

## **A Corpus-based Study on English Translation Methods of Research Article Compound Titles: A Case Study of Foreign Language Teaching and Research**

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### **Abstract**

The research, with Foreign Language Teaching and Research as an example, investigates Chinese and English research article compound titles from linguistic dimension and punctuation dimension, and generalizes common English translation methods of linguistic research article compound titles. From linguistic dimension, the research found that the main linguistic structure of English compound titles were “noun phrase/ noun phrase” and “verb phrase/ noun phrase” structure, which may be helpful for choosing linguistic structure of English titles. Meanwhile, several translation methods of frequently used Chinese lexis were summarized. From punctuation dimension, the research found that the most applied translation method was to have colon remained or to be translated into compound titles linked by colon, followed by method to omit colon or em dash and to translate into a single title. Chinese compound titles usually translated into English compound titles linked by colon. With concise and eye-catching structures, such translation method reflected the function of colon in English: explanation and illustration. Sometimes, prepositions were used to translate compound titles into single titles; with flexible structures, this method was also conformed to English expressions. Besides, compound titles linked by em dash should be avoided in English research article titles, because em dash is hardly used in English formal styles.

### **Keywords**

**Compound titles; Research article titles; Translation methods; Corpus.**

### **1. Introduction**

Nowadays, in order to issue an article on international academic journal, it is usual for authors to translate their articles into English, but some authors often make mistakes in translating titles. For example, some authors' translation is too expatiatory and not coincide with English expressions, which would have bad impacts while publishing an article. Therefore, researches on title translation are necessary. In addition, the quality of title translation will directly influence readers' interests on looking through the articles. A data shows that readers who read the titles are about five times more than who read the whole articles[1]. Title translation may also influence searching and index of an article, which may indirectly has an influence on download and citation of an article. A research article shows that scientific papers with short titles have more downloads than that with longer titles[2].

As one main type of titles, compound title has several small types and each type has its own translation method. A study about titles of research articles in applied linguistic shows that the usage of compound titles continually increased in past 43 years[3]. Why compound titles become a popular choice? Or what cause compound titles a preference for research articles? First, the book *Writing Academic English* said that“ Use a colon between the main title and the subtitle of a book, article or play.” (p.286)[4]. It's common to use colon type compound title formally or informally. Second, compound titles have a specific structure. With a colon or a dash, we can simply grab the subject or main idea from compound titles. Third, it's obvious to see a colon or a dash in a string of words. Thus, compound titles may instantly attract interests of readers.

With the present research, I decided to choose English translation of compound titles as my research topic. And to ensure the accuracy and representativeness of this research, I collected compound titles of research articles from a famed academic journal *Foreign Language Teaching and Research*. This periodical has a huge influence in the field of language learning, and a number of outstanding scholars have published articles on the periodical.

Corpus linguistic is a research method which based on quantities of authentic texts, and conclude through Probability and Statistics, so it's essentially empirical. With corpus linguistic, this research analyzed title translation in practice. It is said that languages created and developed as society had done. Languages constantly develop in the process of application. Thus, the translation features and methods we concluded will be of practical significance. This may promote the development of title translation.

On the one hand, proper title is not only the reflection of an article, but also the embodiment of the level of an author. Without title, the article is incomplete. It definitely contains a great importance of theoretical value. On the other hand, a more systematic and standardized rules in title is needed in reality, because the error in title may impede the internationalization of research articles, which is an obstacle for academic exchanges.

Therefore, the present research aims to take *Foreign Language Teaching and Research* as an example to analyze research article compound titles from two dimensions: linguistic dimension and punctuation dimension, and generalize two levels of translation methods: structure level and lexical level, illustrating translation methods of compound titles by three main types: compound title linked by colon, compound title linked by em dash, and compound title linked by colon& em dash.

## 2. Literature Review

### 2.1 Previous Studies on Linguistic Features of Research Article Titles

In the term of linguistic features of academic titles, there were some achievements on it. Xu Jianping stated the linguistic features of academic titles in Chinese core periodicals and classified titles into six types, including verb-object structure, noun phrase structure, biased-positive formation or coordinate structure, declaration sentence structure, prompt titles or subtitles, and question titles[5]. Liu Xianghong studied the academic titles in the field of scientific and analyzed some common types of basic structures and linguistic features. First type is phrase structure titles, which consists of one or several words or phrases in an order of single, parataxis or modifier-core relation. Second type is verb-object titles. Third is verb-object and modifier-core structure. Fourth is declarative titles, and the last is titles with subtitles or em dash[6]. Cao Yang and Zhao Shuo did a further study in scientific titles. They found that noun phrase structure was the main structure of titles, especially the "noun phrase structure + preposition phrase" structure. In addition, some frequent-used preposition and verb phrase were found in their paper[7]. Yao Keqing and Jiang Yajun researched changes of academic titles in applied linguistics and divide six kinds of titles by syntactic structure, including compound titles, "noun phrase + preposition phrase" titles, verb phrase titles, noun phrase titles, full sentence titles, and preposition phrase titles[3].

### 2.2 Previous Studies on English Translation of Research Article Titles

Many studies have been conducted on title translation at home and abroad these years. "Some famous journals including *Nature* and *British Medical Journal* (BMJ) issued articles about research article titles. *The write of stuff*, the magazine of European association of medical author, published a monograph on research article titles in 2007. James Hartley and Vivian Soler, specialized in research article titles, were invited to write articles on discussing titles' writing and applied problem"[8]. While in China, articles on translation of research article titles are fewer, most of which just had a few words on translation methods. Xu Jianping probed into some problems and gave some advice on translations of the six categories in Chinese core periodicals[5]. Liu Mingdong generalized translation methods of academic titles in five types: noun phrase, preposition phrase, infinitive phrase, gerundial phrase and sentence; he then proposed five principles in translation[1]. Liu Xianghong proposed some

translation methods in scientific titles. And two common applied structures in translation were “preposition attributive+ centre word” and “postposition attributive + centre word”[6].

### 2.3 Previous Studies on Compound Titles and Their Translations

Articles, especially on compound titles' translation, were less to find. Jiang Yajun commented overseas debate over compound research article titles and gave some inspirations and references to domestic paper writing. He pointed out that translators should have a comprehensive thinking of whether or not to use a compound title by subject of paper etc [8]. Wang Yingge reviewed characteristics and applications of compound title in English papers, and also generalized some translation methods of Chinese compound titles. For example, translating subtitle coincided with English expression, literally translating “title: subtitle” structure, and translating Chinese single titles into English compound titles[9]. Liu Yongfang illustrated structure and linguistic feature of English scientific compound titles based on corpus and gave some suggestions[10]. He raised some common problems in Chinese scientific journals in order to promote the development of compound titles[11]. With the literature review of relevant previous studies, it is found that previous studies have investigated research article compound titles and their translation, and we noted the applications and regular translations of compound titles in research article writing. However, the study on translation methods of compound titles is insufficient to find so far.

## 3. Research Methodology

Before writing the essay, a survey on the usage rate of compound titles has been carried out. We found that in 2000-2019 (till March), 208 academic articles which provided with English translation of titles and abstracts in *Foreign Language Teaching and Research* used compound titles, excluding book reviews, book introductions or conference reviews. There were about 5480 Chinese characters and about 2950 English words in compound titles of this corpus. These 208 compound titles occupied about 11% in 1870 article titles during almost twenty years. If all kinds of articles with compound titles were counted, the proportion will be higher. So, it can be proved that compound title is a frequently used title type in research articles.

With the small corpus, this research analyzed linguistic features and structures of these 208 compound titles and classified them into four types. Then, we summarized some rules in translating compound titles by contrast and comparison. Meanwhile, a few common translation methods of certain Chinese words or phrases will be mentioned.

## 4. Translation Methods of Research Article Compound Titles from Linguistic Dimension

### 4.1 Translation Methods at the Structure Level

The research investigated the 161 English compound titles( the rest 47 English titles were single titles) from the angle of linguistic structure and classified them into 8 types. And the following table is the quantity of each types.

Table 1. Quantity of each linguistic structure

Linguistic structure (Title/ Subtitle)	Compound titles linked by colon (51)	Compound titles linked by em dash (110)	In all the English compound titles (161)	Proportion
Noun phrase/ Noun phrase	43	83	126	78.26%
Verb phrase/ Noun phrase	5	10	15	9.32%
Noun phrase/ Verb phrase	0	6	6	3.73%

Sentence/ Noun phrase	1	3	4	2.48%
Sentence/ Verb phrase	0	1	1	0.62%
Noun phrase/ Prepositional phrase	1	3	4	2.48%
Prepositional phrase/ Noun phrase	1	2	3	1.86%
Verb phrase/ Verb phrase	0	2	2	1.25%

According to the table, we found that “noun phrase/ noun phrase” structure was the most common linguistic structure in English compound titles. This result gave an index to one of English linguistic characteristics that English was a static language. People in English-speaking countries prefer to use noun phrases while people in Chinese prefer verb phrases. And the second largest proportion is “verb phrase/ noun phrase” structure. These results were consistent with points of Jiang Yajun’s paper[8]. In this connection, it is better to use “noun phrase/ noun phrase” structure or “verb phrase/ noun phrase” structure in title translation.

Although 161 Chinese compound titles are translated into English compound titles, the rest of 47 Chinese compound titles are translated into English single titles, occupying 29%. This data indicated that Chinese compound titles can also choose to be translated into a single and simple form.

#### 4.2 Translation Methods at the Lexical Level

When we observed the Chinese compound titles, we found that there were some lexis in common and these lexis often had the same or a similar English translation. This research picked up six main kinds of lexical structures to analyze.

The first type is to generally describe a research, for example, “一项.....的研究/探讨”, “.....对比研究”, “...研究报告”, “.....实证研究”etc. These words are usually translated into “a study/ an analysis of...” in English. Sometimes the phrase was an addition in English while there was no obvious word like “研究” in Chinese.

The second type is “论.....”. It’s usual to translate into “A study of...” or “On...”. However, “论” in a academic article is circumlocution, so the later translation method is more suitable.

The third type is to explain the title further, like “基于.....” and “基于.....的研究”, and they often translated into “A study based on...” or “A X-based study on...”

The fourth type is to give an example to illustrate the title, symbolized of “以.....为例”. “A case study of...”, “a focus on...” and “exemplified by...” are some common translations.

The fifth type is “来自.....的证据”, which is translated into “evidence from...” mostly.

The sixth is “兼评/兼谈.....”. This word has two main translations. One is to ellipsis the contents after “兼谈” to make the translation more concise, because this part is not as significant as contents in title part. The other is to translate as “with comments/ analysis on...” after a colon.

### 5. Translation Methods of Research Article Compound Titles from Punctuation Dimension

Generally, title consists of two forms: single title and compound title. “Compound title is the title which has two parts connected with punctuation like a colon, or an em dash, or a full stop and so on”[8]. If a single title is not enough to express the meaning specifically, like research object or

research direction, then a compound title is needed. Compound titles play roles of supplementary instruction; they refer to additional information, for example, the research theme, research object, or research method.

This paper classified Chinese compound titles into four types by form according to Wang Yingge's article[9]. They were compound titles linked by colon( Title: Subtitle), compound titles linked by em dash( Title--Subtitle), compound titles linked by colon & em dash( Title: Subtitle-- Subtitle or Title- Subtitle: Subtitle), and compound titles linked by semantic meaning( Title. Subtitle). Here is a table of each type in the corpus.

Table 2. Each type of compound titles

Type	Quantity	Proportion
Compound title linked by colon	58	27.88%
Compound title linked by em dash	148	71.15%
Compound title linked by colon& em dash	2	0.97%
Compound title linked by semantic meaning	0	0%

The data from this small corpus showed that compound title linked by colon and by em dash are two popular types of Chinese compound titles, and people prefer using compound title linked by em dash to using which linked by colon. However, the number of colon & em dash linked type is few-- just has two examples. As for semantic meaning linked type, since there was no sample in the corpus, this type won't be discussed in the research.

In this chapter, the research will analyse each type of compound titles and their translation methods. Since the cases of colon linked type are simpler while em dash linked type are more complicated, the colon linked type would be analyzed at first.

### 5.1 Translation Methods of the Colon in Compound Titles

In Chinese, one of the function of colon is to separate subject term from illustration and supplement in titles[12]. In English writing, colon is used for explanation and introduction; it is also used between titles and subtitles. So, either in Chinese or in English, it's reasonable to use colon in titles. But the translation method of colon linked type in compound titles is not always the same.

Table 3. Each translation method of colon linked type

Translation method	Example	Quantity	Proportion
Having colon remained	Example 1: ST: 英法中动结构: 最简方案下的参数化研究 TT: Middles in English and French: A minimalist parametric approach	49	84.48%
Omitting colon	Example 2: ST: 模糊指称: 无穷递增和无穷递减的跨界状 TT: On the infinite-increasing and infinite-decreasing borderline cases in vague references	7	12.07%
Substituting colon with em dash	Example 3: ST: 句式义与词项: 英汉“共同耗用”句式的比较 TT: Construction meanings and lexical items-- A comparative study of the English and Chinese constructions of “using and consuming jointly”	2	3.45%

#### 5.1.1. Remaining the Colon

It was clear that colon remained in English translation in most of the situations-- in proportion of 84.48%, because colon in two languages have a common function. Examples used this translation method first propose a subject, and then introduce more details after the colon. For instance, it may introduce what is the research or study about( like Example 1), which angle or perspective is used in the study, and so on. As for linguistic feature, the title usually is a modifier-core structure, and the subtitle usually is a coordinate relation or a modifier-core structure, but sometimes the linguistic feature of title and subtitle may reverse. If putting Example 1 and other examples together, we will find that in translation, the structure of title and subtitle usually is corresponding with Chinese title. And the translation will use noun phrase and preposition phrase at large, as English is a static language. With this translation method, the structure of compound title is clear and compact.

### 5.1.2. Omitting the Colon

Several examples omitted colon in translation-- in proportion of 12.07%. They usually translated into noun phrases connected with a preposition like “on”, “in”, “of”etc. Besides, “on...” structure is frequently used in translation. But this method is not suitable for a long compound title, which will be so expiatory that readers can’t quickly catch the main idea of title. Now that compound titles often have more words than single titles, such method has its limitation to be applied in long compound titles.

### 5.1.3. Substituting Colon with Em Dash

The last translation method of example 3 is rare to see-- there were just two cases in the corpus. The reason is that em dash is seldom used in English titles, and scholars think “em dash is used for pause or anacoluthon”.[13] In addition, em dash is mainly used in informal style and comedies. Although the functions of colon and em dash are in common, the authentic English expression required to use colon.

With a clear structure, colon used in Chinese title was to explain the approaches or rationales of a research article. From the examples, this kind of title usually uses literal translation, which means translate the same as the framework of source language. Therefore, compound title linked by colon translated with colon remained more often.

## 5.2 Translation Methods of the Em Dash in Compound Titles

The statistics in Table 2 showed that compound title linked by em dash occupied 71.15% in corpus of this research, with a total of 148 em dash linked type of examples. So the analysis of this type will be meaningful and typical. Undoubtedly, this section is a rather important part of the essay. In addition, this section classified four question & em dash examples into em dash linked type, as well as four exceptions. They will be analyzed later.

The compound title linked by em dash have three translation methods: translating em dash into colon, remaining em dash in translation, and omitting em dash. Following is the data:

Table 4. Each translation method of em dash linked type

Translation method	Example	Quantity	proportion
Translating em dash into colon	Example 4: ST: 中国大城市外语使用情况调查分析——以北京、上海、天津、广州、深圳、重庆和大连为例 TT: Foreign language use in Chinese metropolises: An analysis of evidence from a national survey with special references to Beijing, Shanghai, Tianjin, Guangzhou, Shenzhen, Chongqing and Dalian	60	42.86%
Having em dash remained	Example 5: ST: 隐喻认知基础的心理现实性——时间的空间隐喻表征的实验证据	42	30.00%

	TT: The psychological reality of cognitive basis of metaphors—evidence from the spatial metaphoric representation of time		
Omitting em dash	<p>Example 6</p> <p>ST: 色彩语码研究 ——进化论与相对论之争</p> <p>TT: A comparative study of evolutionary theory and linguistic relativism with a particular reference to issues of color lexicon</p>	38	27.14%

### 5.2.1. Translating Em Dash into Colon

From Table 4, the most popular method of translating em dash linked type was to translate em dash into colon, which occupied 42.86% in total. This result reflected that most scholars agreed colon's function in English was to explain and illustrate. There were three main situations of this translation method. First is to exemplify, like Example 4, in which em dash was to take several cities for example. Such translations appeared in a research analysis or a survey; at first, the research was given, then came the concrete evidence of research subject. Second is to explain the subject in detail, or describe the attribute of the research. Third is to conclude the part before em dash.

In the condition of translating “em dash” into “colon”, the length of Chinese compound titles is longer than usual, so an em dash used for balancing the structure. Sometimes, a colon is used for exemplification. And sometimes, colon has a meaning of illustration and explanation the same as em dash. But in English writing, it's informal to use em dash because this symbol may cause a sense of incoherence. Therefore, em dash in compound title translated into colon in most cases.

### 5.2.2. Having the Em Dash Remained

Although em dash translates into colon in most of the situations, there are several examples showed that some authors literally translated the Chinese compound title and having the em dash remained, which were like “Chinglish”. But as what had been said before, em dash was no frequently applied in formal English style, such as academic articles. In addition, evidence from other research also showed that such translation method was not applicable in English. Liu Yongfang's study on 5000 English titles of science and technology core journals from 12 subjects showed that only 10 examples in English titles used em dash, which just occupied 1.2% in all the 5000 English titles[10]. Therefore, it's more appropriate to avoid using em dash in English translation of academic compound titles, though Chinese like using it in Chinese.

Here, the data of thirty percent reflected that translation of compound titles in China lacked standards and rules, and Chinese scholars must be more rigorous when translating titles. More efforts needed to be done in translation of compound titles.

### 5.2.3. Omitting Em Dash

Another frequently used translation method of em dash linked type is to omit em dash, which possessed 38 examples in corpus and took up 27.14% in total. Take Example 6 for instance, the English translation omitted em dash and substituted a preposition phrase (“with a reference to”) for em dash. Following are some features of this translation method.

First of all, we found the length of such kind of examples are shorter than others'. Second, in the English translation, em dash was substitute with preposition phrase, like “in”, “with”, “of”, “into”, “on”, and so on. In Chinese, an em dash may make the structure of title more distinct and eye-catching. But here, in English translation, it is smart to use preposition to connect the two parts of title, and it is not prolix because of the short length of title. This translation method is very flexible, and the position of preposition is changeable.

Example 7:

ST:再评关联理论——从“后叙”看 Sperber 和 Wilson 对关联理论的修改

TT: A Critique of “ Postface” to Relevance

Example 8:

ST:隐喻语篇组织功能研究——标题与正文之间的组织关系

TT:Metaphor as a textual strategy in Chinese

These compound titles didn't have em dash in translation, either. However, the translation method mentioned is a little different-- these titles omit something in Chinese title. In Example 7, the writers' name of Relevance was omitted because English readers already knew them. Example 8 deleted the Chinese part after em dash, which is an interpretation of the main title, so such translation method may attribute to conciseness principle.

#### 5.2.4. Special Cases of Em Dash Linked Type

Several special cases of em dash linked type compound titles appeared in the corpus, as Example 9 and Example 10.

Example 9:

ST:句法结构从哪里来? ——论句法理论的冗余性及其消除的可能性

TT:Where do syntactic structures come from? On the redundancy of the current syntactic theories and its eliminability

Example 9 is "Question and em dash" type. The symbol of this type of compound title is the connection of question and em dash. In reality, it's rare to see in compound title. It's as same as the result in Lin Jiayu's article[14]. In corpus of the research, there are just four examples in nearly twenty years. Usually, the main title is a question sentence, and the subtitle has a difference with the answer. In the corpus, like Example 9, such type of cases literally translated the titles and remained the question.

Example 10

ST:精巧的语言 有意味的形式——汉语谜语语言研究

TT:Skillful use of language in creative forms: An analysis of the language in riddles in Chinese

There were four particular cases in corpus with both space symbol and em dash in Chinese title. Meanwhile, there were four-character or five-character structure before em dash. But in their translations, they would be translated into a whole phrase and substituted em dash for colon. In example 10, two five-character structures were translated into a noun phrase connected with preposition "in" and "em dash" was translated into "colon".

### 5.3 Translation Methods of the Colon & Em Dash in Compound Titles

This kind of compound title is rare in the corpus.

Example 11

ST:《易经》与认知语言学: 语言体验观比较——四论语言的体验性

TT:A comparative exploration in embodiment of language between "Book of Changes" and CL

In Example 11, colon and em dash in Chinese title were removed in translation, and the whole compound title was attached by preposition "in" and "between". Since this type of compound title just had two examples in corpus, its translation method can not be concluded from such few examples.

## 6. Conclusion

This research discussed the classification and translation methods of each type of compound title based on corpus, and gave some suggestion on title translation. Noun phrase/ noun phrase structure and verb phrase/ noun phrase structure were the frequently used linguistic structure of English compound titles. At the same time, in the 208 English translation of research article compound titles, literal translation with colon and using preposition flexibly to replace colon/ em dash were two main translation methods, which respectively occupied about 52.40% and 21.63% in corpus. These results



would make references to writing compound titles correctly, and promote normalization of title translation, especially of compound title translation.

Although the research had gained some conclusions, there were still deficiencies in this research. First, with the number of 208 compound titles, the corpus was small and the statistics were less convincing to embody an exactly high accuracy of the research. Second, the research subjects of compound titles were picked from a linguistic periodical, so the result may not be the same as the result in other fields of academic articles. Third, since the author's ability and knowledge limited the quality of this research at present, there was space for improving the research.

In future, to polish this research, the corpus can be enlarged in quantity and be expanded to more fields, such as scientific technology, medicine, and so on. Also, a comparative study can be done between the corpus in linguistic and in other fields of research articles, in order to study the similarities and differences in features of compound titles and their translations.

### Acknowledgements

This work was supported by grants from the Hunan Provincial Foundation for Philosophy and Social Sciences (No.18WHLH33), the Hunan Provincial Higher Education Research and Reform Project (No.2017-229), the Foundation for Philosophy and Social Sciences of University of South China (No.2017XGY05), and the Degree & Postgraduate Education Reform Project of University of South China (No. 2018JG002).

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