

A review on the use of Connectives in Argumentative Writing by Chinese learners of German

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Keywords: German learners, argumentative essays, connectives.

Abstract: The purpose of this study is to explore the use of connectives in argumentative essay written by Chinese learners of German, to summarise the key points mentioned in the three selected master's theses by means of a literature review. And also to analyse the reasons for the problems appeared in the exercising texts, hoping to conclude pedagogical suggestions of previous studies, and to deduce more possibilities from the level of research design in order to provide references and directions for future research on this topic.

1. Introduction

In recent years, as foreign language researchers' research on words tends to be multi-dimensional and omni-directional (Xu Qingli et al., 2013), researchers have gradually expanded their perspective from words and sentences to text level, from focusing on word ontology to analyzing the function and utility of words based on text, and from static analysis to the combination of static and dynamic analysis, connecting theory and practice, providing constructive opinions and suggestions for in-class teaching and foreign language learning. The use of connectives, which have the functions of cohesion, coherence, prompting and emphasis, directly determines the logical relationship between sentences and the formation of discourse logic and hierarchy. Proper use of connectives can help readers clarify the logical structure of discourse and thus better understand discourse (Degand, L. et al., 1999).

Researches on the use of connectives by foreign language learners in China mainly focus on English, while there are few literatures on German learners. In this study, by searching CNKI, this paper selects three articles on German argumentative writing as the research objects, and attempts to summarize the research results of Chinese scholars on German learners' argumentative writing from the research ideas and methods of Chinese scholars, so as to deepen learners' understanding of the characteristics of learning and using German connectives.

2. Research design

2.1 Definition of keywords

2.1.1 Discourse

A complete discourse often consists of the main discourse and the meta-discourse. The main discourse focuses on the new propositions, conveys the author's writing intention to the reader, and completes the concept of the discourse. However, the main discourse is only one of the parts of discourse production, which depends on the author, while reading communication is an interaction between the author and the reader. The author relies on meta-discourse to help the reader understand the discourse, to give an account of the structural arrangement, and guide or notice the reader which propositions are important, and suggest the reliability of the propositions. (Xu Haiming et al., 2005).

2.1.2 Meta-discourse.

Most researchers believe that the classification of meta-discourse should be divided into two categories: first, textual meta-discourse; and second, interpersonal meta-discourse. Textual meta-

discourse includes textual connectives and code glosses. Among them, textual connectives specifically include: transitive connectives, logical connectives, sequential connectives, topicalizers, summary words, and reminders (e.g., "as mentioned above"). Code glosses words include explanatory expressions as well as rhetorical devices such as metaphors that further illustrate what has been said. Interpersonal meta-discourse include "illocutionary markers" (including words and sentences that reflect the speaker's intention or purpose), "validity markers" (including emphatics, hedges and modalities), "attitudinal markers" (including words and phrases such as shocked and angry), "attributors" (words and phrases that give an account of the source of information or propositions), "commentaries" (such as "my readers", "suppose you...", "you can imagine") (Xu, Haiming et al., 2005).

2.2 Literature selection

As the largest literature database in China, CNKI database contains academic papers and important documents from most of the universities in mainland China. The researcher searched all Chinese master's and doctoral dissertations before 2021 by using the keyword "German argumentative writing" and selected papers that fit the paradigm of empirical research as the subjects of this study. Three papers were identified as shown in Table 1, all three of which discuss the use of meta-discourse in a sample of German argumentative writing exercises. The basic information of the three literatures is shown here.

Table 1. Basic information.

Literature	Research topic	Research method	Study sample size
Chang Xuan (2014)	The use of Meta-discourse Markers in German Argumentative Writing by Chinese German Majors	Inductive synthesis method	100
Wu Zekun(2020)	The Use of connectives in Argumentative Writing of Chinese German Majors	Quantitative, qualitative analysis methods	155
Ding Feng(2020)	A Comparison of the Use of Logical Connectives between Chinese German Learners and German Native Learners in Argumentative Writing	Comparative study method	60

2.3 Research Methods

This paper adopts the method of basic literature review and uses NVivo12 qualitative analysis software to conduct horizontal comparison and analysis between the three literatures from the research design to the stated viewpoints and conclusions. On this basis, it deduces the possibility of more scientific research design, summarizes the research results and constructive teaching methods, and gives corresponding suggestions for improvement.

3. Literature Review

3.1 Subjects of the Study

Linguistic research should be divided into two categories: ontological research and applied research, and the specific research methods adopted will be different depending on the purpose and direction of the research (Shen, Lihong, 2012). Since the three articles analyzed in this paper are all based on the premise of "in argumentative writing", they should be classified as applied studies of linguistics.

Corresponding to the study of language ontology of "studying language for language's sake" is the study of language application. Foreign language teaching accounts for a large proportion of applied

linguistic research, which is the orientation of applied linguistics research (Shen Lihong, 2012). For example, Chang Xuan's study (2014) took a random sample to specifically analyze the use of meta-discourse markers in these 100 argumentative assignments and puts forward opinions and suggestions on the teaching methods of German argumentative writing for Chinese German students. It is concluded that the analysis of students' works and the summary of common problems are to a certain extent pedagogically oriented. In this aspect of language acquisition and teaching, where learners often differ, experimental methods are often preferred when relevant qualitative methods are not sufficient to explain the problem. However, we need to pay attention to many aspects when adopting experimental methods, such as what samples are selected and what methods are adopted to collect data, which plays an important role. Imperfect experimental design will affect the experimental results to a certain extent.

3.2 Methodology and nature of the study

It is mentioned above that Chang Xuan's study (2014) adopted a random sampling method to collect 100 argumentative exercises from 10 different universities for analysis. As far as the research method is concerned, this study is not a follow-up study, but the learning and use of metathesis is a dynamic process, and it is difficult to analyze the use of metathesis markers in German argumentative essay writing in a single examination only, which cannot truly reflect the long-term stable and regular change patterns of students. There may be some deviations in determining the problems, which is not conducive to putting forward opinions and suggestions on the teaching methods of German argumentative writing for Chinese German students.

As far as the nature of the research is concerned, this study only focuses on the analysis of a single composition completed by the students, while the cognitive factors inherent in the learners' use of the meta-discourse and the pedagogical behaviour of the pedagogues on this issue have not been given sufficient attention, and the learning process of the learners and the pedagogical behaviour of the pedagogues have a test-oriented performance (Xu Haiming. et al. 2005). It is necessary to investigate the patterns of Chinese German students' use of meta-discourse from a developmental perspective and using a follow-up study to provide a theoretical explanation of the cognitive factors that influence their use of meta-discourse.

From the perspective of dynamic systems theory, Wu Zekun (2020) used 155 German argumentative essays from first to fourth year undergraduate German majors in China as the study corpus, and the corpus of argumentative essays by native speakers of university students in the Falko corpus as the reference corpus, and used a combination of quantitative and qualitative methods to study four analytical dimensions: frequency, diversity, complexity and accuracy. The dynamic acquisition of connectives in the argumentative essays of Chinese German-speaking university students is studied. Although the research method is more scientific, it does not belong to the theoretical definition of tracking research [Tracking research refers to a research method that investigates the same group of objects at different time points, collects data, and then explores the changes of social phenomena with time and the causal relationship between different phenomena through statistical analysis of the data obtained from several surveys before and after. It consists of two parts: the first investigation (or pre-investigation) and the follow-up investigation (or follow-up investigation, one or more times). As one of the most rigorous research methods, tracking research plays a very important role in the process of exploring complex social phenomena and answering various theoretical and practical questions.], Chang Xuan (2014) overcomes the problem of collecting samples from a single test. Based on the dynamic system theory corpus, this paper studies the use of connectives in argumentative writing of Chinese German majors from a developmental perspective.

The analysis made by Wu Zekun (2020) from four dimensions: frequency, diversity, complexity and accuracy shows that compared with previous studies, the focus is more prominent and the structure is clearer. The four dimensions are not fragmented, and in the conclusion section the authors conclude that there is a dynamic fluctuating correlation between the frequency, diversity, complexity and accuracy of the four connectives. Diversity and accuracy, complexity and accuracy show a strong or weak relationship of mutual support and coordinated development, while frequency and diversity,

frequency and complexity, frequency and accuracy, diversity and complexity show a competitive relationship.

3.3 Horizontal comparative analysis of research conclusions

The main errors of the text organized meta-discourse are focused on syntactic morphological errors, which reflects that there is no necessary correlation between students' learning of patterned means of linguistic expression and the quality of their assignments. In addition to analyzing the syntactic morphological errors that occur when using text organized meta-discourse, the separation of text organized meta-discourse from the content of the text should also be taken into account. According to the research conclusion of Chang Xuan's study (2014), the meta-discourse and the main discourse together constitute the discourse which is organically combined and indispensable. The process of text writing should be a dynamic interaction of the two discourse parts.

The main error in the interpersonal meta-discourse is the tendency of lower level students to increase the persuasiveness of their arguments by expressing subjective certainty. On the contrary, this over-subjective expression will weaken the logical composition of the argument. While the grammatical use of subjective certitude in sentence construction is relatively simple and the argument is relatively better described from a subjective point of view, too much subjective expression can lead to a loss of objectivity and credibility in the argument as a whole.

Chinese German learners' over-categorization of certain connectives or misconceptions about certain connectives also contribute to their misuse of connectives. This is one of the important problems of Chinese learners of German in argumentative writing. It exists in the test-based teaching and learning of German writing, where logical connectives are divided into several categories according to different logics for ease of use. However, there are semantic or grammatical nuances between logical connectives, which can lead to misuse of connectives if learners do not analyze them.

By analyzing the three articles in a horizontal comparative, the following points of common interest among researchers are listed for brief review. A few hypotheses about students' meta-discourse use and its relationship with writing quality are mentioned in Chang Xuan's study (2014).

3.3.1 First, there is little variation in the amount of meta-discourse related to the stylistic structure of argumentative essays in different essays

From an objective point of view, the reasons for this are twofold: firstly, in the writing task of the German Foundation Level 4 test, candidates should complete argumentative writing of not less than 120 words on related topics within 35 minutes, Under the condition of certain writing time and length, students need to coordinate the structure and content of the article, which leads to little difference in the use of meta-discourse related to the stylistic structure of argumentative writing in such samples; Second, the German department in China offers writing courses that provide German majors taking the PGG (Pruefung fuer das Germanistik- Grundstudium) with ways and means of writing various types of essays, including the German argumentative essay. Students have a certain mastery of the use of meta-discourse related to the structure of the argumentative essay in their daily practice, so they use common meta-discourse logical connectors in the exam, which leads to little difference in the use of meta-discourse related to argumentative stylistic structure in the samples analyzed in this study.

The above is a comparative analysis of the meta-discourse usage of a certain function in a sample of students at the same stage of their work, for which there is a comparative analysis in Wu Zekun's study (2020) that takes into account both horizontal and vertical dimensions and includes three dimensions of frequency, diversity and complexity. The horizontal perspective was compared with native speakers of German at the same stage, and the vertical perspective was set on a timeline from freshman to senior year, leading to the following conclusions. "Frequency": from freshman to senior year, the distribution of German learners' connectives at the syntactic level and semantic level changes, with a tendency to approach that of native speakers in senior year. In general, Chinese learners use fewer connectives than native speakers, and tend to use more conjunctive adverbs at the syntactic level, and more connectives indicating additive relations, such as cause and effect and concession, at the

semantic level; “Diversity”: use the standard class sign ratio [The ratio of standard class symbols to form symbols refers to the ratio of class symbols and form symbols, which usually reflects the changes of vocabulary. The higher the ratio, the higher the degree of vocabulary change. However, the vocabulary types of a certain language are relatively stable in a certain period of time, and the number of class symbols will decrease with the increase of corpus capacity. Therefore, the standard class symbol/shape symbol ratio (STTR) is generally adopted, and its calculation method is to calculate every 1000 words in the corpus, and then calculate its leveling value to obtain the standard class symbol/shape symbol ratio.] To reflect the change of vocabulary. The diversity of connectives used by Chinese learners increased significantly from junior year onwards and exceeded that of native speakers. The absolute variety of connectives used by native speakers was richer in the same semantic category, but increased with grade level; “Complexity”: with the increase of German teaching hours, German learners show obvious tendentious changes in the complexity of connectives, gradually reducing their dependence on common words. The reliance on commonly used words gradually decreases, and there is a tendency to use more sub-common words and connectives other than the common 115 words. It should be noted that Chinese learners of German also have their own characteristics in terms of the use of connectives, which are not different from those of native speakers, and are mainly ordinal and summary words, but there are still some connectives specific to each grade.

3.3.2 Second, from the perspective of pure quantification, there is no correlation between writing quality and meta-discourse use

From the perspective of pure quantification, it is not the case that the more meta-discourse are used the higher the quality of the writing is, but whether the meta-discourse can be used correctly involves two aspects: whether there are grammatical problems in the use of meta-parts and whether the use of meta-parts is logical in terms of discourse. The presence of these two problems in the use of meta-discourse parts in an exercise will definitely affect the quality of the exercise. The more meta-linguistic connectives are used, the more difficult it is for students to grasp the logic of the discourse. Therefore, from a purely quantitative perspective, there is no correlation between writing quality and meta-textual use.

The same description of the accuracy of conjunctive use exists in Wu Zekun's study (2020), where German learners had a significantly higher rate of conjunctive errors than native speakers, with misuse and misapplication. Specifically, learners in general were prone to make errors at the syntactic level. In contrast, native speakers of German were more likely to make errors in the use of punctuation in sentences with connectives. The rate of learners' conjunctive errors gradually decreased as the length of study increased, but by the fourth year the rate of conjunctive errors was still significantly higher than that of native speakers. In addition, the average rate of learner errors per sentence for connectives gradually decreased. There was no significant change in the distribution of all connective error types, except for syntactic-level errors and orthographic errors.

3.3.3 Third, Chinese German majors experience the intermingling of native language discourse knowledge and target language discourse knowledge in German writing.

Wu Zekun's study (2020) interprets this phenomenon from three dimensions: diversity, complexity and accuracy, which is called “fossilization [The phenomenon of "fossilization" can be explained as the existence of a language system called interlanguage between the mother tongue and the target language. In the process of foreign language learning, Learners' language is in a dynamic state of development and change. With the gradual progress of language acquisition, interlanguage will gradually approach the target language. However, when learners reach a certain level, some features of interlanguage, such as grammar, semantics and pronunciation, will tend to stagnate, which is difficult or even impossible to eliminate, thus forming language fossilization (Gao Yun et al., 2005).]” and “teddy bear [Lexical teddy bears, first proposed by Hasselgren (1994), refers to the target words that language learners are most familiar with and use with ease. Research shows that learners use high-frequency words in the target language more frequently than native speakers. Such as important, big, nice, etc. (Li Xiaoli, 2011)]”.

A comparative analysis reveals that negative native language transfer and differences in Chinese-German thinking habits are important causes of this phenomenon. Since students do not have enough knowledge of the target language discourse, there is a process of translating and translating from the native language to the target language in the process of completing the discourse, instead of constructing the discourse directly from the target language discourse knowledge, which will result in the partial use of the native language discourse knowledge in constructing the discourse, i.e., the phenomenon of intermingling the native language discourse knowledge and the target language discourse knowledge. For example, the findings of Chang Xuan's study (2014) mentioned that students in the low and middle subgroups tend to draw on Chinese writing habits and styles in their German exercises, and the phenomenon of intermingling the structures of both Chinese and German genres in their compositions. In Ding Feng's study (2020), it is mentioned that Chinese learners of German are not aware of the characteristics of the argumentative essay as a written language, which is also one of the reasons for the problems in using logical connectives.

4. Research findings

4.1 Recommendations and Insights

The learning and mastery of the chapter-organizing meta-discourse can help students improve their understanding and awareness of the structure of discourse, topic advancement, and discourse articulation. The knowledge of the interpersonal interaction meta-discourse helps students systematically grasp the functions of linguistic devices and their use in context, thus facilitating the clear expression of discourse logic and effectively improving the problem of poor adhesion between the meta-text and the main discourse. The students' rigid and rote learning style is contrary to the purpose of teaching. In teaching, teachers should both implicitly instill the concept of meta-textual parts into students and master this theoretical framework and apply it flexibly to writing teaching.

In German class, teachers can guide students to look for connectives and other cohesive devices in the text to explain the structural features of the text, or they can ask for more specific exercises on coherence and the use of connectives, such as adding appropriate connectives to the text in context, in order to expand the perspective from the individual utterance to the chapter level. It is also important to analyse and summarise typical errors in the use of connectives and to compare synonymous connectives with each other, so that on the one hand learners of German can use them in a differentiated way and on the other hand give them more possibilities to express themselves. However, the method of comparing connectives with each other is not suitable for the basic stage of learning, as it tends to lead to confusion. The differentiated use of connectives is more suitable for learners who are already able to use basic connectives correctly, and the teacher helps the students to identify the grammatical and contextual differences between the connectives so that they can use them more appropriately. The teacher can adjust the focus of teaching according to the mistakes students make in the exam, analyze the common performance of exercises in high and low groups, give examples for self-examination or mutual assessment of the problems in the exercises, and select typical exercises as a corpus for students to learn from.

The German department should offer cultural courses in addition to language courses for semantic understanding and grammar teaching to help students understand cultural differences and learn different ways of thinking. Some of the mistakes made by learners using connectives are caused by Chinese thinking. Teachers should help learners to distinguish between linguistic and cultural factors that are partly responsible for errors in the use of connectives and encourage them to interact with native speakers and to observe their language habits and ways of thinking in everyday life in order to promote more appropriate language use. In addition, teachers should pay special attention to the differences between German and Chinese and English, and to the positive and negative transfer between languages.

4.2 Problems and shortcomings

To summarize, all three papers adopt a more rigorous empirical research paradigm to analyze the language use of German learners' argumentative essay practice, either qualitatively or quantitatively. However, there are some shortcomings in these three articles. For example, the classification of connectives is relatively limited, the dimensions of analysis are not comprehensive enough, and the distribution of learners' levels is homogeneous (Wu Zekun, 2020).

For example, the sample for Chang Han's study (2014) was drawn from the writing section of the 2011 German Foundation Stage 4 standardized test (Writing Task A), and 100 argumentative exercises from 10 different universities were collected by random sampling. Since the curriculum of German language courses in Chinese universities includes teaching of argumentative essay writing, the study participants were systematically trained to write argumentative essays, using high-frequency connectives that are consistent with the basic level and used in daily training. The dimensions of the analysis are not comprehensive enough and need to be analyzed according to the researcher's emphasis on the specific problems. The fact that a certain group of learners is a hot topic for research and that the diversity of learner levels requires more consideration in the design of the study and in the collection of materials has limited the feasibility, leading to the problem of a single distribution of learner levels in previous studies on this topic.

In addition to the aforementioned shortcomings mentioned in previous studies, there are some problems with these studies. Firstly, from the point of view of research design, the conclusions drawn from the research method used by Chang Han's study (2014) do not fully reflect the long-term, regular problems of students and do not apply to making comments and recommendations on teaching approaches and methods. If we are to make comments and recommendations at the level of teaching styles and methods, it is not possible to generalize from the analysis of these 100 exercises alone. In terms of the number of research samples, the sample of 100 assignments can reflect the general problem to a certain extent, but to make the research design better, it would be more scientific in theory to form a dynamic research system by randomly selecting 100 essay assignments from 10 different universities for the fourth level of the General Test for three consecutive years from 2009 to 2011 as a sample. There are no specific requirements in terms of research methodology if the analysis is made only for the use of meta-textual markers in the 100 German argumentative essay exercises. The ideal research design would be a tracking study of all the essay exercises of the same group of subjects over a relatively long period of time, but with very little operationalization. At present, there are very few social studies using the method of tracking research in domestic academia, and some of the existing studies called tracking surveys are actually only contemporaneous cohort studies, that is, surveys of people with the same characteristics at different periods of time, rather than true tracking studies. The reasons for the scarcity of tracking studies are, on the one hand, the stringent design requirements of tracking studies (the subjects of the second and N surveys must be the same group of subjects of the first survey), and the fact that the human, material and financial resources required to conduct tracking studies are often very large, and the time required for the whole cycle of the study is often long, making the average research project often unaffordable or unachievable in one or more aspects. The other main reason may be that the research is not as efficient as it could be. Another major reason may be that the methodological importance of tracking studies is not yet recognized by the majority of researchers, nor are the specific methods and requirements familiar to them.

Secondly, there are some inherent limitations to this kind of research, as argumentative writing does not only reflect the writer's own language use, but also involves multiple factors such as his or her thinking logic and cultural background, etc. If we only use one-way research to analyze Chinese learners' use of connectives in German argumentative essays, without considering the learners' own native language application, it will lack some convincing power. This is an inherent limitation of such studies, and although we are unable to overcome this difficulty in our research design for the time being, it is a guide for teachers in terms of teaching and learning to develop students' logical thinking skills in constructing discourses.

Finally, argumentative essay writing places too much emphasis on the rigor of language and the logic of the chapter thus affecting normal human communication and expression. In fact, linguistic communication is the process of gradually enriching expression through the interaction of simple words and short sentences, without overemphasizing the logic and rigor of language, and the content of linguistic communication is completed by the narration of an event with explanatory additions. Chinese German students start learning German by teaching grammar, and in the process of expression they inevitably pay more attention to whether the structure of the sentence is rigorous and grammatically correct, which affects the normal expression, which is the result of the long-term teaching style.

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