shape [e.g: *bulat*(round), *segitiga*(triangle)]

(vi) Time [e.g: *lama*(old), *baru*(new)]

(vii) Feeling [e.g: *sedih*(sad), *gembira*(happy)]

(viii) Method [e.g: *laju*(fast), *perlahan*(slow)]

(ix) Distance [e.g: *dekat*(near), *jauh*(far)]

4　System Structure

In the system, firstly, the derivation word will be separated into affix and root word. Here, we have the list of the possible affixes.

e.g　[membeli] → [mem] + [beli]

affix　　root word

After separating the root word and the affix, the system will search the category of both affix and root word. As mentioned earlier, affixes are divided into noun, verb and adjective groups while root word is divided into a number of groups under noun, verb and adjective.

Finally, the meanings of root word and affix are combined to get the entire meaning of the derivation word. Figure 1 show the translation

example while Figure 2 shows the system structure.

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Input: [aminah,membeli,buku]
Output: [aminah,buys,a,book]
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Figure 1. Translation example

Input the derivation word

↓

Separate affix from root word

↓

Specify the category of affix and root word

↓

Determine the meaning of affix and root word

↓

Combine the meaning of affix and root word

↓

Output of the meaning

Figure 2. System Structure

5　Conclusion

Determining a derivative word by classifying the root word, enable us to obtain a precise meaning for the derivative word. Although in several cases, the meaning of a derivative word is equal to the meaning of it root word, but the analysis of determination of meaning for derivative word is necessary to avoid from creating a long entries of lexical. This attempt can lead a way in creating a good translation system for Malay language.

References

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