The Effect of L2 Proficiency on the Processing of Multiword Expressions

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Abstract: The processing of multiword expressions (MWEs) has gained increasing attention nowadays, and many factors have been proven to influence it. However, within all these factors, whether L2 proficiency affects MWE processing has still not been answered satisfactorily. Some studies have shown that higher L2 proficiency will lead to a processing advantage while others have not. Thus, this paper intends to answer this question by synthesizing and analyzing the related studies about the effect of L2 proficiency on the processing of MWEs through research methods, characteristics of participants, research procedures, and research results and conclusion. This paper provides some possible reasons for the mixed findings of those studies from the aspects of the division of the proficiency levels, the differences of research methods, and the amounts of participants. Based on the limitations of studies that found L2 proficiency did not influence the processing of MWEs, this paper concludes that L2 proficiency plays a role in MWEs processing.

Keywords: L2 proficiency, multiword expressions, L2 processing

1. Introduction

Multiword expressions (MWEs) are often defined as sequences of words that frequently occur in a language and have some conventionality among speakers of a language [1,2]. They can be divided into several categories, including collocations (e.g., black tea, keep distance), idioms (e.g., break the ice, bite the bullet), binomials (e.g., bread and butter, bride and groom), and lexical bundles (e.g., in my opinion, I have no idea).

The research about the processing of MWEs gained increasing interest nowadays since the process of storing and abstracting multiword sequences is regarded as linguistic productivity within usage-based approaches [3,4]. Additionally, the importance of MWEs has been well-established because the sequence learning can be considered as much of the language acquisition [5]. Moreover, MWEs have been proven to be common in language use and vital for improving second language (L2) proficiency [6,7].

Many factors have been proven to influence the processing of MWEs. For instance, Wolter and Gyllstad employed an acceptability judgment task to investigate the effects of frequency on the processing of L2 congruent and incongruent collocations by L1 speakers and advanced L2 learners [8]. The researchers found that the sensitivity to the collocational frequency and congruency effects all showed in the processing of collocations by advanced L2 learners.

Using the same task as Wolter and Gyllstad, Chen investigated the effects of L1 influence on English as a second language (ESL) learners and English as a foreign language (EFL) learners' processing of L2 collocations[8,9]. The results showed that while there was a congruency effect in both response time and accuracy rate of EFL learners' L2 processing, ESL learners only showed a congruency effect in accuracy. Additionally, Yi et al. studied the effects of contingency among L1 and advanced L2 learners of Chinese[10]. The researchers used the eye-tracking method and found that contingency influenced the processing of L2 adverbial sequences.

However, while these factors have been proven to influence MWE processing in different ways, whether L2 proficiency has an effect on MWE processing has not been answered comprehensively, therefore, this paper intends to synthesize and analyze the related research in this topic and provide an answer to this question.

This paper begins with a discussion of the background and subjective of it, and then the definition, main categories, importance of MWEs and influence factors of MWEs processing are introduced. Next, some supportive and opposed studies about the effect of L2 proficiency on the processing of MWEs are reviewed and followed by a discussion of the mixed findings including some reasonable explanations of the differences, and the research gap of the previous studies is discussed. Finally, this paper summarizes the main arguments, draws the conclusion that L2 proficiency plays a role in the MWE processing, and provides some suggestions for future studies.

2.   L2 Proficiency and The Processing of Multiword Expressions

L2 proficiency refers to L2 learners' obtained language ability of L2 and which can be measured by some standardized English tests [11]. Although there are several studies that investigate the effect of L2 proficiency in the processing of MWEs, the findings were still mixed.

Yamashita and Jiang investigated the role of congruency in the acquisition of MWEs among native speakers of English, and L2 learners of different proficiency levels including higher proficiency Japanese English as a second language (ESL) users and lower proficiency Japanese English as a foreign language (EFL) learner [6]. The researchers used a phrase-acceptability judgment task to study the processing of congruent and incongruent collocations through participants' accuracy rate and response time. The results showed that although ESL users with higher proficiency made less errors and responded faster than EFL learners with lower proficiency learners on both congruent and incongruent collocations, they both made more errors on incongruent collocations than congruent collocations, but the congruency effect of reaction time only revealed by EFL learners. The control group of native speakers processed two types of collocations equally in accuracy rate and response time.

Using the same task—a phrase-acceptability judgment task, Wolter and Yamashita studied the effects of word frequency, collocational frequency, L1 congruency, and L2 proficiency on L2 MWE processing. English native speakers, intermediate and advanced Japanese L2 learners of English were recruited and their response times to the processing of congruent and incongruent adjective-noun collocations were analyzed [12]. The researchers found that L2 learners with different proficiency both responded faster to congruent than to incongruent collocations, while there was no speed difference in the processing of two types of collocations by natives. Additionally, native speakers and advanced L2 learners were more sensitive to collocational frequency than intermediate L2 learners.

Some researchers also studied the processing of other types of MWEs except for collocations. Siyanova-Chanturia et al. conducted an eye-tracking study to investigate the effect of phrasal frequency on the processing of MWE among native and non-native speakers with different proficiency levels[13]. The participants were asked to read sentences containing binomial phrases and their reversed versions with different phrasal frequency and their reading time was analyzed. The results indicated that while all participants showed sensitivity to phrasal frequency in the processing

of binomials, only native speakers and higher proficient L2 learners read binomials faster than the reversed forms, and L2 learners with lower proficiency levels showed no sensitivity to the phrasal type.

Using a grammaticality judgment task and an eye-tracking experiment together, Jiang and Siyanova-Chanturia investigated the role of frequency and L2 proficiency in the processing of MWEs among L1 speakers and different proficient L2 learners of Chinese[14]. The participants were required to decide whether the collocations presented were grammatical and read the sentences containing collocations. The reaction time and eye movements were recorded respectively and analyzed. The researchers found that both L1 speakers and L2 learners with different proficiency levels were sensitive to phrase frequency and there was a correlation between the L2 proficiency and the sensitivity to phrase frequency.

From the previous studies, it can be seen that although the researchers focused on different categories of MWE and used different research methods to investigate, they all proved that L2 proficiency played a role in the processing of MWEs since the L2 learners with higher proficiency levels showed a processing advantage for MWEs.

However, some studies found no difference when L2 learners with different proficiency levels processed MWEs. For instance, Sonbul studied the effects of collocational frequency on the processing of L2 collocations by using an online eye-tracking experiment and an offline rating task among native and non-native speakers of English with different L2 proficiency levels[15]. The researchers found that the sensitivity to frequency did not change with the higher proficiency level in the online task and concluded that there was no L2 proficiency effect on sensitivity to frequency in online L2 collocational processing.

Similarly, Hernándeza et al. also investigated the effects of frequency on the processing of MWEs but used a phrasal-decision task. L1 speakers and L2 learners with different proficiency levels were recruited to this study and were asked to judge whether the four-word combinations were possible in English[16]. The results showed that both L1 speakers and L2 learners responded faster to higher frequency phrases than lower frequency ones. There was no difference between their sensitivity to the phrasal frequency regardless of different L2 proficiency.

3. Discussion

There are several possible reasons for the mixed findings. First, although the participants were significantly different as in the study of Hernándeza et al., participants were divided for English exposure as one group was considered as EFL learners, and the other as ESL users, the differences of the proficiency levels between the participants is not very great because the range of proficiency levels used in these studies are narrow within advanced proficiency level to ensure participants' comprehension to the tasks, and this small differences may not able to influence their processing[16].

Second, the results of different research methods may be different. Compared with the phrasal-decision tasks used in the study of Hernándeza et al. and the rating task used in Sonbul's study, the results of the eye-tracking study may be more accurate as in Jiang and Siyanova-Chanturia's study, since eye-tracking can provide researchers with more detailed information about MWEs processing including fixations, durations and regressions, and thus can provide more detailed and comprehensive answers to the effects of L2 proficiency in the MWEs processing[14-16].

Furthermore, studies that found the L2 proficiency effects in the MWEs processing recruited more participants than studies that did not, which makes the results of former studies more convincing by using larger samples.

What is more, from the previous studies about the effects of L2 proficiency on MWE processing, it can be seen that they all focused on only one type of MWEs in the study, and whether the findings in the study can be extended to other types of MWEs is unclear. Additionally, most studies focused

on the L2 learners with high proficiency levels, whether the present findings can be applied to low proficiency levels is unknown.

4. Conclusion

To sum up, this paper reviewed some research that investigated the effects of L2 proficiency in the processing of MWEs, although different researchers provided different answers to the role of L2 proficiency, studies that found L2 proficiency did nothing to the processing of MWEs had some limitations and not that convincing comparing with the studies that found L2 proficiency played a role to the MWEs processing because of the sample size and research methods. Thus, the L2 proficiency should be considered as a factor that plays a facilitative role in the processing of MWEs. Based on the research gaps, future studies should be conducted on L2 learners with more various proficiency levels including low proficiency, and consider analyzing different types of MWEs in the same study to draw a more comprehensive conclusion about L2 processing of MWEs.

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