
**A REVIEW OF INCIDENTAL LEARNING OF VOCABULARY AND COLLOCATION
IN DIFFERENT MODES OF INPUT**

Yan Feifei

Postgraduate student, School of Foreign Languages, Ocean University of China, Qingdao, China

<https://doi.org/10.54922/IJEHSS.2023.0480>

ABSTRACT

More and more attention has been paid to the incidental learning of vocabulary and multiword expressions in different modes of input in recent years. This paper reviews empirical studies that have examined the incidental learning of vocabulary and multiword expressions in four modes of second language input (reading, listening, watching, and reading while listening). It was found that most studies concentrated on the learning of vocabulary and collocations rather than other types of multiword expressions. More attention should be paid to the incidental learning of different types of multiword expressions in future studies.

Key Words: Incidental Vocabulary Learning; Multiword Expressions; Modes Of Input.

1. INTRODUCTION

Vocabulary and multiword expressions are essential parts of English learning. Multiword expressions are various, consisting of many expression types, such as idioms (*kick the bucket*), lexical bundles (*in the middle of*), binomials (*bride and groom*), collocations (*strong tea*), and other phrasal elements (Siyanova-Chanturia & van Lancker Sidtis, 2019). Besides vocabulary, multiword expressions, especially collocations, also account for a large proportion in second language (L2) learning. Erman and Warren (2000) reported that 58.6% of spoken utterances and 52.3% of written utterances consisted of collocations. However, class time is limited, and L2 learners cannot complete the due vocabulary that should be achieved, so the learning of vocabulary and collocations after class is also of particular importance. Teachers teach some after-school vocabulary learning skills in class, such as guessing from context, learning from word cards and using word parts and dictionaries, and so on, so that L2 learners can better acquire vocabulary and multiword expressions in their daily learning.

In recent years, many scholars have explored the incidental learning of vocabulary and multiword expressions under different modes of input (Webb, Jonathan& Anna, 2013; Peters& Webb, 2018; Feng, 2020). Many L2 learners have acquired a large number of vocabulary and multiword expressions incidentally in reading. With the advancement of technology, many books have CD-ROMs and online synchronized listening versions, which has also led more researchers to explore the incidental acquisition of vocabulary and collocations in listening and listening while reading. In recent years, people often watch L2 videos on televisions and mobile phones, which has promoted research on the incidental acquisition of vocabulary and multiword expressions under audio-visual mode. Therefore, comparison between different modes of input becomes a hot topic for the incidental learning of vocabulary and multiword expressions.

2. REVIEWING THE RELATED LITERATURE

2.1 Studies of Incidental Learning of Vocabulary and Multiword Expressions under Reading

Eckerth and Tavakoli (2012) investigated the differential effects of word exposure frequency and elaboration of word processing on initial word learning and subsequent word retention of advanced learners of L2 English. The results showed equal effects for both variables on the initial word learning, subsequent word retention was more contingent on elaborate processing of form-meaning relationships than on word frequency. These results, together with those of the studies reviewed, suggested that processing words again after reading was superior to reading-only tasks.

Apart from offline measures, online measures are also adopted. Pellicer-Sánchez (2016) examined the incidental acquisition of vocabulary knowledge from reading and the online reading of unknown lexical items. L2 English learners read a story containing unknown items while their eye movements were recorded. After eight exposures, L2 readers recognized the form and the meaning of 86% and 75% of the target non-words, respectively, whereas they recalled the meaning of 55% of the non-words. After three to four encounters, non-words were read significantly faster, and by eight encounters they were read in a similar manner to previously known real words. Results also showed a positive relationship between new vocabulary learning outcomes and online reading, with longer reading times associated with higher vocabulary recall test scores. The study was also conducted with first-language readers to provide baseline data for comparison. Results confirmed the L2 findings while also indicating an interesting L1-L2 distinction in the rate rather than in the outcome of the acquisition process.

Besides studies on vocabulary, collocations are also studied. Pellicer-Sánchez (2015) examined the incidental acquisition of collocational knowledge when learners encounter adjective-pseudo-word collocations while reading. Forty-one L2 learners read a story containing six target collocations in a classroom setting. One week after reading, they were interviewed about their knowledge of the form, meaning, and collocation of the target items at recall and recognition levels. Participants were randomly assigned to one of two experimental groups: the 4-repetition group and the 8-repetition group. Results showed that collocational knowledge can be learned incidentally from reading; that it is learned at a similar rate to other lexical components such as the form and meaning of individual words; and that the frequency manipulation in this study did not seem to have a significant effect on the acquisition of any of the aspects examined.

2.2 Studies of Incidental Learning of Vocabulary and Multiword Expressions under Listening

Pavia, Webb, and Faez (2019) investigated incidental learning of three vocabulary knowledge dimensions, spoken-form recognition, form-meaning connection, and collocation recognition, through listening to two songs. The effects of repeated listening to a single song (one, three, or five times) and the relationship between frequency of exposure to the targeted vocabulary items and learning gains were also explored. The results indicated that listening to songs contributed to vocabulary learning. In addition, repeated listening had a positive effect on vocabulary gains, and frequency of exposure positively affected learning gains.

Jin and Webb (2020) investigated incidental learning of both single-word items and collocations through listening to the teacher talk. They also explored the relationship between vocabulary learning gains and two factors: frequency of occurrence and first language translation.

A meaning-recall test and a multiple-choice test were used to evaluate learning gains. The results indicated that listening to the teacher talk had the potential to contribute to vocabulary learning of both single-word items and collocations. In addition, using L1 translation to explain target word meanings contributed to larger gains on the immediate posttest, and frequency of occurrence was not a significant predictor of incidental vocabulary learning.

2.3 Studies of Incidental Learning of Vocabulary and Multiword Expressions under Reading while Listening

Webb, Newton, and Chang (2012) investigated the effects of repetition on incidental learning of collocation. Taiwanese university students learning EFL simultaneously read and listened to one of four versions of a modified graded reader that included different numbers of encounters with a set of 18 target collocations. The results showed that collocations can be learned incidentally through reading while listening to a graded reader and the number of encounters has a positive effect on learning.

Webb and Chang (2014) investigated the extent of vocabulary learning through reading while listening to 10 graded readers and the relationship between vocabulary gain and frequency as well as the distribution of occurrence of 100 target words in the graded readers. Sixty-one Taiwanese participants studied EFL in an extensive reading program or a more traditional approach structured around a global English course book. A pretest, posttest, and delayed posttest were administered to all participants. The results indicated that vocabulary gains through reading and listening to multiple texts were high. Relative gains were 44.06% after reading the 10 graded readers and 36.66% three months later. In addition, the relationships between vocabulary learning, frequency, and distribution of occurrence were found to be non-significant. This is different from the study of Webb, Newton, and Chang (2012), which found significant differences in the number of encounters. It still remains to be explored the role of the number of encounters.

2.4 Studies of Incidental Learning of Vocabulary and Multiword Expressions under Watching

Peters and Webb (2018) explored incidental vocabulary learning by watching a single full-length TV program. Three word-related variables (frequency of occurrence, cognateness, word relevance) and one learner-related variable (prior vocabulary knowledge) were examined. Two experiments were conducted with Dutch-speaking EFL learners to measure the effects of viewing TV on form recognition and meaning recall and meaning recognition. The findings showed that viewing TV resulted in incidental vocabulary learning at the level of meaning recall and meaning recognition. The research also revealed that learning was affected by frequency of occurrence, prior vocabulary knowledge, and cognateness. Montero Perez (2020) used 15 pseudowords rather than the real words in the exploration of incidental learning after viewing a L2 documentary. Montero Perez investigated the influence of participants' prior vocabulary knowledge and working memory. Results revealed that learning gains occurred at the level of form and meaning recognition.

Teng (2020) examined Chinese English as a second language primary school learners' vocabulary learning through watching and further explored the effect of captions during watching. The research design involved a 2 (advance-organizer strategy: present vs. absent) * 4 (caption type: glossed full captions, glossed keyword captions, full captions, keyword captions) between-

subjects design. Findings revealed that captioned videos produced significant effects on learning regarding the three dimensions of vocabulary knowledge. Glossed full captions were found to be the most effective caption type. Administration of the advance-organizer strategy also resulted in better gains in learning form, meaning, and use than the absence of this strategy. The combination of the advance-organizer strategy and glossed full captions led to the best learning performance for each dimension of vocabulary knowledge. Li and Wang (2020) also investigated the role of captions. The effects of task difficulty and interestingness on incidental vocabulary learning from audio-visual input by Chinese EFL learners. Results showed that linguistic difficulty of the audio-visual input was negatively correlated with the interestingness of the input, and thus to examine the effect of interestingness the impact of linguistic difficulty should be controlled. In addition, the subjects' difficulty (bilingual subtitle vs. no subtitle) in such a way that lower difficulty led to better learning. Furthermore, the interestingness of the audio-visual input had a significant impact on incidental vocabulary learning. The more interesting the input, the better the learning effects.

Besides vocabulary, more studies extend to multiword expressions. Puimege and Peters (2020) explored the incidental learning of formulaic sequences from audio-visual input and factors affecting the learning of formulaic sequences. A pretest-posttest, the within-participant design was adopted. 42 Dutch English learners watched a one-hour English documentary without subtitles. Learning gains were measured at the level of form recall and meaning recall. Significant learning gains were found in both the form recall and meaning recall tests, indicating that several knowledge aspects of formulaic sequences can be learned incidentally from audio-visual input. The findings also revealed a positive relationship between learners' prior vocabulary knowledge and learning gains. Further, several item-related factors affected the learning gains. Finally, the findings showed the incremental nature of learning formulaic sequences, as preknowledge of the meaning of the formulaic sequences before the TV viewing was the strongest predictor of learning the form of formulaic sequences.

2.5 Studies of Comparison of Incidental Learning of Vocabulary and Multiword Expressions under Different Modes

Valentini, Ricketts, et al. (2018) explored children's learning of phonological, orthographic, and semantic information about words encountered in a story context. A total of 71 children (8- and 9-year-olds) were exposed to a story containing novel words in one of three conditions: listening, reading, or simultaneous listening and reading. Half of the novel words were presented with a definition, and half were presented without a definition. Both phonological and orthographic learning were assessed through recognition tasks. Semantic learning was measured using three tasks assessing recognition of each word's category, subcategory, and definition. Phonological learning was observed in all conditions, showing that phonological recording supported the acquisition of phonological forms when children were not exposed to phonology in the reading condition. In contrast, children showed orthographic learning of the novel words only when they were exposed to orthographic forms. Semantic learning was greater in the combined condition than in the listening and reading conditions. The presence of the definition was associated with better performance on the semantic subcategory and definition post-tests but not on the phonological, orthographic, or category post-tests.

Research gradually focused on students with a higher L2 level. Webb and Chang (2020) investigated incidental learning of L2 collocations in three different modes: reading, listening and reading while listening. One hundred thirty-eight second-year college students learning EFL in Taiwan were randomly assigned to three experimental groups (reading, listening, reading while listening) and a nontreatment control group. The experimental groups encountered 17 target collocations in the same graded reader. Learning was measured using two tests that involved matching the component words and recalling their meanings. The results indicated that the reading while listening condition was most effective while the reading and listening conditions contributed to similarly sized gains. Feng and Webb (2020) also used a pretest-posttest-delayed posttest design at one-week intervals to determine the extent to which written, audio, and audiovisual L2 input contributed to incidental vocabulary learning. Seventy-six university students learning EFL in China were randomly assigned to four groups. Each group was presented with input from the same television documentary in different modes: reading the printed transcript, listening to the documentary, viewing the documentary, and a non-treatment control condition. Checklist and multiple-choice tests were designed to measure knowledge of target words. The results showed that L2 incidental vocabulary learning occurred through reading, listening, and viewing and that the gain was retained in all modes of input one week after encountering the input. However, no significant differences were found between the three modes on the post-tests indicating that each mode of input yielded similar amounts of vocabulary gain and retention. A significant relationship was found between prior vocabulary knowledge and vocabulary learning, but not between frequency of occurrence and vocabulary learning.

Chen (2021) compared incidental vocabulary learning in reading-while-listening and reading-only conditions. Using both offline and online outcome measures, Chen assessed explicit form and meaning knowledge and the lexicalization of new words. He also explored how L2 listening and reading proficiency moderated learning gains in the two treatment conditions. L2 learners first read or read while listened to four short stories in English for meaning, with embedded target vocabulary items. They then completed vocabulary post-tests in the order of a form priming lexical decision task, a form recognition test, a form-meaning connection test, and a semantic priming lexical decision task. Results showed that while the reading-while-listening group outperformed the reading-only group in recognizing the form and meaning of the target vocabulary, neither group fully lexicalized the new words, which was crucial for fluent lexical retrieval. L2 listening and reading proficiency affected learning from reading-while-listening and reading-only differentially: the reading-while-listening group was negatively affected by L2 reading proficiency when controlling for listening proficiency while the performance of the reading-only group was not predicted by L2 proficiency.

Besides the four modes, Xin and Wang (2021) explored the effects of input mode in film watching (audio-text-image and audio-text input) and output task type (a multiple-choice task and an English-Chinese translation task) in English listening activities on junior high school students' incidental vocabulary acquisition. It is found that input mode has no significant main effect on vocabulary memorization, but it has a significant main effect on vocabulary retention. In addition, output task type has a significant main effect on both vocabulary memorization and vocabulary retention. Furthermore, there is no interactive effect between film input mode and output task type on either vocabulary memorization or vocabulary retention in English listening activities.

Dang, Lu, and Webb (2022) explored the incidental learning of collocations in reading, listening, reading while listening, viewing, and viewing with captions. In the quasi-experimental study, 165 learners of English for academic purposes at a university in China were randomly assigned to five experimental groups and a control group. Each experimental group encountered 19 target collocations in the same academic lecture in one of the following input modes: reading, listening, reading while listening, viewing, and viewing with captions. The control group did not receive any treatment. The results revealed that reading, viewing, and viewing with captions led to learning at the form recognition level, but no significant differences were found in the learning gains across these modes. Nonverbal elaboration, type of vocabulary, and type of verbal elaboration affected learning, but the frequency of occurrence, strength of association, comprehension, and prior knowledge of general vocabulary did not.

3. SUMMARY AND CONCLUSION

This study reviews studies that explored incidental learning of vocabulary and multiword expressions under different modes of input (reading, listening, reading while listening, and watching). It was found that most studies concentrated on vocabulary and collocations rather than other types of multiword expressions. Lexical bundles, binomials, and idioms are also essential in English learning for EFL learners. Therefore, more attention should be paid to other types of multiword expressions. It is worth exploring whether the result of single-word items can apply to all kinds of multiword expressions, so different types of multiword expressions also need to be compared in future studies.

There are also some limitations to this study. This study only focuses on the modes of reading, listening, reading while listening, and watching, ignoring the influencing factors of incidental learning. Future research that examines different modes of input could further elucidate the role of influencing factors of incidental learning of vocabulary and multiword expressions.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

REFERENCES

- [1] Feng Teng. 2020. Retention of new words learned incidentally from reading: Word exposure frequency, L1 marginal glosses, and their combination[J]. *Language Teaching Research* 6 (24), 1-28.
- [2] Feng Teng. 2020. Vocabulary learning through videos: Captions, advance-organizer strategy, and their combination[J]. *Computer Assisted Language Learning*: 1-34.
- [3] Feng Y.& S. Webb. 2020. Learning vocabulary through reading, listening, and viewing: which mode of input is most effective[J]. *Studies in Second Language Acquisition* 42 (3): 499–523.
- [4] Gyllstad, H., & Wolter, B. (2016). Collocational processing in light of the phraseological continuum model: Does semantic transparency matter? *Language Learning* 66 (2), 296–323.
- [5] Hallin, A. E., & Van Lancker Sidtis, D. (2017). A closer look at formulaic language: Prosodic characteristics of Swedish proverbs. *Applied Linguistics* 38 (1), 68–89.
- [6] Howarth, P. A. (1998). Phraseology and second language proficiency. *Applied Linguistics* 19 (1), 24–44.

- [7] Jeffrey A. Greene, Dana Z. Copeland & Victor M. Deekens. 2020. A model of technology incidental learning effects[J]. *Educational Psychology Review* 33: 883–913.
- [8] Jin Z. & S. Webb. 2020. Incidental vocabulary learning through listening to teacher talk[J]. *The Modern Language Journal* 20: 1-17.
- [9] Lau, E., Namyst, A., Fogel, A., & Delgado, T. (2016). A direct comparison of N400 effects of predictability and incongruity in adjective-noun combination. *Collabra* 2 (1), 1-19.
- [10] Laufer, B., & Girsai, N. (2008). Form-focused instruction in second language vocabulary learning: A case for contrastive analysis and translation. *Applied Linguistics* 29 (4), 694–716.
- [11] Lee, S. (2021). The Effect of L2 Proficiency, L1 Congruency, and Collocation Frequency on L2 Collocation Processing: an Experimental Study of Korean EFL Learners. *Korean Journal of English Language and Linguistics* 21 (10), 60-84.
- [12] Pavia N., S. Webb & F. Faez. 2019. Incidental vocabulary learning through listening to songs[J]. *Studies in Second Language Acquisition* 41 (4): 1-24.
- [13] Perez. M. M. 2020. Incidental vocabulary learning through viewing the video: The role of vocabulary knowledge and working memory[J]. *Studies in Second Language Acquisition* 42 (4): 749–773.
- [14] Peters E. & S. Webb. 2018. Incidental vocabulary acquisition through viewing L2 television and factors that affect learning[J]. *Studies in Second Language Acquisition* 40 (3): 551–577.
- [15] Puimege E. & E. Peters. 2020. Learning formulaic sequences through viewing L2 television and factors that affect learning[J]. *Studies in Second Language Acquisition* 42 (3): 525-549.
- [16] Webb S. & A. C.S. Chang. 2020. How does the mode of input affect the incidental learning of collocations[J]. *Studies in Second Language Acquisition*: 1-22.
- [17] Webb S., J. Newton & A. Chang. 2013. Incidental learning of collocation[J]. *Language Learning* 63 (1): 91-120.
- [18] Zhang P. & S. Graham. 2019. Vocabulary learning through listening: Comparing L2 explanations, teacher codeswitching, contrastive focus-on-form and incidental learning[J]. *Language Teaching Research*: 1-20.
- [19] 范焯. 注意在二语动名词搭配习得中的作用[J], *外语教学与研究* 2008 (3): 170-177.
- [20] 顾琦一, 陈方. 不同话题熟悉度阅读中工作记忆与二语水平的作用[J]. *现代外语* 2020 (5): 705-717.
- [21] 李天颐, 王启. 任务难度和趣味性对英语视听输入中词汇附带习得的影响[J]. *现代外语* 2020 (4): 516-628.
- [22] 苗丽霞. 第二语言词汇附带习得研究30年述评[J], *外语教学理论与实践* 2014 (1): 23-28.
- [23] 吴晓燕, 王菲. 近20年二语阅读研究进展[J], *现代外语* 2020 (3): 424-434.
- [24] 张群. 二语搭配研究进展[J], *现代外语* 2021 (1): 123-132.
- [25] 周榕, 吕丽珊. 输入增显与任务投入量对英语词汇搭配习得影响的实证研究[J], *现代外语* 2010 (1): 82-110.