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Article

Use of English Phrasal Verbs of Chinese Students Across Proficiency Levels: A Corpus-Based Analysis

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Abstract

A number of studies have investigated phrasal verbs from various aspects (Liu, 2006; Yu, 2011; Liao & Fukuya, 2004). However, those studies lack generality, because only a couple of phrasal verbs were chosen as examples, or too much content prompt was offered in task response of L2 learners. The current study applies a corpus-based approach to investigate English phrasal verbs in free conversations from a Chinese learner corpus, SWECCL (Wen & Wang, 2008), which demonstrates Chinese students' actual use of phrasal verbs. This study focuses on analysis of two phenomena: development of phrasal verb uses and avoidance of phrasal verbs across different proficiency levels in Chinese students' oral English conversations. Results showed that students at higher proficiency level used more phrasal verbs in oral communication, and the progress of phrasal verb use was evident from middle proficiency level to advanced proficiency level. The study also found that phrasal verbs occurred less frequently overall in L2 learners' oral conversations compared with frequency of their single-word synonyms.

Keywords

English phrasal verbs, Chinese learner corpus, proficiency level, single-word synonyms

1 Introduction

Chinese students are prone to use high-frequency verbs repetitively, which leads to the lack of variety in language use. Native speakers also frequently use those verbs, but they often combine verbs with adverbs or prepositions to express various meanings. The combination which native speakers frequently use in their conversations is called phrasal verb (e.g., *put on, take off*).

A phrasal verb is made up of a verb and a prepositional or adverbial particle (Waibel, 2007). Their meanings are not constituted through simply combining words' meanings, and they can be replaced by single verbs. Appropriate use of phrasal verbs becomes a distinguishing feature of a proficient L2 learner. However, Chinese L2 learners are faced with challenges of acquirement of phrasal verbs, because verb-particle combinations are flexible rather than regulated by specific rules. Another difficulty is the polysemy of those phrasal verbs, a prevailing phenomenon in verb-particle combinations (Han, 2018). Due to those two major obstacles, Chinese students usually learn phrasal verbs through rote learning,

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which is extremely ineffective (Ding & Yang, 2016). While a considerable amount of literature has been published on semantic and syntactical analysis of phrasal verbs, and there has been little quantitative analysis which investigates Chinese college students' phrasal verb use. Since empirical research on phrasal verbs is still not fully developed, corpora can be useful tools which contribute to demonstrating L2 learners' performance on phrasal verb use.

2 Literature Review

2.1 Semantic and syntactical studies on phrasal verbs

Relevant micro-linguistic studies demonstrated several special features of phrasal verbs (Zhao, 1984; Wang, 1993; Wang, 1997). Complicated multiple meanings and complex syntactical structures were two main concerns of those semantic and syntactic studies. On the one hand, phrasal verbs usually contain multiple meanings, of which literal meaning is at the core of semantic field, and metaphorical meanings are connected with it (Bolinger, 1971; Liu, 2006). On the other hand, phrasal verbs are syntactically complex because they can be transitive or intransitive. In a transitive construction, an object can be placed between a verb and a particle to construct a VOP or after a particle to be a VPO (Fan, 1995). Also, sometimes a prepositional phrase (PP) follows a particle to provide more information, such as *fall out of the window* (Han, 2018). In terms of their collocational association with other words, it is not fixed by regular rules, for example, *map out a plan* is proper but *map out people* is an inappropriate use.

Most researchers are aware of syntactical and semantic difficulties in acquisition of verb-particle constructions, and phrasal verbs are pervasively used in English especially in many informal conversations (McArthur, Wang & Zhu, 1992). In order to tackle issues of acquiring phrasal verbs, researchers investigate phrasal verbs from a pedagogical perspective and emphasize conceptual meanings of them, and some progress was made. White (2012) encouraged denotation and metaphorical meaning of particles in phrasal verbs by asking them to draw pictures of them and proved this method was useful for acquisition. Ding and Yang (2016) introduced a new pedagogy of phrasal verbs' acquisition—summing up figurative meanings of particles and generating verb patterns. For example, "at" means "attempt to", so when it is used with a verb like "shoot", the construction refers to "attempt to shoot somebody".

2.2 Avoidance of phrasal verbs

Semantic studies and error analysis on propositions usually focused on case study through the interpretation of cognitive theory. Thorough syntactical analysis of phrasal complex structure also heavily relied on giving examples (Zhao, 1984; Wang, 1993; Wang, 1997; Han, 2018). Another branch delves L2 learners' preference for single-word verbs over phrasal verbs. Avoidance of verb-particle construction was confirmed by many studies. Dagut and Laufer (1985) conducted translation and multiple-choice tests. They concluded that Hebrew-speaking students used more single-word verbs over phrasal verbs and used more frequently their literal meanings over figurative meanings. Laufer and Eliasson (1993) studied advanced Swedish-speaking learners through similar assessments and found that cross-linguistic difference, specifically, the lack of phrasal verb structures in L1, mainly accounted for the underuse of this structure. Liu (2006) focused on assessing correct particle use of Chinese students through multiple choice questions and filling blanks and generalized three reasons why errors occurred when Chinese learners chose appropriate particles for phrasal verbs: (a) only considering literal meanings of phrasal verbs; (b) negative transfer of L1; (c) ignoring the context when students infer meanings of phrasal verbs. Controversially, Guo (2013) used multiple choice tests to count the frequency of phrasal verbs and single words and found that Chinese college students have preference for phrasal verbs over single-word verbs and underused phrasal verbs only under the condition of unfamiliarity with multiple meanings of them rather than interference of L1. With proficiency as a variable, studies with similar tests concluded that Chinese learners at middle level avoided

using phrasal verbs but used single-word verbs instead and students at middle level and advanced level avoid using phrasal verbs in figurative meanings (Liao & Fukuya, 2004; Zhang, 2007). However, those studies offered options for participants to choose. Therefore, the items used in tasks can be content prompts for participants, and those multiple-choice tasks do not mimic students' language output in real life. Another potential problem of those studies was that researchers determined literal meanings and figurative meanings of the use of phrasal verbs. However, categories of phrasal verbs in figurative meanings and literal meanings are not completely distinguished like those researchers established in their studies, but a continuum with varying degrees of semantic transparency (Bolinger, 1971; Liu, 2006). In order to address those issues, corpora can be a helpful tool. Sung (2020) searched the frequencies of 150 most frequently used phrasal verbs and their single-word synonyms and concluded that frequency of underused phrasal verbs by L2 learners was statistically significantly lower than their single-word counterparts. Since only written data was taken into consideration, oral data may get different results and thus it is worth studying. The 150 phrasal verb list, *S&AW PHaVE List* (Liu & Myers, 2020), can be a useful reference which provides most common phrasal verbs and their meanings in both spoken and written registers.

2.3 L2 Leaners' use of phrasal verbs across proficiency levels

With the help of corpus method, various aspects of phrasal verbs can be analyzed effectively, such as collocational constraints of verb-particle combinations, multiplicity of phrasal verbs' meanings, and frequent use of phrasal verbs among native speakers (Gardner & Davies, 2007). However, L2 learners' use of phrasal verbs is not fully analyzed in corpus linguistics across proficiency levels. Regarding English proficiency, Chen explained why subjects in her research did not show avoidance of phrasal verbs, which was in conflict with Waibel (2007) who generated more frequent use of phrasal verbs by German students than L2 learners of other L1s. Furthermore, Yu (2011) focused on oral English performance of English majors and illuminated that the ability of using phrasal verbs developed with the improvement of English proficiency but it stopped developing from middle proficiency level to advanced proficiency level. However, since only the number of oral records was taken into consideration, and the text length of every record was also important to work as a basis for relative frequency, this research may lack accuracy in comparing performance of groups at different proficiency levels. Proficiency level, which works as an important variable in related corpus studies, can bring diversified findings to studies on phrasal verbs.

Inspired by previous studies, the present study is concerned with actual performance of Chinese L2 learners on phrasal verb use. Corpora provide more scientific data than isolated linguistic examples, researchers' intuitions or random group of phrasal verbs, because they deal with verb-particle combinations by utilizing frequency of occurrences in language calculated by computers and phrasal verb usage in real context (Gardner & Davies, 2007). Furthermore, unlike case studies which were frequently used to analyze Chinese students' use (Ma & Shang, 2011; Yu, 2011), such as prepositions with frequent use, "in" "on" "over", "come", "do" "get" "give" "go" "make" "put" and "take" working as verbs in the frequency analysis, this paper adopted *S&AW PHaVE List*. The list was proposed by Liu and Myers (2020) based on COCA. It offered 150 phrasal verbs of most frequent use and their frequently-used meanings. Phrasal verb frequency difference among groups at different proficiency and frequency difference between phrasal verbs and single-word verbs were investigated in SWECCL to reveal Chinese learners' performance.

3 Method

3.1 Research questions

The current study is intended to address the following two research questions:

1. How does frequency of phrasal verb use among Chinese L2 learners vary across different proficiency levels?
2. How do Chinese students show avoidance of phrasal verbs in L2 oral communication?

3.2 Learner population

Learner population in this study was 1148 Chinese sophomores whose majors were English. Their speeches and free conversations were ranked by two professional scorers. And they were classified into four groups based on their ranks with rank 4 being the most proficient (Wang & Wen, 2007).

In terms of similarities of phrasal verbs in Chinese and English, firstly, they are constructed by two components and one is complementary to the other. And they all work as predicates. Also, two components can be separable.

(1) English: V + particle e.g., *come over*
Chinese: V + particle e.g., *guo* *lai*
come-PRS-DECL over-ADV

(2) English: *take a book out*
Chinese: *na chu* *yi ben* *shu* *lai*
take-PRS-DECL one-CLF book-OBJ out-ADV

Whereas, the difference is that a phrasal verb in English usually contains multiple meanings and some idiomatical meanings cannot be inferred easily through literal meaning of components. However, it is not the case in Chinese. For example, "come out" in English refers to "come out a book" or "come out from somewhere". Phrasal verb use also undergoes negative influence of native language. For example, "eat completely", "drink thoroughly", "use completely" are translated directly from Chinese to English. However, "eat up", "drink up", "use up" are more frequently used among the native speakers (Wang, 1987). Though there are a few combinations of verb + adverb or preposition in Chinese, such as "hui lai (come back)", they differentiate from English phrasal verbs in that the amount is much smaller and most of them do not have any figurative meanings (Zhang, 2007). Because of cross-linguistic differences, Chinese learners find it challenging to appropriately use multiple meanings of English phrasal verbs.

3.3 The corpora

The Spoken and Written English Corpus of Chinese Learners (SWECCL) was employed for the investigation of the Chinese L2 learners' use of phrasal verbs. SWECCL is a two-million-word corpus compiled by Nanjing University, Foreign Language Teaching and Research Press and Beijing Foreign Study University. SECCL is a part of the corpus which only compiles spoken data. The spoken data was collected from Test for English Majors-Band 4 (TEM-4) during 1996-2002. It contains 1148 transcripts of audio samples which are 1,460,042 words.

All subjects were sophomore English majors from colleges around the country. They were asked to do three tasks: listening to and retelling a story, impromptu speech and conversation between two students. And their recordings were scored by two raters. Every task performance was given a rank, rank 1 referred to the worst performance and rank 4 meant the best performance. In this study, only 713 free conversations were chosen because they could reflect actual use of phrasal verbs in communication of daily life. For the convenience of research, this paper calculated words of each rank: 122306 words, 218430words, 27556 words, and 3922 words.

3.4 The extraction of phrasal verbs and their single-word synonyms

In order to address the issue which only focused on certain verbs and particles, this paper adopted *S&AW PHaVE List* (Liu & Myers, 2020) as a criterion to extract data in the learner corpus. The list generated the most common meanings of the most frequently used phrasal verbs in spoken and academic written English derived from COCA. Meanwhile, Wordnet (Princeton University, 2010) provided words related to phrasal verbs. Then words which matched the top two most common meanings of each phrasal verb in spoken register were determined as single-word synonyms. AntConc (Anthony, 2020) was used to do the searches, with verbs as search terms and particles as context words as shown in Figure 1. The searches for single-word synonyms were also conducted in AntConc, as shown in Figure 2. *For parents to keep up to bring up their children is already very hard* could be a concordance example of the phrasal verb, *bring up*. And *but I think you know firstly the pay is good, you can to some extent raise your family* was a concordance line of *raise*, one of the synonyms of *bring up*. Similar concordance examples like *bring up their children* and *raise your family* can also be found in COCA (Davies, 2008) as shown in Figure 3 and Figure 4. Those examples demonstrate that Chinese college students can use phrasal verbs and their single-word synonyms correctly in oral communications in English.

Figure 1

An Example of Searching Phrasal Verbs

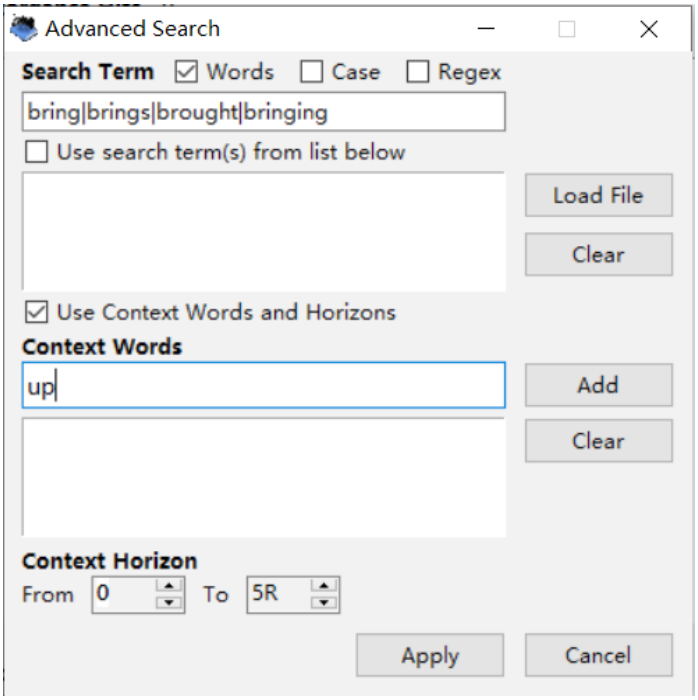


Figure 2

An Example of Searching Single-Word Synonym

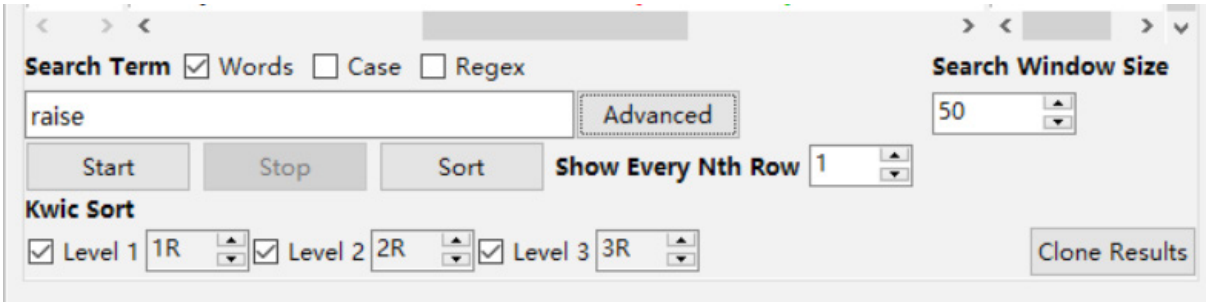
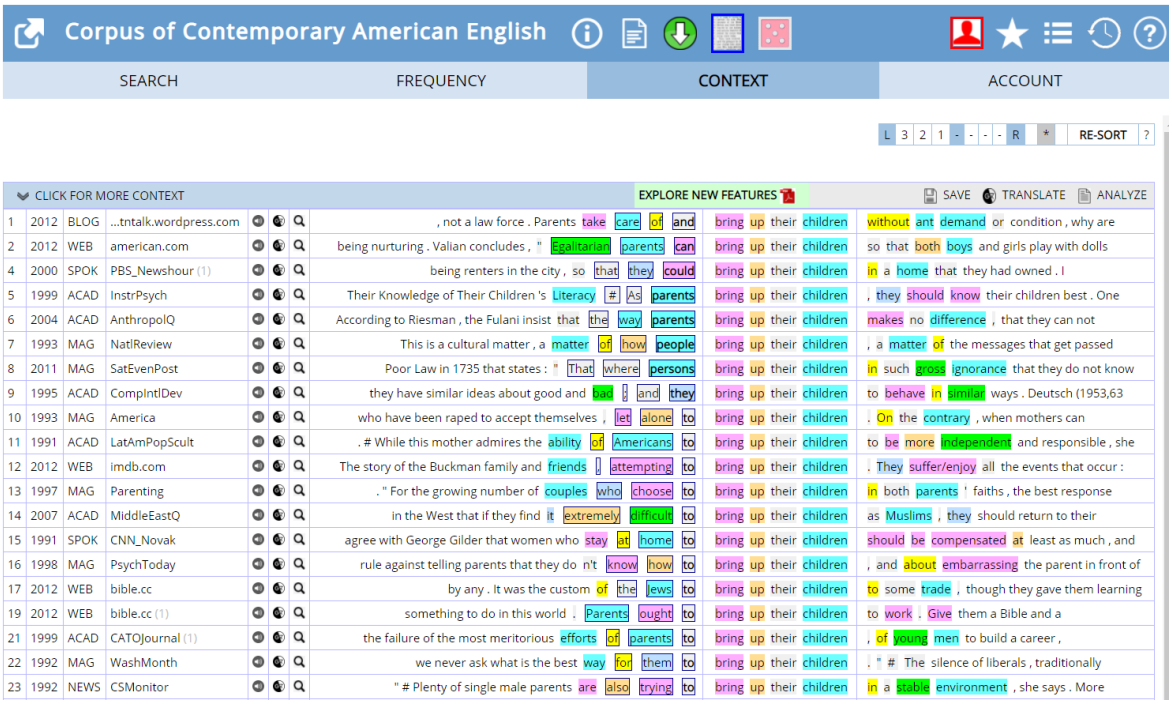


Figure 3

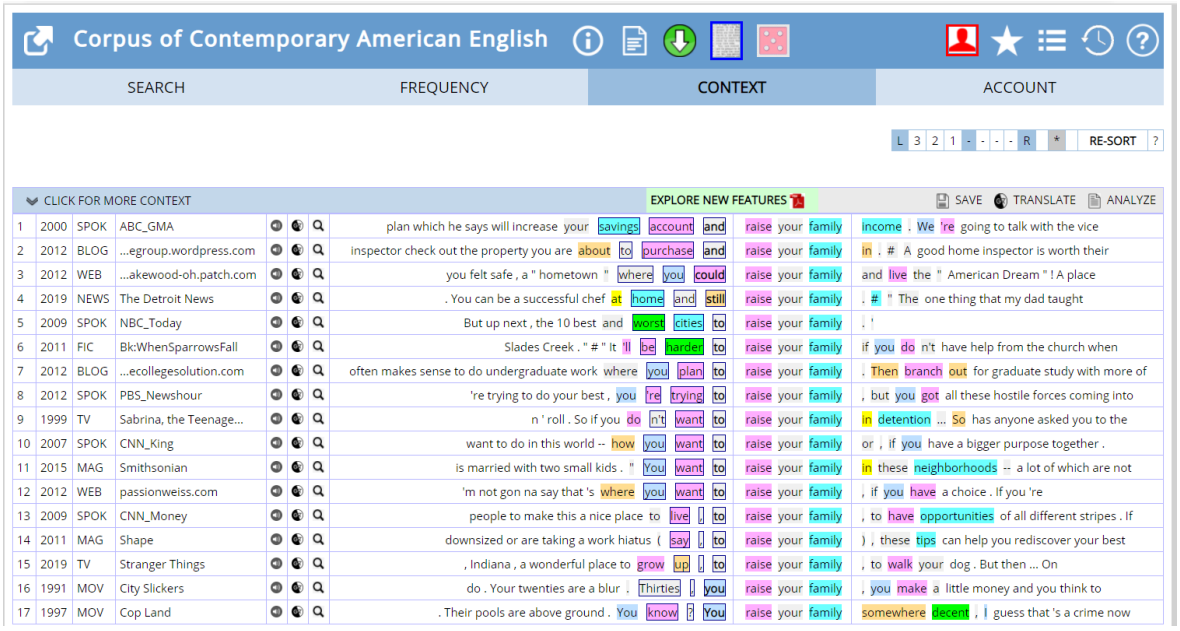
Concordance of the Phrasal Verb Bring up Searched in COCA



1	2012	BLOG	...tntalk.wordpress.com	, not a law force . Parents take care of and	bring up their children	without ant demand or condition , why are
2	2012	WEB	american.com	being nurturing . Valian concludes , " Egalitarian parents can	bring up their children	so that both boys and girls play with dolls
4	2000	SPOK	PBS_Newshour (1)	being renters in the city , so that they could	bring up their children	in a home that they had owned . I
5	1999	ACAD	InstrPsych	Their Knowledge of Their Children 's Literacy # As parents	bring up their children	, they should know their children best . One
6	2004	ACAD	AnthropolQ	According to Riesman , the Fulani insist that the way parents	bring up their children	makes no difference ; that they can not
7	1993	MAG	NatlReview	This is a cultural matter , a matter of how people	bring up their children	, a matter of the messages that get passed
8	2011	MAG	SatEvenPost	Poor Law in 1735 that states : " That where persons	bring up their children	in such gross ignorance that they do not know
9	1995	ACAD	CompIntlDev	they have similar ideas about good and bad ; and they	bring up their children	to behave in similar ways . Deutsch (1953,63
10	1993	MAG	America	who have been raped to accept themselves , let alone to	bring up their children	. On the contrary , when mothers can
11	1991	ACAD	LatAmPopScult	. # While this mother admires the ability of Americans to	bring up their children	to be more independent and responsible , she
12	2012	WEB	imdb.com	The story of the Buckman family and friends , attempting to	bring up their children	. They suffer/enjoy all the events that occur :
13	1997	MAG	Parenting	. " For the growing number of couples who choose to	bring up their children	in both parents ' faiths , the best response
14	2007	ACAD	MiddleEastQ	in the West that if they find it extremely difficult to	bring up their children	as Muslims , they should return to their
15	1991	SPOK	CNN_Novak	agree with George Gilder that women who stay at home to	bring up their children	should be compensated at least as much , and
16	1998	MAG	PsychToday	rule against telling parents that they do n't know how to	bring up their children	, and about embarrassing the parent in front of
17	2012	WEB	bible.cc	by any . It was the custom of the Jews to	bring up their children	to some trade ; though they gave them learning
19	2012	WEB	bible.cc (1)	something to do in this world . Parents ought to	bring up their children	to work . Give them a Bible and a
21	1999	ACAD	CATOJournal (1)	the failure of the most meritorious efforts of parents to	bring up their children	, of young men to build a career ,
22	1992	MAG	WashMonth	we never ask what is the best way for them to	bring up their children	. " # The silence of liberals , traditionally
23	1992	NEWS	CSMonitor	" # Plenty of single male parents are also trying to	bring up their children	in a stable environment , she says . More

Figure 4

Concordance of Raise, the Synonym of Bring Up Searched in COCA



1	2000	SPOK	ABC_GMA	plan which he says will increase your savings account and	raise your family	income . We 're going to talk with the vice
2	2012	BLOG	...egroup.wordpress.com	inspector check out the property you are about to purchase and	raise your family	in . # A good home inspector is worth their
3	2012	WEB	...akewood-oh.patch.com	you felt safe , a " hometown " where you could	raise your family	and live the " American Dream " ! A place
4	2019	NEWS	The Detroit News	. You can be a successful chef at home and still	raise your family	. # " The one thing that my dad taught
5	2009	SPOK	NBC_Today	But up next , the 10 best and worst cities to	raise your family	. '
6	2011	FIC	Bk:WhenSparrowsFall	Slades Creek . " # " It 'll be harder to	raise your family	if you do n't have help from the church when
7	2012	BLOG	...ecollegesolution.com	often makes sense to do undergraduate work where you plan to	raise your family	. Then branch out for graduate study with more of
8	2012	SPOK	PBS_Newshour	're trying to do your best , you 're trying to	raise your family	, but you got all these hostile forces coming into
9	1999	TV	Sabrina, the Teenage...	n ' roll . So if you do n't want to	raise your family	in detention ... So has anyone asked you to the
10	2007	SPOK	CNN_King	want to do in this world -- how you want to	raise your family	or , if you have a bigger purpose together .
11	2015	MAG	Smithsonian	is married with two small kids . " You want to	raise your family	in these neighborhoods -- a lot of which are not
12	2012	WEB	passionweiss.com	'm not gon na say that 's where you want to	raise your family	, if you have a choice . If you 're
13	2009	SPOK	CNN_Money	people to make this a nice place to live , to	raise your family	, to have opportunities of all different stripes . If
14	2011	MAG	Shape	downsized or are taking a work hiatus (say , to	raise your family	) , these tips can help you rediscover your best
15	2019	TV	Stranger Things	, Indiana , a wonderful place to grow up , to	raise your family	, to walk your dog . But then ... On
16	1991	MOV	City Slickers	do . Your twenties are a blur . Thirties , you	raise your family	, you make a little money and you think to
17	1997	MOV	Cop Land	. Their pools are above ground . You know ? You	raise your family	somewhere decent , I guess that 's a crime now

Since in a phrasal verb, a verb and a particle can be either adjacent to each other or separable from each other, collection of data should take both usages into consideration. A maximum of five words between a verb and a particle was used in this paper since Gardner and Davies (2007) illuminated that even seven-word phrasal verbs exist in BNC such as *send your certificate of motor insurance back*. Next, because verbs have various inflectional forms, these forms were counted under the frequency of the original form, for example, *goes, went, going* were all grouped under *go*. Another challenge associated with data extraction was the similarity of form between verb-particle combinations and verb-preposition phrases

structures in the learner corpus and the research on phrasal verb analysis had to differentiate phrasal verbs from verb-preposition phrases structures (Kim & Baldwin, 2006). For example, *take over* works as a phrasal verb in *he takes over the accounts*, but it becomes a verb - preposition phrase in *He takes the lamp over the table*. All those exceptions were manually checked by the researcher and only phrasal verb structures were coded in this paper.

Extracting single-word synonyms of phrasal verbs from AntConc also encountered great challenges that there were no complete synonyms. Those single word alternatives chosen from Wordnet contain multiple meanings. Therefore, in some cases, single-word verbs cannot replace their phrasal verb counterparts. For example, *raise*, as the single word alternative of *bring up*, also means *increase*, such as the concordance *I think helping others can also raise our sense of, er, raise our sense of social life, then we can, er, then we can make ourselves to help others* in SWECCL. In order to maintain correctness of results, every concordance was counted into frequency only when it was manually checked.

4 Results

4.1 Frequency difference among Chinese L2 learners at different proficiency levels

Following extracting procedure, this paper firstly calculated absolute token frequency and relative frequency of 150 phrasal verbs in the task three, free conversation, of SECCL, the spoken corpus, as found in Appendix A.

The frequency analysis of Chinese students' phrasal verb use revealed a difference among rank 1, rank 2, rank3 and rank 4. Table 1 below demonstrated that relative token of rank 1 students was lower than rank 2 students, and rank 2 students had a lower relative token than rank 3 students. And rank 4 students had the highest relative token among students of four ranks.

Table 1

Token Frequencies of Phrasal Verb in the Spoken Corpus of SWECCL

Proficiency level	Size	Absolute token	Relative token
rank 1	122,306	181	147.99
rank 2	218,430	334	152.91
rank 3	27,556	47	170.56
rank 4	3,922	8	203.98

Note. Relative token frequency was calculated through the absolute token frequency divided by token size of each rank in the spoken corpus and then rounding it to the nearest tenth.

Because word sizes of each rank are different, relative token frequencies of every phrasal verb used by students of four ranks rather than absolute token frequencies were used to compare difference. Non-parametric Kruskal-Wallis H test was conducted to compare difference of phrasal verb use frequency among four rank groups. And the Kruskal-Wallis H test found that there was a statistically significant difference on relative token frequencies among the different rank groups, $\chi 2(3) = 51.751$, $p = .000$, $\eta^2=0.082$, with a mean rank frequency of 317.74 for rank 1 group, 349.77 for rank 2 group, 282.2 for rank 3 group and 252.29 for rank 4 group. The findings were in conflict with previous findings that phrasal verb use of students at rank 2, 3 and 4 was similar. Instead, statistically significant differences were found between rank 4 group and rank 3 group, rank 3 group and rank 2 group. It proved that capability of using phrasal verb in oral English conversation of Chinese college students was also improving from middle-level to advanced level.

Table 2

The Kruskal-Wallis H test: Ranks for Phrasal Verb Use' Frequency of Different Proficiency Groups

Ranks			
	group	N	Mean Rank
alt	1	150	317.74
	2	150	349.77
	3	150	282.2
	4	150	252.29
	Total	600	

Table 3

Pairwise Comparisons of Group for Phrasal Verb Use' Frequency at Rank 1, 2, 3, 4

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.a
4.00-3.00	29.913	14.424	2.074	0.038	0.229
4.00-1.00	65.45	14.424	4.538	0	0
4.00-2.00	97.477	14.424	6.758	0	0
3.00-1.00	35.537	14.424	2.464	0.014	0.083
3.00-2.00	67.563	14.424	4.684	0	0
1.00-2.00	-32.027	14.424	-2.22	0.026	0.158
Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.					
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.					
a Significance values have been adjusted by the Bonferroni correction for multiple tests.					

4.2 Avoidance of phrasal verbs in L2 oral communication across proficiency levels

In order to demonstrate phrasal verb avoidance in oral English, this study chose 10 phrasal verbs which were frequently used in free conversations compared with other 140 phrasal verbs. Meanwhile, if a complete synonym counterpart of a phrasal verb can be found in Wordnet was also taken into consideration when this paper chose phrasal verbs as typical examples. In the end, as Table 4 shows, 10 phrasal verbs and 20 single-word synonyms were picked out for analysis. And as Table 5 shows, phrasal verb use is less frequent than their single-word synonyms overall. Frequency of phrasal verb use at four separate rank groups are demonstrated in Appendix B.

Table 4

Ten Relatively Frequent-Used Phrasal Verbs in SWECCL and Their Single-Word Synonyms

Phrasal verbs	single-word synonyms	
bring up	mention	raise
get in	enter	arrive
go on	happen	continue
build up	develop	enlarge
get off	escape	leave
Set up	establish	arrange
take up	start	discuss
get down	lower	begin
get on	board	progress
pick up	collect	learn

Table 5

Frequencies of Phrasal Verbs and Single-Word Synonyms

Phrasal verbs	Absolute Frequency of phrasal verbs	Absolute Frequency of single-word synonyms
bring up	26	59
get in	19	92
go on	27	200
build up	7	119
get off	5	42
set up	7	19
take up	7	114
get down	6	33
get on	16	2
pick up	6	834

Then the analysis of phrasal verb use of Chinese college students at different proficiency levels was conducted. Because data was not normally distributed (skewness and kurtosis statistics were greater than ±2 when they divided by their respective errors), non-parametric independent samples test on relative frequency was adopted to assess frequency difference between phrasal verbs and single-word synonyms at each rank in the spoken corpus of SWECCL. The Wilcoxon Signed-Ranks test for rank 1 indicated that single-word synonyms (mean rank = 40.881) was rated more favorably than phrasal verbs (mean rank = 3.025), $Z = 2.601$, $p = .009 < .05$, $r = 0.58$. The Wilcoxon Signed-Ranks test for rank 2 indicated that single-word synonyms (mean rank = 41.341) was rated more highly than phrasal verbs (mean rank = 3.388), $Z = 2.701$, $p = .007 < 0.05$, $r = 0.60$. The Wilcoxon Signed-Ranks test for rank 3 showed that single-word synonyms (mean rank = 36.653) was rated more highly than phrasal verbs (mean rank = 1.451), $Z = 2.803$, $p = .005 < .05$, $r = 0.63$. Statistically significant differences were found for rank 1 group, rank 2 group and rank 3 group.

The findings above showed phrasal verb avoidance in Chinese students' oral English conversations at primary level and middle-level. However, at advanced level, no statistically significant difference was shown between the uses of phrasal verbs and single-word synonyms, the Wilcoxon Signed-Ranks test for rank 4 showed that single-word synonyms (mean rank = 28.047) was rated more highly than phrasal verbs (mean rank = 2.55), $Z = 1.604$, $p = .109 > .05$, $r = 0.36$. Therefore, students at advanced level do not avoid using phrasal verbs.

Table 6

Descriptive Statistics of phrasal verb use and single-word synonym use for rank 1, 2, 3, 4 groups

Descriptive Statistics for rank 1										
	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Phrasal verbs	10	0.82	7.36	3.03	0.67904	2.15	1.05	0.69	0.41	1.33
Single-word	10	0	247.74	40.88	23.26	73.56	3.02	0.69	9.36	1.33
Valid N (listwise)	10									

Descriptive Statistics for rank 2										
	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Phrasal verbs	10	0.92	8.24	3.39	0.97	3.07	0.98	0.69	-1.17	1.33
Single-word	10	0.46	219.29	41.34	20.63	65.23	2.72	0.69	7.84	1.33
Valid N (listwise)	10									

Descriptive Statistics for rank 3										
	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Phrasal verbs	10	0	7.25	1.45	0.80	2.54	1.66	0.69	2.03	1.33
Single-word	10	3.63	177.82	36.65	16.48	52.13	2.66	0.69	7.50	1.33
Valid N (listwise)	10									

Descriptive Statistics for rank 4										
	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Phrasal verbs	10	0	25.50	2.55	2.55	8.06	3.16	0.69	10.00	1.33
Single-word	10	0	178.48	28.05	18.41	58.20	2.37	0.69	5.59	1.33
Valid N (listwise)	10									

5 Discussion

The first question concerns phrasal verb use of Chinese L2 learners at different proficiency level in oral English. The corpus analysis identified frequency difference among four groups of students at different proficiency levels. The most proficient L2 learners used phrasal verbs most frequently, as the relative token frequency of phrasal verbs in rank 4 was found to be the highest among four ranks. And another finding, statistically significant differences between rank 2 and rank 3, rank 3 and rank 4, is inconsistent with previous research that Chinese students at middle level and advanced level did not show a striking difference in phrasal verb use (Yu, 2011). Consequently, this paper believes that phrasal verb use still develops when L2 learners at middle level are approaching advanced level.

The second research question explores avoidance of phrasal verbs in L2 oral communication through a corpus approach. For phrasal verbs, their single-word synonyms convey similar meanings and can replace them in sentences. However, the frequency difference between them was statistically significant at lower proficiency level. And single words appeared more frequently in the learner corpus. The avoidance phenomenon did not show among advanced-level students. Why did Chinese students use less phrasal verbs than single-word synonyms in L2 daily communication? One reasonable explanation may be that they are not equipped with too much knowledge about phrasal verbs in oral English study

(Dagut & Laufer, 1985), although phrasal verbs are more colloquial and informal in style and they should be used more in oral English (Chen, 2013). Phrasal verbs are notoriously difficult for L2 learners, and because of its flexible and complex structure, teachers tend to refer it as chunks and require students to memorize it mechanically. Additionally, multiple meanings, especially figurative meanings are acquired by rote learning, actual contexts of using phrasal verbs are not provided in pedagogy. However, using phrasal verbs appropriately in spoken and written registers can make L2 learners more native-like, knowing the characteristics of them, such as structural variance and collocation with particles, is prerequisite to perform better in English oral communication (Gilquin, 2015).

6 Conclusion

In conclusion, with the development of English proficiency, Chinese students gradually use phrasal verbs more frequently. And the phrasal verb use is still developing from middle level to advanced level. As for the reasons of avoiding using phrasal verbs in oral English communication, replacement of single-word synonyms should be taken into consideration because students at lower proficiency level use fewer phrasal verbs than their single-word synonyms. However, the statistically significant frequency difference does not show among advanced L2 learners.

These findings bring light to future research on phrasal verbs, such as demonstrating use of phrasal verbs with corpus and quantitative method of phrasal verb analysis. The findings about relationship between development of English proficiency level and phrasal verbs use encourages L2 learners to acquire phrasal verbs in order to improve their English proficiency. Teachers are also required to adopt effective teaching pedagogy because of difficulties students are encountering during phrasal verb learning.

There are some limitations in this paper. Firstly, Wordnet provided lists of words related to phrasal verbs, only two of them were chosen by the author. Also, the corpus used in this paper, Spoken English Corpus of Chinese Learners (SECCL), collected spoken data only from Chinese English majors, it may not represent Chinese L2 learners in general. Data collection is not flawless because phrasal verbs and their single-word counterparts cannot perfectly replace each other in terms of meaning, but every concordance of single-word synonyms had been manually checked before it was taken into account. When the meaning of a single-word synonym was different from the meaning of its phrasal verb, the concordance would be eliminated.

Appendix A

Token frequency of 150 phrasal verbs in the spoken corpus of SWECCL

Phrasal verbs	Rank 1	Rank 2	Rank 3	Rank 4
Back up	0(0)	0(0)	0(0)	0(0)
Blow up	0(0)	0(0)	0(0)	0(0)
Break down	0(0)	0(0)	0(0)	0(0)
Break off	0(0)	0(0)	0(0)	0(0)
Break out	0(0)	0(0)	0(0)	0(0)
Break up	0(0)	0(0)	0(0)	0(0)
Bring about	0(0)	0(0)	0(0)	0(0)
Bring back	0(0)	0(0)	1(3.62)	0(0)
Bring down	0(0)	0(0)	0(0)	0(0)

Bring in	0(0)	0(0)	0(0)	0(0)
Bring out	0(0)	0(0)	0(0)	0(0)
Bring up	7(5.72)	17(7.78)	2(7.25)	0(0)
Build up	5(4.09)	2(0.92)	0(0)	0(0)
Call out	0(0)	0(0)	0(0)	0(0)
Carry on	0(0)	2(0.92)	0(0)	0(0)
Carry out	0(0)	4(1.83)	0(0)	0(0)
Catch up	1(0.82)	2(0.92)	0(0)	0(0)
Check out	0(0)	0(0)	0(0)	0(0)
Clean up	0(0)	0(0)	0(0)	0(0)
Close down	0(0)	0(0)	0(0)	0(0)
Come about	0(0)	0(0)	0(0)	0(0)
Come along	0(0)	0(0)	0(0)	0(0)
Come around	0(0)	0(0)	0(0)	0(0)
Come back	2(1.63)	16(7.33)	4(14.52)	0(0)
Come down	0(0)	0(0)	0(0)	0(0)
Come in	1(0.82)	0(0)	0(0)	0(0)
Come off	0(0)	1(0.46)	0(0)	0(0)
Come on	3(2.45)	15(6.87)	0(0)	1(25.5)
Come out	0(0)	1(0.46)	0(0)	1(25.5)
Come over	0(0)	0(0)	0(0)	0(0)
Come through	0(0)	0(0)	0(0)	0(0)
Come up	0(0)	2(0.92)	0(0)	0(0)
Cut off	0(0)	0(0)	1(3.63)	0(0)
End up	0(0)	0(0)	0(0)	0(0)
Figure out	0(0)	2(0.92)	0(0)	0(0)
Fill in	0(0)	1(0.46)	0(0)	0(0)
Fill out	0(0)	0(0)	0(0)	0(0)
Find out	2(1.63)	4(1.83)	0(0)	0(0)
Follow up	0(0)	0(0)	0(0)	0(0)
Get back	0(0)	5(2.29)	0(0)	0(0)
Get down	1(0.82)	4(1.83)	0(0)	1(25.5)
Get in	3(2.45)	16(7.33)	0(0)	0(0)
Get off	1(0.82)	3(1.37)	1(3.63)	0(0)
Get on	4(3.27)	3(1.37)	0(0)	0(0)
Get out	2(1.64)	5(2.29)	0(0)	0(0)
Get through	1(0.82)	0(0)	0(0)	0(0)
Get up	0(0)	2(0.92)	1(3.63)	0(0)
Give back	2(1.64)	5(2.29)	0(0)	0(0)
Give in	0(0)	0(0)	0(0)	0(0)
Give out	1(0.82)	0(0)	0(0)	0(0)
Give up	4(3.27)	8(3.66)	2(7.26)	0(0)
Go ahead	1(0.82)	1(0.46)	0(0)	0(0)
Go along	1(0.82)	2(0.92)	1(3.63)	0(0)
Go around	0(0)	2(0.92)	0(0)	0(0)

Go back	0(0)	4(1.83)	0(0)	0(0)
Go down	0(0)	0(0)	0(0)	0(0)
Go in	0(0)	1(0.46)	0(0)	0(0)
Go off	1(0.82)	1(0.46)	1(3.63)	0(0)
Go on	9(7.36)	18(8.24)	0(0)	0(0)
Go out	32(26.16)	33(15.12)	2(7.26)	0(0)
Go over	1(0.82)	0(0)	0(0)	0(0)
Go through	0(0)	2(0.92)	0(0)	0(0)
Go up	0(0)	2(0.92)	0(0)	0(0)
Grow up	25(20.44)	16(7.33)	1(3.63)	0(0)
Hand over	0(0)	0(0)	0(0)	0(0)
Hang on	0(0)	0(0)	0(0)	0(0)
Hang out	0(0)	0(0)	0(0)	0(0)
Hang up	0(0)	0(0)	0(0)	0(0)
Hold back	0(0)	0(0)	0(0)	0(0)
Hold on	0(0)	0(0)	0(0)	0(0)
Hold out	0(0)	0(0)	0(0)	0(0)
Hold up	0(0)	0(0)	0(0)	0(0)
Keep on	0(0)	0(0)	1(3.63)	0(0)
Keep up	1(0.82)	1(0.46)	0(0)	0(0)
Lay down	2(1.64)	0(0)	0(0)	0(0)
Lay out	0(0)	0(0)	0(0)	0(0)
Line up	0(0)	0(0)	0(0)	0(0)
Look around	2(1.63)	0(0)	0(0)	0(0)
Look back	0(0)	0(0)	0(0)	0(0)
Look down	11(8.99)	11(5.04)	2(7.26)	0(0)
Look out	1(0.82)	3(1.37)	0(0)	0(0)
Look up	0(0)	0(0)	0(0)	0(0)
Make out	0(0)	1(0.46)	0(0)	0(0)
Make up	2(1.63)	5(2.29)	2(7.26)	0(0)
Move back	0(0)	0(0)	0(0)	0(0)
Move in	0(0)	0(0)	0(0)	0(0)
Move on	0(0)	1(0.46)	0(0)	0(0)
Move out	0(0)	2(0.92)	0(0)	0(0)
Move up	0(0)	0(0)	0(0)	0(0)
Open up	0(0)	0(0)	0(0)	0(0)
Pass on	0(0)	0(0)	0(0)	0(0)
Pay off	0(0)	1(0.46)	0(0)	2(50.6)
Pick out	0(0)	1(0.46)	0(0)	0(0)
Pick up	2(1.63)	2(0.92)	1(3.63)	1(25.5)
Play out	0(0)	0(0)	0(0)	0(0)
Point out	0(0)	3(1.37)	0(0)	0(0)
Pull back	0(0)	0(0)	0(0)	0(0)
Pull out	0(0)	1(0.46)	0(0)	0(0)
Pull up	0(0)	0(0)	0(0)	0(0)

Put back	0(0)	0(0)	0(0)	0(0)
Put down	0(0)	1(0.46)	0(0)	0(0)
Put in	3(2.45)	9(4.12)	3(10.89)	0(0)
Put off	0(0)	1(0.46)	0(0)	0(0)
Put on	27(22.08)	52(23.81)	8(29.03)	0(0)
Put out	0(0)	0(0)	0(0)	0(0)
Put up	4(3.27)	0(0)	0(0)	0(0)
Reach out	0(0)	0(0)	0(0)	0(0)
Rule out	0(0)	0(0)	0(0)	0(0)
Run out	0(0)	0(0)	0(0)	0(0)
Send out	0(0)	1(0.46)	0(0)	0(0)
Set about	0(0)	0(0)	0(0)	0(0)
Set down	0(0)	0(0)	0(0)	0(0)
Set off	0(0)	0(0)	0(0)	0(0)
Set out	0(0)	0(0)	0(0)	0(0)
Set up	3(2.45)	4(1.83)	0(0)	0(0)
Settle down	0(0)	0(0)	0(0)	0(0)
Show up	0(0)	1(0.46)	0(0)	0(0)
Shut down	0(0)	0(0)	0(0)	0(0)
Shut up	0(0)	1(0.46)	0(0)	0(0)
Sit back	0(0)	0(0)	0(0)	0(0)
Sit down	1(0.82)	0(0)	0(0)	0(0)
Sit up	0(0)	0(0)	0(0)	0(0)
Slow down	0(0)	0(0)	0(0)	0(0)
Sort out	0(0)	0(0)	0(0)	0(0)
Stand out	0(0)	0(0)	0(0)	0(0)
Stand up	1(0.82)	2(0.92)	0(0)	0(0)
Start out	0(0)	0(0)	0(0)	0(0)
Step back	0(0)	0(0)	0(0)	0(0)
Sum up	1(0.82)	0(0)	0(0)	0(0)
Take back	0(0)	2(0.92)	0(0)	0(0)
Take down	0(0)	0(0)	0(0)	0(0)
Take in	2(1.64)	3(1.37)	1(3.63)	0(0)
Take off	2(1.64)	6(2.75)	2(7.26)	1(25.5)
Take on	0(0)	0(0)	0(0)	0(0)
Take out	0(0)	0(0)	1(3.63)	0(0)
Take over	1(0.82)	0(0)	0(0)	0(0)
Take up	2(1.64)	5(2.29)	0(0)	0(0)
Throw out	0(0)	0(0)	0(0)	0(0)
Turn around	0(0)	0(0)	0(0)	0(0)
Turn back	0(0)	0(0)	0(0)	1(25.5)
Turn down	0(0)	0(0)	0(0)	0(0)
Turn off	0(0)	0(0)	0(0)	0(0)
Turn out	0(0)	0(0)	0(0)	0(0)
Turn over	0(0)	0(0)	0(0)	0(0)

Turn up	0(0)	1(0.46)	0(0)	0(0)
Wake up	0(0)	0(0)	0(0)	0(0)
Walk out	0(0)	0(0)	0(0)	0(0)
Wind up	0(0)	0(0)	0(0)	0(0)
Work out	1(0.82)	2(0.92)	1(3.63)	0(0)
Write down	0(0)	0(0)	0(0)	0(0)

Note. Relative token frequency was calculated through the absolute token frequency divided by word size of each rank, multiple by one hundred thousand and then rounding it to the nearest hundredth. Both absolute and relative token frequencies are provided in this table with the latter presented in parentheses.

Appendix B

Frequencies of phrasal verbs and single-word synonyms

	Rank1		Rank2		Rank3		Rank4	
	phrasal verbs	synonyms	phrasal verbs	synonyms	phrasal verbs	synonyms	phrasal verbs	synonyms
bring up	7(5.72)	15(12.26)	17(7.78)	40(18.31)	2(7.25)	4(14.52)	0(0)	0(0)
get in	3(2.45)	25(20.44)	16(7.33)	60(27.47)	0(0)	7(25.40)	0(0)	0(0)
go on	9(7.36)	41(33.52)	18(8.24)	136(62.26)	0(0)	16(58.06)	0(0)	7(178.48)
build up	5(4.09)	41(33.52)	2(0.92)	74(33.88)	0(0)	4(14.52)	0(0)	0
get off	1(0.82)	14(11.45)	3(1.37)	24(10.99)	1(3.63)	5(18.14)	0(0)	0
set up	3(2.45)	6(4.91)	4(1.83)	10(4.58)	0(0)	3(10.89)	0(0)	0
take up	2(1.64)	34(27.80)	5(2.29)	70(32.05)	0(0)	10(36.29)	0(0)	0
get down	1(0. 82)	21(17.17)	4(1.83)	9(4.12)	0(0)	2(7.26)	0(0)	1(25.50)
get on	4(3.27)	0(0)	3(1.37)	1(0.46)	0(0)	1(3.63)	0(0)	0
pick up	2(1.63)	303(247.74)	2(0.92)	479(219.29)	1(3.63)	49(177.82)	1(25.5)	3(76.49)

Note. Relative token frequency was calculated through the absolute token frequency divided by word size of each rank, multiple by one hundred thousand and then rounding it to the nearest hundredth. Both absolute and relative token frequencies are provided in this table with the latter presented in parentheses.

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