

A Usage-based Empirical Study on the Acquisition of Denominal Verbs

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Abstract

The acquisition of English denominal verbs poses a significant challenge for Chinese learners of English. This conversion of nouns to verbs, a creative linguistic process that frequently happens in informal conversations, aims to improve cognitive efficiency. Prior research has primarily focused on the definition, categorization, and the metaphorical or metonymic mechanisms underlying denominal verbs. While some attention has been paid to the acquisition of denominal verbs, empirical studies exploring instructional practices based on usage-based approaches remain scarce. To enhance our comprehension of denominal verb acquisition within the context of usage-based frameworks, this paper conducts an empirical investigation into Chinese EFL learners' proficiency in these verbs, using SPSS 28.0 for data analysis. The findings reveal that the usage-based teaching model is more effective in promoting the acquisition of denominal verbs among English learners compared to the traditional PPP teaching model. (2) The acquisition of denominal verbs is a dynamic and interactive process, influenced by both teaching models and the learners' proficiency in English. This paper contributes to enriching the research on denominal verbs from a usage-based perspective, offering new insights and inspirations for studying the acquisition of denominal verbs.

Keywords

Denominal verb, usage-based approach, second language acquisition, empirical study

1. Introduction

The noun-to-verb shift constitutes an innovative process that gives rise to novel meanings and applications, greatly enriching the vocabulary. Denominal verbs are defined as “nouns that have come to be used as verbs” by Clark and Clark (1979). For instance, it is natural to utter phrases like “I have *inked* a \$50 million deal” or “Bob’s parents *baby* him excessively.” Additionally, denominal verbs are frequently employed in other languages to facilitate cognitive economy, such as in the Chinese expression “有人想刀我 [Someone wants to *knife* me]”. Denominal verbs are commonly used in interpersonal communication, yet Chinese EFL learners seldom utilize them in English conversations. Besides, even when denominal verbs appear in English textbooks, few English teachers mention the usage of noun-to-verb conversion. Due to a lack of sufficient input of English denominal verbs, Chinese EFL learners find it challenging to use these converted nouns accurately.

The usage-based approach argues that constructions function as the core components of language, and the acquisition of human language is a cognitive development process in which constructions are derived from authentic communication. Usage-based researchers do not proceed from the assumption of an innate linguistic endowment to explain language acquisition but appeal to learners’ experiences with language use and to their nonlinguistic cognitive learning and

processing abilities (Jach, 2017). The process of language acquisition in construction learning is grounded in paradigms, while the perspective of usage-based teaching posits that second-language acquisition and first-language acquisition share fundamental similarities, both being dynamic implicit learning processes rooted in paradigms. Denominal verbs emerge and evolve through language communication, closely intertwined with authentic language usage. Informed by the perspective of language use, usage-based research can offer a tailored theoretical framework for second language learners to embrace denominal verbs.

This study, drawing from authentic material extracted from the online corpus COCA with experimental techniques, examines whether and how the usage-based approach can aid Chinese English learners in acquiring denominal verbs.

2. Literature Review

Drawing upon the perspectives of generative linguistics, cognitive linguistics, and neurolinguistics, many scholars have conducted in-depth research on the phenomenon of noun-to-verb conversion, significantly enriching both the connotation and denotation of denominal verbs. Jespersen (1942), renowned as the pioneer in exploring noun-to-verb conversion, categorized desubstantial verbs from a semantic standpoint. Clark and Clark (1979) conducted a pragmatic analysis and classification of over 1,300 denominal verbs, emphasizing the correlation between these verbs and their respective parent (original) nouns in their categorization. Quirk (1985) classified denominal verbs into seven types from a grammatical aspect, which has gained widespread acceptance in China. Michaelis and Hsiao (2019) explored linguistic innovation and noun-to-verb shift from both syntactic and semantic perspectives, noting nouns and verbs have comparable arrays of semantic dependents and denote comparable situations. Baeskow (2022) suggested a multi-faceted, simulation-oriented framework that takes into account the cognitive perspective of noun-verb conversion as an exemplification of metonymy, extending the cognitive connotation of denominal verbs.

The usage-based approaches, alternately referred to as the usage-based perspective/model, were originally put forward by Langacker (1987). Grices & Wulff (2005; 2009) investigated the various constructions utilized by German EFL learners by integrating corpus analysis with experimental techniques, ultimately providing empirical evidence for the positive influence of a usage-based approach on second construction acquisition. Nakamura (2012) investigated the applicability of three frequency manipulations in adult second language construction learning within the framework of usage-based models, demonstrating that frequency manipulations exert positive influences on adult second language acquisition. Although many scholars have explored learners' second language acquisition from the perspective of language use (Hoffmann, 2012; Eskildsen, 2015; Zhang, 2017), few empirical studies have focused on denominal verbs as the research object. Therefore, this paper centers on the acquisition of denominal verbs within the framework of the usage-based model, aiming to assist Chinese students with varying levels of English proficiency in mastering denominal verbs.

3. Experimental Design

This study employs a pre-test and post-test experimental design with a teaching duration of six weeks. Two parallel classes with similar English proficiency levels are designated as the experimental group and the control group, respectively. Students in the experimental group received corpus-based instruction twice weekly. All teaching and test materials were sourced from the COCA corpus to ensure authenticity, primarily in the form of example sentences integrated into classroom lessons, increasing students' frequency of exposure to denominal verbs. Students in the control group received conventional PPP instruction. Prior to the teaching practice, a pre-test related to denominal verbs was conducted on the participants. After six weeks of teaching, a post-test was administered to assess the effectiveness of acquiring denominal verbs among learners of different proficiency levels.

All experimental data were processed and analyzed using SPSS 28.0. Given that this experiment involves two independent variables (participants' English proficiency level and teaching mode) and one dependent variable (the degree of acquisition of denominal verbs), a two-way ANOVA was primarily used to interpret the experimental data.

3.1 Research Questions

This study poses two research questions: (1) Can the usage-based teaching model effectively enhance EFL learners' acquisition of denominal verbs? (2) Are there notable differences in the acquisition effects of the usage-based teaching model among learners with varying levels of English proficiency?

3.2 Participants

This study conducted a six-week teaching experiment in a preeminent high school located in Changsha, Hunan Province.

Two classes, exhibiting comparable English proficiency levels, were chosen to serve as the experimental group and the control group, respectively. The experimental group comprised 49 students, while the control group encompassed 52 students. To ascertain a comparable distribution of English proficiency across these two classes, the Oxford Placement Test (OPT) developed by Syndicate (2001) was administered. The OPT features a total score of 60, with students scoring between 48 and 60 classified as high proficiency, those scoring between 40 and 47 as medium proficiency, and those scoring between 30 and 39 as low proficiency.

Table 1. Distribution of English proficiency across two classes

Class	High Proficiency Group	Medium Proficiency Group	Low Proficiency Group
Class A	15	20	14
Class B	14	23	15

3.3 Materials

Drawing upon Clark and Clark's (1979) categorization of denominal verbs, this study extracted the most frequently occurring locatum verbs, location verbs, agent verbs, and goal verbs from the COCA corpus, with the data undergoing thorough cleaning and processing to ensure accurate counts of the frequencies of the verbs derived from nouns.

Table 2. The top 10 denominal verbs ranked by frequency within each category

Locatum verbs	frequency	Location verbs	frequency	Goal verbs	frequency	Agent verbs	frequency
cover	159560	face	156448	sound	138386	host	34352
name	109855	list	43333	figure	111587	bear	27666
sign	107633	photograph	27239	post	96908	guard	16878
head	94356	house	25504	form	92213	fool	15170
handle	78899	spot	23492	order	66657	model	13936
fire	72894	shop	20626	smoke	32716	master	10259
dress	56985	hook	16999	line	27914	nurse	6964
paint	44841	position	13752	copy	18254	engineer	4879
address	44729	film	11484	fool	15170	man	3941
date	37943	seat	11425	police	3721	block	13566

The sentences featured in both the pre-test and post-test of this study exclusively comprise high-frequency denominal verbs, thereby adhering to the usage-based model. Both the pre-test and post-test papers consist of 31 items, including 10 construction-meaning matching questions aimed at assessing participants' understanding of polysemous denominal verbs, 10 single-choice questions designed to evaluate their proficiency in selecting appropriate denominal verbs, 10 Chinese-English translation questions, and a word-choice writing task intended to assess the frequency of denominal verbs utilized by the participants.

Using an independent sample t-test, the pre-test scores of learners from two classes are statistically analyzed, and the results are presented in Table 3. According to Table 3, there was no significant difference between the pre-test data of the experimental group and the control group ($p = 0.734 > 0.05$), which provides the prerequisite for subsequent experiments.

4. Results

4.1 The impact of teaching models on acquiring denominal verbs

Table 4 shows that in the post-test, the average total score of the experimental group is significantly higher than that of the control group. The results of the independent sample t-test indicate that there is a significant difference between the post-test scores of the experimental group and the control group ($p = 0.001 < 0.05$). Therefore, it can be concluded that

adopting different teaching models has an impact on acquiring denominal verbs.

Table 3. Experimental data of pre-test

Group	N		Means		Std. Deviation		Std. Error Mean		
Class A (EG)	49		48.59		11.485		1.641		
Class B (CG)	52		47.83		11.084		1.537		
	Levene's Test for Equality Variances		t-test for Equality Means						
								95% Confidence Interval of the difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.034	.986	.341	99	.734	.765	2.246	-3.691	5.221
Equal variances not assumed			.340	98.104	.734	.765	2.248	-3.697	5.226

Table 4. Experimental data of post-test

Group	N		Means		Std. Deviation		Std. Error Mean		
Class A (EG)	49		61.63		11.686		1.669		
Class B (CG)	52		53.94		10.513		1.458		
	Levene's Test for Equality Variances		t-test for Equality Means						
								95% Confidence Interval of the difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	1.077	.302	-4.481	99	.001	-7.690	2.209	-12.074	-3.306
Equal variances not assumed			-2.470	96.374	.001	-7.690	2.216	-12.090	-3.291

4.2 The impact of teaching models and English proficiency on acquiring denominal verbs

Through a two-way ANOVA, we can explore whether there is an interactive effect between teaching models and English proficiency on acquiring denominal verbs. As shown in Table 5, teaching models exhibit a significant main effect ($F=80.862$, $p=0.000$), and English proficiency also demonstrates a significant main effect ($F=321.530$, $p=0.000$). However, there is no significant interactive effect between teaching models and English proficiency ($F=2.104$, $p=0.128$).

Table 5. The two-way ANOVA for teaching models and English proficiency

Source	Partial SS	df	Mean Square	F	Sig.
Model	12120.842 ^a	5	2424.168	147.307	.000
teaching mode	1327.757	1	1327.757	80.682	.000
English proficiency	10582.585	2	5291.292	321.530	.000
teaching mode * English proficiency	69.246	2	34.623	2.104	.128

Note. R-squared = .886 (Adj R-Squared = .880)

To deeply explore the interactive impact between teaching mode and English proficiency, this study takes teaching mode as the x-axis variable and English proficiency as the y-axis variable, as shown in Figure 1.

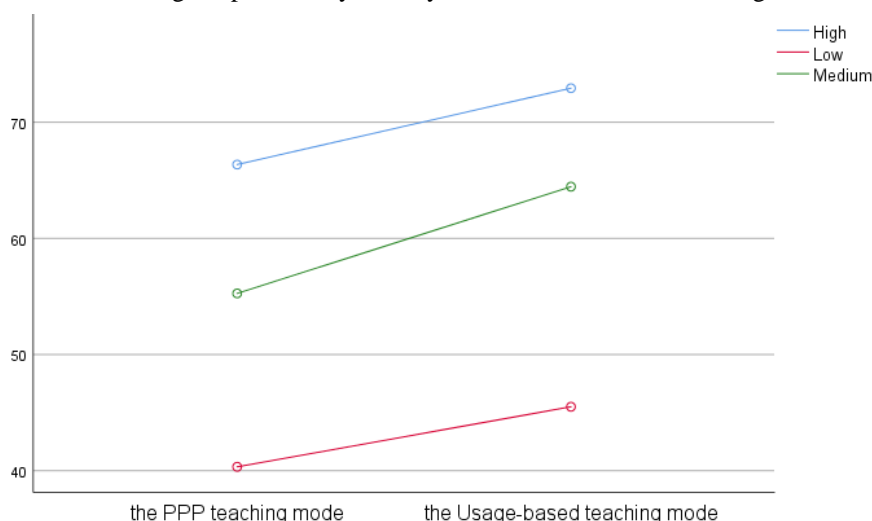


Figure 1. Interaction effect plot of teaching mode and English proficiency.

Figure 1 indicates that, compared to high-proficiency and low-proficiency students, medium-proficiency students make more significant progress in acquiring the denominal verbs after receiving usage-based instruction. Through post-test interview, it can be found that high-proficiency Chinese learners are already more accustomed to the PPP teaching mode, and they are able to acquire new linguistic phenomena well under the traditional teaching mode due to their solid foundation and good learning habits. Low-proficiency English learners still have some difficulty understanding the corpus-based examples presented in class, but many subjects in the experimental group mentioned that usage-based instruction greatly increased their interest in learning English and made them more aware that learning English is not just for exams but for communication.

5. Discussion

The instruction, grounded in the usage-based framework, exerts a more profound influence on Chinese EFL learners' acquisition of denominal verbs, demonstrating the efficacy of incorporating corpus data into second-language instruction. The post-test review reveals that the key factor influencing the acquisition of denominal verbs among Chinese EFL learners is their proximity to authentic experiences that involve the usage of such verbs. As an illustration, the locatum verb "oil" is frequently employed by participants who commute to school by bicycle. These students tend to be more inclined to express "oil my bike" compared to those who do not own a bicycle.

The denominal verbs tend to be overlooked by students without adequate guidance. By focusing on authentic language use and patterns, the usage-based model encourages learners to internalize the functions and meanings of denominal verbs, leading to a deeper understanding and more natural use of denominal verbs. Moreover, the study highlights the influence of English proficiency on the acquisition of denominal verbs, suggesting that teachers should take into account the varying levels of proficiency among their students and tailor their instruction accordingly. For instance, for beginners, a focus on basic denominal verb forms and their common uses may be more appropriate, while advanced learners can be challenged with more complex and nuanced examples.

6. Conclusion

This study empirically explored the effectiveness of a usage-based approach in enhancing Chinese EFL learners' acquisition of denominal verbs. The findings revealed that, compared to the traditional PPP teaching model, the usage-based method was more effective in promoting learners' mastery of denominal verbs. Moreover, the acquisition of denominal verbs is a dynamic and interactive process influenced by both teaching models and second language proficiency. This study not only enriches the research system of denominal verbs from a usage-based perspective but also provides new insights and inspiration for future studies on denominal verb acquisition, offering fresh perspectives and inspiration for future inquiries into this intricate linguistic phenomenon.

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