

A Comparative Study of Derivation between English and Chinese Based on Group Interactions in College English Classroom

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ABSTRACT

The aim of this paper is to analyze the misuse of derived words by learners in university English classroom group interactions, and to compare and contrast the derivational word formation methods between English and Chinese. The goal is to help teachers enhance their teaching effectiveness and explore methods for EFL learners to efficiently acquire and produce high-quality output. Through quantitative and qualitative research, it was found that there are similarities between English and Chinese derivational methods in terms of classification and purpose, absorption and assimilation of foreign source, and the emergence of scientific and technological neologism. However, differences exist in terms of the number of affixes, word formation productivity, morphology focus, and dynamic adjustment of word roots, leading to difficulties in acquisition for learners and errors in expression.

KEYWORDS

Word formation; Derivation; Comparative study between English and Chinese; Group interaction

I Introduction

1.1 Research Background

According to the Oxford Research Encyclopedia of Linguistics, *derivation* is a type of word formation, changing the syntactic category (part of speech) of a base or by adding substantial, non-grammatical meaning (or both) to create new lexemes. A comparative analysis allows for the identification of similarities and differences in how affixation is utilized to create new words in these two languages, thereby exploring the underlying principles of word formation in each language. Additionally, it offers practical implications for language teaching and learning, as educators can leverage the insights to enhance pedagogical approaches for learners of English and Chinese, promoting cross-cultural communication.

The study of derivation in English and Chinese word formation has garnered significant attention within the field of linguistics. GU (2008) highlights English's predominant use of derivation and compounding as its principal features, while emphasizing Chinese word formation's unique reliance on compounding and other morphological processes. From a pragmatic perspective, LI (2015) delves into the subjective motivations behind affixation phenomena in both languages, revealing common pragmatic principles underlying this linguistic phenomenon. Foreign researchers BAUER (1983), PLAG (2003), and LIEBER (2010) have also provided extensive analyses on derivational morphology in English and Chinese, enriching the comparative framework for understanding word formation processes across languages. These studies collectively reflect the evolving landscape of

research on derivation in English and Chinese word formation, providing a nuanced understanding of these two languages' lexical systems.

1.2 Research Methodology

Since HATCH (1978) proposed that learners can acquire language structures through interactive learning, the relationship between "interaction" and "acquisition" has become a central focus of research in second language acquisition (ECKERTH, 2009). The study of derivation in English and Chinese through group interaction is significant for several reasons. Firstly, oral interaction is considered the most fundamental form of language expression (HATCH, 1978). As a form of language output, oral interaction is theoretically based on language input, indicating that learners' mastery of derivation can be examined not only from the traditional perspective of comprehension accuracy but also from a more advanced standpoint of expressive accuracy. Furthermore, oral interaction closely resembles the natural production state of speakers, as opposed to using written questionnaires, where participants may consciously avoid errors. Therefore, studying derivation through the derivational errors related to part of speech in EFL group interaction provides valuable insights into discrepancy in English and Chinese word formation challenging learners' linguistic abilities.

2 Derivation in English Word Formation

2.1 Theoretical Framework

BAUER (1983) offers a comprehensive theoretical framework for understanding derivation as a word formation process involving affixation. According to LIN & LIU (2005), derivation is a process that changes the form of words and adds diverse grammatical and lexical information through affixation. This process involves adding affixes at the beginning (prefix) or end (suffix) of words, as highlighted by CAI & TIAN (2013). PLAG (2003) emphasizes that derivation operates at the intersection of morphology and syntax, contributing to lexical diversity and influencing syntactic structures through the introduction of derived forms.

2.2 Empirical Studies

Empirical studies shed light on how derivation operates within natural language use and its cognitive underpinnings. DRESSLER et al. (2015) assert that derivational affixes contribute to lexical diversity by creating related words with nuanced meanings derived from a common base. ARONOFF and FUDEMAN (2011) elaborate on the functional significance of derivational morphology in expressing subtle semantic distinctions through systematic affixation. Additionally, BYBEE et al. (1994) present empirical evidence supporting the productivity of derivational processes in creating new lexemes within English vocabulary.

3 Derivation in Chinese Word Formation

3.1 Historical Development

ZHAO (1968) observed that the Classical Chinese period marked a significant shift towards affixation as a method of word formation, leading to greater flexibility and productivity in creating new lexical items. The Middle Chinese period witnessed the rise of derivational suffixes and prefixes, as well as phonologically motivated derivational patterns (NORMAN, 1988).

In contemporary linguistic studies, scholars have employed various theoretical frameworks to

analyze derivation in Chinese word formation. Morphological theories such as Construction Morphology and Distributed Morphology have been applied to investigate the complex interplay between form and meaning in derived words.

3.2 Linguistic Features

Fundamental principles of derivation in Chinese word formation are rooted in the attachment of affixes to base forms or roots to create new lexical items. As elucidated by *Modern Chinese Lexicology* (GE, 2013), this process is central to expanding the lexicon and accommodating semantic shifts. For instance, the prefix *da* literally meaning “big” can be affixed to various roots to form words such as *dazhan* meaning “fierce competition”, *dawu* meaning “dense fog”, and *dasha* meaning “tall building”. This exemplifies how derivation contributes to lexical diversity and semantic nuance. Moreover, LIANG (2014) mentions that despite not having specific grammatical markers for inflection or derivation, Chinese has seen the gradual virtualization of certain lexical morphemes into affix-like structures due to tonal changes and language contact.

4 Comparison of Derivation in English & Chinese

4.1 Similarities

4.1.1 Categorization and Purpose

The process of derivation in both languages can be categorized into lexical affixation (*un-*, *fei-*), which alters the meaning of a word, and grammatical affixation (*-ize*, *-hua*), which changes the word’s syntactic function. Therefore, both languages demonstrate similarity in their use of affixation for altering meanings and shifting parts of speech.

4.1.2 Absorption and Assimilation

In English, the language has absorbed numerous foreign elements, particularly from Germanic, Greek and Latin, through derivation. For instance, words such as *atheist* in (1a), *unify* in (1b) and *magnitude* in (1c) showcase the absorption of Germanic, Greek and Latin affixes to form new words in English.

- (1) a. **atheist**, **belittle**, **mistreat**, **forgive**, **outburst**
- b. **unify**, **bilingual**, **triangle**, **polysemy**, **monologue**
- c. **magnitude**, **malfunction**, **medieval**, **nonsense**, **submissive**

Similarly, Chinese has assimilated foreign elements through derivation, notably from Japanese. For example, the Japanese suffix *-zu* meaning “tribe” or “clan”, and *-kong* meaning “enthusiast” or “fanatic” have been borrowed into Chinese to create new words such as *dagongzu* in (2a) and *xijiekong* in (2b).

- (2) a. workers, phubbers, moonlight, star-chasing, neet
- b. details control, shopping control, food control, glasses control, brother control

4.1.3 Sci-tech Neologism

Derivation is particularly evident in the formation of scientific and technological neologism, where new terms are constantly coined to describe advancements in various fields. In English, examples such as *e-commerce* in (3a) and *cybersecurity* in (3b) demonstrate how the prefixes *e-* and *cyber-* are affixed to existing words to denote electronic commerce and security related to digital technology. Similarly, in Chinese, terms like *namicailiao* in (3c) showcase the use of the prefix *nami-*

to signify nanomaterials concerning with nanotechnology.

- (3) a. **e-commerce**, **e-record**, **e-shopping**, **e-tailer**, **e-trade**
- b. **cybersecurity**, **cyberlover**, **cyberbully**, **cyberspace**, **cybercafe**
- c. nanomaterials, nanotechnology, nanorobotics, nanogels, nanooptics

4.2 Differences

The participants in the research were 16 Chinese freshmen majoring in English who were unaware that they were participating in an experiment. The study lasted for one term (February, 2023–June, 2023, 16 weeks). The learners were randomly divided into groups of 2 to 3 individuals. In accordance with task prompts provided by the teacher during class, the learners engaged in approximately five 15-minute discussions on various topics. The total duration of the audio data was 5 hours, 34 minutes, and 5 seconds, comprising a total of 49,895 English words.

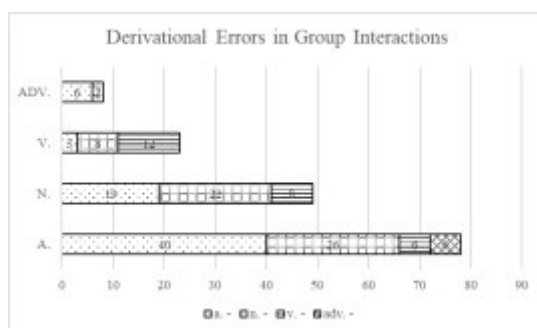


Figure 1 Derivational Errors in Part of Speech in Group Interactions

Table 1 Derivational Errors in Part of Speech in Group Interactions

x-/Y	A.	N.	V.	ADV.	TOTAL
a. -	40	19	3	6	68
n. -	26	22	8	2	58
v. -	6	8	12	0	26
adv. -	6	0	0	0	6
total	78	49	23	8	158

As is illustrated in the chart and the table above, there are two variables, “x -” and “Y”, in data analysis. “x -” (a. -, n. -, v. -, adv. -) represents the part of speech of the erroneous derivative used in the group discussion, while “Y” (A., N., V., ADV.) indicates speaker’s intended and correct form of the derivative. The research only focuses on derivational errors in part of speech, the mistakes in regard to inflectional affixation (e.g. present tense *-ing* and past tense *-ed*) are thus avoided. For example,

A: ...because we think our parents should and supposed to be, can **company** us for a ve(ry) for a very long time...

In the speech by A, the noun *company* is used as a verb, causing confusion with the derivative *accompany*. Therefore, it is marked as “n. - V.”. There are 16 categories of derivational errors related to part of speech, 158 in total in the recordings.

4.2.1 Quantity of Affixes

English and Chinese are two distinct languages with different linguistic structures, particularly in terms of affixation. English has a larger quantity of affixes compared to Chinese, making it more susceptible to word form similarities that can lead to confusion for Chinese EFL learners (which can be illustrated by the category “v. - V.”). Affixes in English allow for a wide range of word formation

possibilities. This complexity can result in words that have the same part of speech and are similar in forms but have entirely different meanings, for example, *affect* and *effect* in (4), posing a challenge for Chinese learners to distinguish between them.

(4) *affect* & *effect*, *complement* & *implement*, *adapt* & *adopt*, *arise* & *arouse*, *confine* & *confide*, etc.

Furthermore, the abundance of affixes in English can lead to “mechanical derivation” among Chinese EFL learners. This phenomenon occurs when learners rigidly apply inappropriate affixes based on their knowledge on target language patterns, leading to errors such as adding an incorrect suffix to a base word when converting the part of speech of the word. For instance, regarding *timely* as an adverb (“a. - ADV.”), assuming *guilty* as a noun based on *quality* and *specialty* (“a. - N.”), mistaking *recognition* for *recognition* in (5a), *resistent* for *resistant* in (5b) due to an overgeneralization of the suffix *-ation* and *-ent*.

(5) a. **realization** (**realize**), **industrialization** (**industrialize**), **recognition** (**recognize**)

b. **consistent** (**consist**), **insistent** (**insist**), **resistant** (**resist**)

4.2.2 Productivity of Derivation

In English, a single root can be combined with various prefixes and suffixes to form numerous words, resulting in a superposition of derivations. For instance, the word *establish* serves as a base for the derivatives *disestablish* and *establishment*, which in turn can be further extended to *antidisestablishmentarianism*. This showcases the remarkable capacity for English to continually expand its lexicon through the process of derivation. In contrast, after undergoing multiple derivations, the Chinese language finds it challenging to maintain the form of words.

In addition, compared with Chinese, English demonstrates a richer variety of derivatives with distinct meanings through more flexible conversion of parts of speech. This phenomenon allows for nuanced distinctions between related words with the same part of speech, contributing to the language’s expressive power. For example, consider the adjectives *interesting* and *interested* in (6a). While both stem from the same verb root *interest*, they convey different semantic nuances; *interesting* describes something that evokes curiosity or attention, whereas *interested* pertains to an individual’s state of being intrigued or engaged (“a. - A.”).

(6) a. *interested* & *interesting*, *compelled* & *compelling*, *depressed* & *depressing*

b. *useful* & *useless*, *careful* & *careless*, *hopeful* & *hopeless*

c. *classic* & *classical*, *economic* & *economical*, *electric* & *electrical* & *electronic*

Similarly, in terms of nouns, English offers more diverse forms and meanings such as *psycho*, *psychotic*, *psychopath*, *psychology*, and *psychologist* (“n. - N.”).

However, the multiple derivatives may present challenges in understanding the precise meanings and nuances of these words, leading to potential errors in comprehension or usage. The flexibility of English in converting parts of speech through derivation can also be perplexing for Chinese EFL learners. The ability to transform a word from one part of speech to another may require a deeper understanding of syntax and semantics, posing a hurdle for learners accustomed to the more rigid structural transformations within the Chinese language. That may explain why the types of “a. - A.” and “n. - N.” outnumber the rest.

4.2.3 Weight of Morphology

In the context of derivation, English places greater emphasis on the formal structure of words, while Chinese prioritizes semantic meaning. This dichotomy is particularly apparent in the recognition of a word’s part of speech. In English, the form of a word often plays a crucial role in

determining its grammatical category, thereby necessitating attention to its morphological structure. Conversely, in Chinese, the focus primarily rests on extracting the inner meaning of a word, rendering the identification of its part of speech more challenging based solely on its form.

The implications of these divergent linguistic approaches are particularly salient in language learning contexts. When acquiring English vocabulary, Chinese learners may inadvertently overlook the significance of part-of-speech distinctions due to their habitual emphasis on core meanings. Consequently, when attempting to express English concepts in Chinese, there is a propensity for erroneous grammatical usage to ensue.

Moreover, as beginning learners of English, individuals typically commence their language acquisition journey by grasping basic adjectives and nouns. Thus, when attempting to convey a specific meaning, there is a natural inclination to structure sentences in the form of them. That is likely to prompt the considerable erroneous usage of adjectives and nouns ("a. - " and "n. - " reaching 68, 58 respectively, accounting for about 80% of the total).

4.2.4 Dynamic Adaptation of Root Words

One of the limitations of audio clips as a tool for the research is their inability to identify spelling mistakes. However, it is crucial to note that in the process of derivation, English displays a dynamic adaptation of root words morphologically and phonetically while converting the parts of speech. This can be observed in the formation of derived words such as *explanation* from *explain* in (7a), and through assimilation in words like *immature* from *mature* in (7b). On the contrary, Chinese morphology maintains a static nature, with morphemes remaining unchangeable during the process of derivation.

(7) a. explanation (explain), pronunciation (pronounce), repetition (repeat), judgment (judge), generosity (generous)

b. **i**mmature (mature), **i**llegal (legal), **i**rregular (regular), **i**ncomplete (complete)

4.3 Motivations & Significance

4.3.1 Enhanced Metalinguistic Awareness

Schmidt's *Noticing Hypothesis* suggests that learners may transfer knowledge from their first language to the target language during the process of noticing linguistic features (SCHMIDT, 1990). According to ELLIS (2008), comparing derivational processes across languages can enhance learners' cognitive awareness of language structure. Through comparing derivation between English and Chinese, learners can develop a deeper metalinguistic awareness that transcends individual languages, understanding and analyzing language structures beyond rote memorization and mechanical language transfer.

4.3.2 Targeted Instructional Strategies

Understanding how derivation operates differently in English and Chinese can inform the development of effective teaching materials and activities for second language learners. By identifying common challenges or areas requiring focused instruction, educators can tailor their approaches to meet learners' specific needs, optimizing learning outcomes.

5 Conclusion

In conclusion, the study of derivation in English and Chinese has done a quantitative and qualitative analysis based on EFL group interaction, shedding light on the comparison in terms of

word formation of affixation between the two languages. The comparison has highlighted the motivations and significance encompassing enhanced metalinguistic awareness and targeted instructional strategies, since the research has intended to contribute to a deeper understanding of how derivation operates in both English and Chinese language systems. It provides valuable implications for language teaching and learning approaches by recognizing areas where learners may encounter challenges or benefit from specific instructional techniques.

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