Research on the Cognitive Teaching Development Ability of Lexico-grammar Chunks MOOCs and Practical Cultivation Mechanism of College English Teachers under the Transformation Background of Newly-rebuilt Universities

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ABSTRACT. *The development and cultivation mechanism of College English teachers are very prominent, Under the strategic deployment of the State Council's request for the transformation of undergraduate universities to application-oriented universities and from the requirement of the Ministry of Education's speeding up the revitalization, improving the quality of undergraduate education, eliminating "water courses" and creating "MOOCs". The teaching of College English lexicogrammar has become a major obstacle for College English teachers. The author constructs the teaching model of College English lexicogrammar chunks from three branches of Cognitive Linguistics: Prototype Category Theory, Conceptual Metaphor Theory and Image Schema Theory, and applies the cognitive teaching model to the specific teaching practice of lexicogrammar chunks, so as to promote the development of lexicogrammar chunks teaching ability and practical cultivation mechanism for College English teachers.*

1. Introduction

1.1 Review of the current situation research on the transformation from newly-rebuilt undergraduate universities to application-oriented universities

Since 2013, China Education Daily and People's daily have published articles calling for the transformation and development of new undergraduate universities from the perspective of school orientation, cultivation objectives, curriculum system,

teaching management and teaching evaluation. Zhumadian Consensus in 2014 made a strategic deployment of "guiding part of ordinary undergraduate universities to transform into application-oriented universities" for the implementation of the State Council's meeting spirit, and will explore the "transformation and development of some local undergraduate universities" and "the road to the construction of application technology universities with Chinese characteristics". Professor Xia Jianguo(2016) pointed out that to guide the transformation of local universities to applied technology universities, on the one hand, it has opened up the internal rising channel of vocational education; on the other hand, it has also established an interchange between general education and vocational education at the undergraduate level of higher education.

1.2 Overview of MOOCs

Massive Open Online Courses (MOOCs) are free online courses available for anyone to enroll. MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale. It enables thousands of learners to participate in the same course with high quality content and interactive tools for learning. Millions of people around the world use MOOCs to learn for a variety of reasons, including: career development, changing careers, college preparations, supplemental learning, lifelong learning, corporate eLearning & training, and more. MOOCs have dramatically changed the way the world learns.

1.3 A survey of lexicogrammar chunks teaching

Halliday (1961) put forward lexicogrammar, thinking that vocabulary and grammar are in the central layer of language. J. Beeker (1975) first coined the term chunks. It is a fixed structure and collocation composed of two or more words. Chunks of language theory was proposed by Nattinger and Decarrico in the early 1990s, that is lexical Phrase. It refers to a large number of fixed or semi-fixed formulaic conventions and idioms in a language. Lewis (1993) called it lexical chunks, and put forward the Lexical Approach, which is based on the fixed phrases, collocations and sentence patterns that occurs frequently in communication, thinks that need to develop learners' vocabulary skills, and the acquisition of vocabulary and grammar should keep pace with the cultivation of communicative ability. Zhang Xiao (2006) pointed out that lexical chunks have both grammatical and lexical features, which can be used as a whole unit for learners to keep in memory.

The core of this idea is that there is no clear boundary between vocabulary and grammar, and they differ in quantity but not in qconceptuality (both are the source of meaning). It is a specific structure and have relative stability, and can be stored or used as a whole. The chunks has three meanings of grammar, semantics and context. According to the of lexicogrammar layer and Lexical Chunks Theory, this structure is called lexicogrammar chunks. Lexical chunks can be regarded as the basic unit of language, lexical chunks are the core of language structure and the unity of form and function. Lexical chunks are the necessary process of language

acquisition. The principle of lexical chunks is the main principle of human cognition and conforms to the basic law of cognition.

1.4 Review of the cultivation mechanism of College English teachers

Zhang Yanling (2010) tried to prove the role of "school-based teaching and research" in the professional development of College English teachers and the necessity of establishing a school-based teaching and research system in Universities based on the practice and achievements of 50 teachers in Shanxi University of Finance and economics in the past two years, and pointed out that school-based teaching and research is an effective way for the professional development of College English teachers. Gao Sixia (2012) summarized the research on the professional development of College English teachers, and believed that the basic context and research trend of the professional development of College English teachers are mainly concentrated in three aspects: the research of the professional development of College English teachers, the paradigm research of the professional development of College English teachers and the research on the growth model of College English teachers. Zhang Weihong and Sun Chenggui(2014) point that four measures can be taken to promote the development of College English teachers: improving the qconceptuality of teachers, strengthening the management of career planning, enhancing the construction of courses, and establishing a multiple academic evaluation system.

To sum up, the transformation and development of newly-rebuilt undergraduate universities and to application-oriented universities, universities has become the general trend of higher education system reform in China. The construction of MOOCs is inevitable. The development status and teaching ability of College English teachers makes us be in worry, and the construction of system and mechanism is imminent. From the literature, the research on College English teachers is still in the exploration stage, and the research perspective is limited. Therefore, the research on the current situation and cultivation mechanism of College English teachers in the background of the transformation from the newly-rebuilt undergraduate universities to the application-oriented universities makes up for the vacancy and provides a new research perspective. The research of College English vocabulary and grammar teaching is still deficient. Teachers lack of macro understanding of vocabulary teaching ,they teaching single vocabulary in isolation, and lack of teaching model of vocabulary and grammar. Therefore, the research of the cognitive model of lexicogrammar teaching that based on MOOCs is still in deficiency.

2. Research on the teaching of College English lexicogrammar chunks based on the theory of Cognitive Linguistics

Cognitive Linguistics is a new discipline of human language, which emerged in the late 1980s and early 1990s. It is based on the observation and cognition of our experience of the world. Cognitive Linguistics is one of the most popular linguistic

theories. The research on its application is gradually carried out in the academic field. Cognitive Linguistics takes experience, attention and salience as the most basic representation of showing the theoretical content. Generally, it can be divided into three categories: Basic Category Theory, Conceptual Metaphor Theory and Prototype Category Theory. The goal of this research is to construct a teaching model of College English lexicogrammar chunks based on MOOCs and under the guidance of Cognitive Linguistics, and to provide a new way and perspective for College English lexicogrammar chunks teaching.

2.1 Teaching Model of College English Lexicogrammar Chunks under the Guidance of Prototype Category Theory

Wittgenstein put forward "family resemblance" in 1953. The so-called "category" is like a family, and the members of category are like members of a family, with their similarities. Based on this principle, cognitive psychologist Rosch and his colleagues established Prototype Category Theory. The theory holds that the boundary of category is fuzzy and permeated with each other. The members of category have family resemblance, and the members who are more common with other members have central status, which are prototype of category. Prototype is the most representative and typical of all members. It is an important way of categorization.

2.1.1 Using prototype category word formation to expand students' vocabulary

Cognitive linguists put forward that a word term can represent a complex category, and prototype is the typical one in this category, which is in the center of the category. Therefore, in College English vocabulary teaching, we can take root prototype as the center and the cognitive reference point of categorization to expand around the center vocabulary to the edge, form a radiation map of the transformation of lexical meaning and parts of speech, and use prefixes and suffixes to form a new vocabulary and deduce its new meaning. For example, the suffix -ous is added to some nouns to form adjectives, which are mainly used to express the characteristics or properties of people or things, such as poisonous, advantageous, continuous, famous, various and other adjectives. The suffix -ment is added after the transitive verb to form a noun, indicating the process or result of doing something, such as judgement, improvement, entertainment, assignment, engagement and other nouns.

2.1.2 Using Prototype Category, strengthening the vocabulary teaching of basic level category and improving the effective learning of upper and lower level vocabulary

Linguists divide category into three main levels: basic level category (such as furniture), upper level category (such as chair) and lower level category (such as armchair, dining chair).The category of basic level is an important foundation of people's cognition and the starting point of understanding things. For example,

when explaining the basic level word "palm" of the word "tree", we can introduce other basic level words of tree: oak, pine, pear, willow, peach, evergreen, mulberry, etc. In this way, students can learn and master a group of vocabulary effectively so to expand their vocabulary.

2.2 Teaching Model of College English Lexicogrammar Chunks under the Guidance of Conceptual Metaphor Theory

Early 1980s, Lakoff & Johnson put forward a new theory of conceptual metaphor. The theory holds that when people perceive the objective world, they always interact with the perceived objective world on the basis of their own experience. According to the existing, they associate the known things or phenomena with the unknown, so as to deepen the understanding of the unknown. Conceptual metaphor is a structural mapping from one conceptual domain or cognitive domain to another. Conceptual metaphor, from the perspective of Cognitive Linguistics, is a kind of thinking and cognitive phenomenon of human beings, which constitutes the cognitive basis of language. People often use the cognitive features of conceptual metaphor to map the limited words into the infinite world, and use the limited words to understand the infinite world. Therefore, Conceptual Metaphor Theory provides a theoretical basis for English vocabulary teaching and plays an positive role in guiding vocabulary learning.

2.2.1 Using metaphor to master English Polysemy

According to Cognitive Linguistics, polysemy is produced in the process of extending the original meaning of words from metaphor and metonymy to other meanings. There is a certain connection between the meanings of these polysemy words and the meanings of the original words, which is not arbitrary but metaphorical, and there are certain similarities. For example, "blossom", which originally means bloom or flowers in general, as a verb, generally means trees bloom. Therefore, "blossom bud" and "blossom cup" refer to "flower bud", "flower cup", "by March, the cherry trees are in blossom "It translates as "In March, cherry tree flowers are in full bloom." At the same time, "blossom" can also be used as a metaphor, which can refer to girls as lively and lovely as flowers, such as "she is blossoming into a beautiful girl. "blossom" can also be introduced as "thriving; prosperity; develop; grow up. For example, "you will form bonds of friends that will blossom over many decades".

2.2.2 Paying attention to the cultural connotation of lexical metaphor

Conceptual metaphor is a way of thinking and an important cognitive means, so metaphor is the carrier of linguistic and cultural connotation. In the practice of English vocabulary teaching, teachers can introduce the cultural connotation of vocabulary into the classroom, guide students to understand the cultural connotation of Chinese and Western culture, and understand the similarities and differences

between Chinese and Western metaphorical thinking. For example, "an early bird" has the meaning of "an early bird" in both English and Chinese, and "a night owl" has the meaning of "night owl, a late sleeper" in both languages. "You may be an early bird while your roommate is a night owl. "You may get up early, but your roommate is a night owl!"

2.3 Teaching Model of College English Lexicogrammar Chunks under the Guidance of Image Schema Theory

Linguists believe that image schema is a kind of cognitive structure based on the experience of perception and body interaction with the objective world. Lakoff & Johnson pointed out that image schema is "a regular pattern that appears repeatedly in the process of human interactive experience with the external world, and it mainly refers to the function of image abstract structure" .According to Cognitive Linguistics, the process of metaphor is actually a mapping process, from an image schema with abstract structure in one cognitive domain, that is, the source cognitive domain, to another cognitive domain, that is, the target domain. Image schema is an important cognitive model in Cognitive Linguistics. It can simplify, process and reorganize people's external information, reduce the burden of memory and improve people's cognitive efficiency. Therefore, the application of Image Schema Theory in the teaching of lexicogrammar chunks is helpful to improve the efficiency of students' vocabulary learning.

3. Research on teaching practice and questionnaire

3.1 Research objectives

This research is based on the cognitive model of constructivist teaching in College English lexicogrammar chunks under the MOOCs. It uses the basic theory of Cognitive Linguistics to guide College English vocabulary teaching, applies the cognitive model to specific teaching practice, tests the cognitive teaching development ability of lexicogrammar chunks of College English teachers, and summarizes the cultivation mechanism of College English teachers. The purpose of this research is to improve the teaching methods of English vocabulary and grammar under MOOCs,improve the effect of classroom teaching, promote the construction and application of MOOCs. It focuses on the resolution of the structural problems in College English curriculum and classroom, the integration and optimization of the course resources, the adjustment and reorganization of the classroom resources, the change in the classroom process, making the course and classroom structure conform to the development law of teaching and the cognitive law of students to meet the learning needs of students.

3.2 Research Object

In this research, the freshmen in two natural classes majoring in Chinese Language and literature in the Primary Education School of Changsha Normal University were used to conduct empirical research and a questionnaire survey was conducted among the teachers of Foreign Languages University of Changsha Normal University who teach university English. The empirical research is divided into control class (49 people) and experimental class (51 people).

3.3 Practical Investigation Process

In the teaching practice, the teacher implemented the traditional teaching method in control class, used the teaching method of English lexicogrammar chunks based on the Cognitive Linguistics theory in the experimental class .Two classes were taught by the same teacher with the same class hours using the same textbook—New Horizon University English. Before the experiment, the pre-test was carried out for the freshmen of two classes to analyze and understand the English vocabulary and grammar ability of students. And then after a semester of English learning, the post-test were carried out for the control class and the experimental class respectively. Based on the date, it analyzed whether the lexicogrammar chunks teaching under the guidance of Cognitive Linguistics theory can improve the English vocabulary and grammar ability .The teachers who teach College English in Foreign Languages University of Changsha Normal University conducted a questionnaire survey to explore the problems existing in the teaching process of English vocabulary and grammar, the development ability of cognitive teaching of lexicogrammar chunks and the practical cultivation mechanism.

3.4 Data Collection and Analysis

In this research, the pre-test and post test scores statistical analysis method and questionnaire survey method were used, and SPSS software was used for statistical analysis of the questionnaire and test scores.

In the early stage of the semester, the pre-test was carried out for the freshmen of two natural classes. After one semester of English learning, the post test was carried out for the control class and the experimental class respectively. All the students took the uniformly organized vocabulary test. The test papers of all students are collected and their scores are counted. Through the statistical software SPSS, the results of the comparative analysis between the experimental class and the control class are as follows:

Table 1 A Descriptive Comparison of the Independent Sample Analysis of both Classes in Pre-test

Class Type	N	M	Mo	Md	SD	T	Sig.(2-tailed)
Control Class	49	54.14	45	49	11.85		
Experimental Class	51	52.88	46	50	12.08	-.690	.491

From table 1, it is obvious that in the control class, the average score of the whole class is 54.14. In the experimental class, the average score is 52.88. From the median and mode we can see that there is no difference between the control class and the experimental class, they have the almost same mode, one is 45, another is 46, and the almost same mean, one is 49, another is 50. The SD is 11.85 of the control class and 12.08 of the experimental class. Thus, learners in the two classes possess the same level of mastering cognitive lexicogrammar chunks before this empirical study. Table 1 shows that the mean of the control class is a little higher than the experimental class, the standard deviation of these two classes is very close in pretest. P value =. 491 (t= -.690 p value>0.005) indicates that there is no significant difference in the lexicogrammar proficiency of the students between the experimental class and the control class in pretest.

Table 2 A Descriptive Comparison of the Independent Sample Analysis of both Classes in Post-test

Class Type	N	M	Mo	Md	SD	T	Sig.(2-tailed)
Control Class	49	76.14	70	70	8.85		
Experimental Class	51	80.88	75	75	6.60	2.165	.030

From table 2, it is obvious that in the control class, the average score of the whole class is 76.14. In the experimental class, the average score is 80.88. It is obvious that there is a difference between the mean, mode and SD of both groups. We can see that the mode of these two classes is 70 and 75 respectively, and the median is 70 and 75 respectively. From the mode and median we can see the score of the experimental class is higher than the control class. And the SD of these two groups is 8.85 and 6.60 respectively. The smaller the SD is, the better students do. So it can be seen that the teaching result of experimental class is better than that of control class. From table 2, we can see that the average score of the experimental class is 4.74 points higher than that of the control class in the post test of the two classes. It can be seen that there is a significant difference between the experimental class and the control class in the post-test scores from the P value =. 030 (P value < 0.05) of t-test of independent samples. After a semester's experiment, the students' English lexicogrammar level of the experimental class has been improved obviously.

4. Implication and Conclusion

4.1 Enlightenment of Teacher Cultivation Mechanism

From the perspective of teaching practice, we can draw two inspirations from the cognitive teaching and cultivation mechanism of lexicogrammar chunks of College English teachers 'MOOCs   in the context of the transformation of new universities.

First, the professional development of College English teachers: the basic context and research trend of the professional development of College English teachers are mainly focused on two points: the connotation research of the professional development of College English teachers, the paradigm research of the professional development of College English teachers.

Second, the personal cultivation of College English teachers: that is, the problem of teachers' personal growth, which means not only the growth of ability generated by professional cultivation, but also the growth of ability acquired through personal communication and learning of teachers; the enhancement of self-development awareness and ability; the enhancement of learning, the expansion of horizons, the enhancement of cultural literacy, the enhancement of cross-cultural communication ability; the enhancement of teachers' moral standards and education ability, and so on.

4.2 Research Conclusion

Based on the analysis of the questionnaires from students, we can draw two conclusions: the theory and the practice of the cognitive teaching ability of lexicogrammar chunks of College English teachers' MOOCs under the background of the transformation of the newly-rebuilt universities

4.2.1 Theoretical Significance

This research is based on the of "MOOCs " to construct a cognitive model of College English vocabulary and grammar. It discusses the feasibility, scientificalness and practicality of this learning model from three branches of Cognitive Linguistics: the theory of prototype category, the theory of conceptual metaphor and the theory of image schema. It also explores the three aspects of building a network of vocabulary and grammar and the deep meaning of vocabulary and grammar. The purpose of constructing a cognitive teaching and learning model of College English vocabulary and grammar is to cultivate the cognitive awareness and law of students, enrich the operation of cognitive theory, and practice the scientificity of cognitive theory.

4.2.2 Practical Significance

Under the guidance of Cognitive Linguistics theory, this research applies three principles to the teaching and practice of lexicogrammar chunks. For teachers, it constructs a cognitive model of lexicogrammar chunks teaching, improves the teaching methods of lexicogrammar chunks, improves the efficiency of lexical information processing, and cultivates the ability of grammar acquisition. For students, it stimulates students' interest in learning lexicogrammar chunks in College English , expands the depth and breadth of students' learning in lexicogrammar chunks, and improves the vocabulary and grammar abilities of students .

Acknowledgements

References

[1] Azar, B. Fundamental English Grammar. White Plains, NY: Pearson Education, 2003.

[2] Beycioglu，K.，Ozer，N. & Ugurlu，C. T. (2010). Teachers' views on educational research. Teaching and Teacher Education，26: 1088-1093.

[3] Brindley, G. Classroom-based assessment. In D. Nuan(ed.) Practical English Language Teaching. New York, NY: McGraw-Hill, 2003.

[4] Brown H.D. (Third Edition). Principles of Language Learning and Teaching. Beijing: Foreign Language Teaching and Research Press, 2000.

[5] Butt, D, Fahey, R, Feez, S, Spinks, S. and Yallop, C. Using Functional Grammar: An Explorer's Guide. Sydney: National Centre for English Language Teaching and Research, 2000.

[6] Carter, R., Hughes, R. and McCarthy, M. Exploring Grammar in Context. Cambridge: Cambridge UP, 2000.

[7] Croft William, Cruse, Alan D. Cognitive Linguistics. Cambridge: Cambridge UP, 2004.

[8] Douglas Brown Teaching by Principles. An Interactive Approach to Language Pedagogy, 2003.

[9] David Nunan. Practical English Language Teaching: Grammar. Beijing: Higher Education Press, 2007, 1.

[10] Fragiadakis, Rosenfield, H.K.E. and Graham C. Grammar Step-by-Step 1. New York, NY: McGraw-Hill ESL/ELT, 2004.

[11] Hewings, M. Advanced Grammar in Use: A self-study reference and practice book for advanced learners of English. Cambridge: Cambridge UP, 2000.

[12] Jack C. Richards, Theodore S. Rodgers. Approacher and Methods in Language Teaching. Beijing: Foreign Language Teaching and Research Press, Cambridge UP, 2008, 8.

[13] Langacker Ronald W. Foundations of Cognitive Grammar. Volume I, II. Standford: Standford UP, 1987.

---. Concept, Image, and Symbol: The Cognitive Basis of Grammar. Berlin: Mouton de Gruyter, 1987.

[14] Larsen- Freeman, D. Teaching language: From grammar to grammaring. Boston, MA: Heinle&Heinle, 2003.

Linse, C. T. and Edwards, B. The New Grammar in Action Assessment. Boston, MA: Heinle & Heinle, 2001.

[15] Knapp，M. (2003). Professional development as a policy pathway. Review of Research in Education，27: 109-157.

[16] Murphy, R. Grammar in Use: A self-study reference and practice book for intermediate students. 2nd ed. Cambridge: Cambridge UP, 2000.

[17] Richards，J. C. & Farrell，T.C. (2005). Professional Development for Language Teachers—Strategies for Teacher Learning. New York: Cambridge University Press

[18] Parrott, M. Grammar for English Language Teachers. Cambridge: Cambridge UP, 2000.

[19] Penny, UR. A Course in Language Teaching: Practice and Theory. Beijing: Foreign Language Teaching and Research Press, Cambridge UP, 2000, 8.

[20] Stern, H.H. Issues and Options in Language Teaching. Shanghai: Shanghai Foreign Education, 1999,4.