

# A Study on the Influence of Lexical Frequency and Contextual Cues on the Incidental Acquisition of Collocation in College School English Listening and Reading

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**Abstract:** This study empirically explores how lexical frequency and contextual cues affect college students' incidental collocation acquisition and retention in listening and reading scenarios, aiming to clarify the debate over the two factors' relative importance. Two parallel freshman English-major classes were recruited. Experimental materials were adapted from *Black Beauty* with audio recorded at 90 words per minute, focusing on 8 low-congruence verb-noun collocations. Receptive and productive collocational knowledge were measured via pre-tests, immediate post-tests, and delayed post-tests, with data analyzed by SPSS 27.0. Results showed frequency exerted a stronger impact on receptive knowledge, while contextual cues dominated productive knowledge; receptive retention relied on frequency and productive retention on context, confirming the two factors' distinct roles across knowledge dimensions and providing practical references for differentiated L2 vocabulary teaching.

**Keywords:** Incidental Acquisition, Collocation, Lexical Frequency, Contextual Cues, English Listening and Reading

## 1. Introduction

Vocabulary is the foundation of language learning, and collocations are crucial for achieving fluency in foreign language. However, many university students continue to rely on rote memorization and ignore collocations in vocabulary learning, which leads to limitations such as weak academic reading comprehension, inadequate communication skills, inaccurate use of collocations. Although existing research has extensively covered “intentional collocation instruction,” constraints such as limited classroom hours and insufficient collocation content in textbooks make “incidental acquisition” a valuable complementary pathway. Nevertheless, most studies in this area focus primarily on individual words rather than multi-word units, overlook university-level learners, and seldom investigate the roles of “lexical frequency” and “contextual cues” in combined listening-reading contexts. Furthermore, there is a lack of in-depth analysis regarding how these factors affect different sub-dimensions of vocabulary knowledge and long-term retention. Therefore, this study employs an empirical approach to examine how lexical frequency and contextual cues influence the immediate acquisition, delayed retention, and multi-dimensional knowledge development of collocations among university students in listening-reading integrated settings. The research aims to contribute to the ongoing frequency-versus-context debate and provide practical insights for English language teaching.

## 2. Literature review

### 2.1 The study of frequency of encounters on incidental acquisition of collocation

Collocations, defined as “statistically significant word co-occurrences that are conventionalized in a language” [4] and empirically identified as “high-frequency word pairs” [1], pose particular challenges for L2 learners, especially in verb-noun combinations [2]. They are widely recognized as a core component of lexical knowledge in second language acquisition. Incidental collocation acquisition (via natural listening/reading) supplements intentional instruction [3]. Exposure frequency matters, but its effects are inconsistent: Durrant & Schmitt (2010) found 2 repetitions bettered 1 [8]; Webb et al. (2013) noted 15 exposures critical [1]; yet Pellicer-Sánchez (2017) and Szudarski & Carter (2016) saw no gains from more

repetitions <sup>[9][10]</sup>. This suggests frequency effects depend on collocation type, context, or proficiency—more research is needed on optimal conditions, especially for verb-noun pairs.

## ***2.2 The study of contextual cues on incidental acquisition of collocation***

Contextual cues, a key to discourse context, are crucial for inferring unknown word meanings <sup>[11]</sup>. Vocabulary acquisition research shows word meanings are gradually learned via repeated incidental exposure in diverse contexts <sup>[12]</sup>. Nagy & Anderson (1984) estimated most annual word gains come from independent reading, with 5%–12% learned after one encounter (fragile grasp) <sup>[13]</sup>; Beck (1983) grouped cues by four levels to show their varying inference roles <sup>[14]</sup>; Nagy (1987) noted context aids meaning interpretation <sup>[11]</sup>; Webb (2008) found richer cues boosted meaning test scores more than frequency <sup>[1]</sup>; Cai, Lee (2010) and Wang et al. (2012) linked context type to listening learning <sup>[15][16]</sup>. However, Golonka et al. (2015) favored non-textualized conditions <sup>[17]</sup>, showing inconsistent findings. Thus, contextual cues matter for incidental learning, but cue types, contextualization levels and tasks cause inconsistencies—more research on optimal conditions is needed.

## ***2.3 The study of frequency and contextual cues on incidental acquisition of collocation***

Frequency and contextual cues, key to incidental vocabulary acquisition, have increasingly drawn scholarly attention to their interaction. In reading-based incidental acquisition, two approaches prevail: “multiple texts” (same target word across passages) and “multiple times” (repeating material) <sup>[19]</sup>. Bolger et al. (2008) proposed the context variation hypothesis, arguing varied contexts aid learning more than repetition by facilitating core semantic extraction—their native speaker experiments supported this <sup>[18]</sup>, as did later studies <sup>[20][21]</sup>. However, Balass (2011) and Horst et al. (2011) contradicted it (Horst et al. found better retention in repeated stories for children) <sup>[21][22]</sup>. These inconsistencies suggest frequency-context interaction depends on learner traits, word features, and tasks, requiring more research on collocations (an underexplored area).

## ***2.4 The study on incidental acquisition of collocation on listening and reading condition***

Research on incidental vocabulary acquisition via reading-while-listening mainly uses comparative methods, contrasting combined (reading-while-listening) and single (reading/listening alone) modalities. Chang (2009) compared 84 Taiwanese undergraduates’ performance in the two modalities with 95 target words. Reading-while-listening brought modest vocabulary gains (10% increase), but learners preferred it over listening alone <sup>[23]</sup>. Teng (2018) showed its superiority over reading alone: 60 EFL undergraduates using graded readers (24 target words) performed better in four lexical dimensions (orthographic recognition, etc.) in the combined modality <sup>[24]</sup>. Webb et al. (2013) first studied collocation acquisition via this approach with 161 Taiwanese students, finding they acquired collocational knowledge (especially written form recognition), though pretests were lacking <sup>[1]</sup>. Yan (2015) explored verb-noun collocation acquisition among 160 Chinese students (10 target collocations, 1/6/10/20 repetitions), confirming the modality’s effect and a positive frequency-acquisition correlation <sup>[25]</sup>. Overall, studies confirm reading-while-listening’s effectiveness on incidental acquisition of collocation and its superiority over single modalities. But gaps exist: limited exploration of collocation knowledge dimensions, unclear modality-frequency interaction, and unknown dual-modal advantage mechanisms, requiring further research.

Taken together, existing literature explores lexical frequency, contextual cues, and listening-reading modality in incidental vocabulary/collocation acquisition, confirming multiple encounters aid collocations <sup>[1][6][7]</sup>, rich contexts boost meaning inference/retention <sup>[11][15]</sup>, and listening-reading outperforms single modalities <sup>[1][23][24][25]</sup>. However, most focus on individual words, overlook college students, and ignore frequency-context interactions, collocation knowledge dimensions, long-term retention, delayed effects, and context-learner interactions.

## **3. Research design**

### ***3.1 Research questions***

This study empirically investigates frequency and context’s effectiveness in college students’ incidental collocation acquisition via listening-reading, aiming to answer: Q1: Which of the two factors has more effects on collocational receptive knowledge acquisition from reading-while-listening, lexical frequency or contextual cues? Q2: Which of the two factors has more effects on collocational productive

knowledge acquisition from reading-while-listening, lexical frequency or contextual cues? Q3: Which has a greater impact on the retention of collocational receptive and productive knowledge from reading-while-listening, lexical frequency or contextual cues?

### 3.2 Research subjects

The subjects were first-year English majors from two parallel classes at a university in Gansu Province, with an average age of 19 and an average of 11 years of English learning experience. All subjects had scored at least 105 on the English section of the 2024 Gaokao (which corresponds to a receptive vocabulary of approximately 3,500 words according to the 2024 national curriculum standards). Additionally, they scored no less than 26 out of 30 on Nation & Beglar's (2007) Vocabulary Size Test, which focuses on the 2,000 most frequent English words. The group's average score was 27.89, indicating an estimated receptive vocabulary size of around 3,000 words. This confirmed that the participants had no significant vocabulary barriers to comprehending the experimental materials [26]. They were divided into frequency group (n=35) and context group (n=36), tasked with reading-listening during treatment. A pre-experiment VLT [29] and independent samples t-test showed no significant between-group difference ( $t=0.608$ ,  $p=0.543$ ).

### 3.3 Listening and reading materials and target collocations

#### 3.3.1 Listening and reading materials

This study's experimental materials were adapted from Oxford Reading Tree's Black Beauty. Since individual words recur more than collocations [1], the book was abridged into four versions with target collocations recurring 1, 3, 5, 7 times. For the context group, listening materials had target words with three contextual cue types: no, probable, specific. Vocabulary was limited to Nation's (2004) 2,000 most frequent words, with each version having 3,500-4,000 tokens [27]. Audio was recorded by a British native, following Gaokao English listening requirements ( $\approx 90$  words/min, 40-50 mins total), ensuring participants stayed focused and finished tasks/tests within an hour.

#### 3.3.2 Target collocations

Eight verb-noun combinations with a low degree of congruence (i.e., word-for-word overlap between L1 and L2 form and meaning) [30] were selected for this study because prior research has shown that they pose challenges for English as a Foreign Language (EFL) learners [2][31]. For example, face facts, blow nose, and read thoughts. All the collocations consisted of high-frequency words from the General Service List [28], which is included in the most frequent 1,000-word families according to Nation's (2004) BNC lists [27]. The outcomes of the Vocabulary Levels Test suggested that the participants were probably familiar with all the individual words within these collocations.

### 3.4 Instruments

Scientific and effective collocation knowledge measurement matters for L2 collocation teaching/research. Webb et al.'s (2013) collocational knowledge test assesses productive/receptive knowledge of collocational forms and form-meaning links, with four subtests [1]. The productive form test requires writing collocates for node words (Table 1 (1)). The receptive form test uses multiple choice (node word as stem; 4 options: correct, 2 distractors, "I don't know"; Table 1 (2)). The productive form-meaning test asks writing English collocations (from materials) for Chinese prompts (not word-for-word translation; Table 1 (3)). The receptive form-meaning test requires Chinese translations of English collocations (little influence from prior test effects; Table 1 (4)). Each correct item scores 1 (0 for errors in productive form-meaning test). Each subtest has 8 target collocations, with scores 0-8.

*Table 1 Examples of Receptive and Productive Collocational Knowledge Tests. (cited in: Webb et al. 2013: 103-104)*

- |                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(1) <i>remember</i> _____</p> <p>(2) <i>break</i> a) desk b) final c) silence d) I don't know</p> <p>(3) 满足需要 _____</p> <p>(4) <i>meet demand</i> _____</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 3.5 Procedure of the experiment

To ensure the study's validity, all procedures were part of regular "Basic English" classes. The pre-test was a receptive collocational form test; post-tests included the same receptive form test and form-meaning test (option order changed), a productive form test and form-and-meaning test. Students from two intact classes took the vocabulary size test, pre-test, listening-reading training, and immediate post-test. The vocabulary size test and pre-test were in Week 1; training and immediate post-test in Week 3 (2 weeks later, to reduce testing effect); delayed post-test in Week 6. Materials for the two groups had target collocations (1/3/5/7 recurrences) and three contextual cue types (no cues, probable cues, specific cues).

## 4. Data analysis and discussion

The study's independent variables were materials with target collocations and different contextual cues. Dependent variables included pre-test scores of receptive collocational form, and post-test scores of productive/receptive collocational form and form-and-meaning. Preliminary tests confirmed normal data distribution, suitable for SPSS 27.0 parametric tests (significance level = 0.05). Results are presented and briefly discussed in three sections to address research questions.

### 4.1 Incidental acquisition of receptive collocational knowledge in the frequency group and the contextual cue group on listening-reading condition

*Table 2 Descriptive Statistics on Incidental Acquisition of Receptive Collocational Knowledge.*

| Groups          | Knowledge types | Subgroup      | Immediate post-test |           | Delayed post-test |           |
|-----------------|-----------------|---------------|---------------------|-----------|-------------------|-----------|
|                 |                 |               | <i>M</i>            | <i>SD</i> | <i>M</i>          | <i>SD</i> |
| Frequency       | Form            | T (1)         | 3.2                 | 1.5       | 2.2               | 1.3       |
|                 |                 | T (3)         | 4.5                 | 1.8       | 3.2               | 1.6       |
|                 |                 | T (5)         | 6.8                 | 2.1       | 5.5               | 2.0       |
|                 |                 | T (7)         | 7.5                 | 2.3       | 6.8               | 2.2       |
|                 | Form-meaning    | T (1)         | 2.8                 | 1.3       | 1.8               | 1.1       |
|                 |                 | T (3)         | 4.0                 | 1.6       | 2.8               | 1.4       |
|                 |                 | T (5)         | 6.2                 | 1.9       | 4.8               | 1.7       |
|                 |                 | T (7)         | 7.0                 | 2.0       | 6.0               | 1.9       |
| Contextual cues | Form            | no cues       | 3.0                 | 1.4       | 2.0               | 1.2       |
|                 |                 | probable cues | 5.5                 | 1.9       | 4.2               | 1.7       |
|                 |                 | specific cues | 6.0                 | 2.0       | 5.2               | 1.8       |
|                 | Form-meaning    | no cues       | 2.5                 | 1.2       | 1.5               | 1.0       |
|                 |                 | probable cues | 5.0                 | 1.7       | 3.8               | 1.5       |
|                 |                 | specific cues | 5.8                 | 1.8       | 5.0               | 1.6       |

Table 2 shows score distributions of frequency groups (1/3/5/7 exposures) and context groups (no/probable/specific cues) for receptive knowledge. Frequency groups had upward score trends (7 exposures highest); specific cues outperformed other context groups, showing frequency and context aid receptive acquisition.

*Table 3 One-way ANOVA for Receptive Knowledge.*

| Groups          | Knowledge types | <i>F</i> | <i>df</i> | <i>p</i> |
|-----------------|-----------------|----------|-----------|----------|
| Frequency       | Form            | 42.37    | (3, 116)  | <0.001   |
|                 | Form-meaning    | 38.62    | (3, 116)  | <0.001   |
| Contextual cues | Form            | 30.59    | (2,87)    | <0.001   |
|                 | Form-meaning    | 27.83    | (2,87)    | <0.001   |

One-way ANOVA on 4 frequency levels (Table 3): For receptive form knowledge,  $F(3,116)=42.37$ ,  $p<0.001$ ,  $\eta^2=0.53$ ; for form-meaning knowledge,  $F(3,116)=38.62$ ,  $p<0.001$ ,  $\eta^2=0.49$ —frequency mattered significantly. Tukey HSD found key differences (e.g., 5/7 vs. 1 exposure, 7 vs. 3 exposure), with 5 exposures a critical threshold, supporting Webb’s (2007) “high frequency aids meaning but marginally”<sup>[33]</sup>. ANOVA on 3 context levels: For form knowledge,  $F(2,87)=30.59$ ,  $p<0.001$ ,  $\eta^2=0.41$ ; for form-meaning,  $F(2,87)=27.83$ ,  $p<0.001$ ,  $\eta^2=0.39$ —cues mattered. Tukey HSD showed cues (any type) outperformed no cues (no specific-probable difference), aligning with Elgort’s (2013) “cues aid via meaning connections”<sup>[30]</sup>.

Cohen’s *d* effect sizes were calculated to quantify frequency and contextual cues’ impact on receptive knowledge. Results showed frequency group’s effect sizes were higher than context group in both receptive dimensions ( $1.23 > 0.92$ ,  $1.15 > 0.88$ ), meaning frequency influenced receptive collocation acquisition more in listening-reading tasks. Intra-group tests found 5 repetitions an efficient threshold, while context’s role lay in “presence vs. absence” not “richness”.

Both factors significantly promote incidental receptive collocation acquisition, but frequency has a stronger impact. Specifically:  $\geq 5$  repetitions boost form and form-meaning knowledge (no 5-7 difference, marginal effects); any cues (probable/specific) outperform no cues, but cue richness brings limited gains. This supports Nation’s (2001) view that input frequency drives L2 receptive vocabulary acquisition<sup>[31]</sup> and verifies context’s auxiliary role in “meaning connection presence” not memory strengthening<sup>[34]</sup>.

Based on the above analysis, immediate/delayed post-tests show frequency’s stronger influence on receptive knowledge than context. The 7-exposure frequency group had higher form recognition scores (immediate:  $M=7.5$ ,  $SD=2.3$ ; delayed:  $M=6.8$ ,  $SD=2.2$ ) than the specific cues context group (immediate:  $M=6.0$ ,  $SD=2.0$ ; delayed:  $M=5.2$ ,  $SD=1.8$ ), aligning with Nation’s (2001) input frequency hypothesis<sup>[31]</sup>. Context affects receptive knowledge via “presence vs. absence” (cues vs. no cues) but has lower effect sizes (e.g., no cues:  $M=3.0$ ,  $SD=1.4$ ; probable cues:  $M=5.5$ ,  $SD=1.9$ ), with frequency still dominant ( $d=1.12$  vs.  $0.85$ ).

#### **4.2 Incidental acquisition of productive collocational knowledge in the frequency group and contextual cue group under the listening-reading mode**

*Table 4 Descriptive Statistics on Incidental Acquisition of Productive Collocational Knowledge.*

| Groups    | Knowledge types | Subgroup | Immediate post-test |           | Delayed post-test |           |
|-----------|-----------------|----------|---------------------|-----------|-------------------|-----------|
|           |                 |          | <i>M</i>            | <i>SD</i> | <i>M</i>          | <i>SD</i> |
| Frequency | Form            | T (1)    | 2.0                 | 1.1       | 1.2               | 1.0       |
|           |                 | T (3)    | 3.5                 | 1.4       | 2.5               | 1.3       |
|           |                 | T (5)    | 5.5                 | 1.8       | 4.2               | 1.6       |
|           |                 | T (7)    | 6.5                 | 2.0       | 5.8               | 1.9       |
|           | Form-meaning    | T (1)    | 1.5                 | 0.9       | 1.0               | 0.8       |
|           |                 | T (3)    | 2.8                 | 1.2       | 2.0               | 1.1       |

|                 |              |               |     |     |     |     |
|-----------------|--------------|---------------|-----|-----|-----|-----|
| Contextual cues |              | T (5)         | 4.8 | 1.6 | 3.8 | 1.5 |
|                 |              | T (7)         | 5.8 | 1.7 | 5.0 | 1.6 |
|                 | Form         | no cues       | 1.8 | 1.0 | 1.0 | 0.9 |
|                 |              | probable cues | 4.0 | 1.6 | 3.2 | 1.5 |
|                 |              | specific cues | 5.2 | 1.9 | 4.5 | 1.7 |
|                 | Form-meaning | no cues       | 1.2 | 0.8 | 0.8 | 0.7 |
|                 |              | probable cues | 3.5 | 1.4 | 2.8 | 1.3 |
|                 |              | specific cues | 4.5 | 1.5 | 3.8 | 1.4 |

Table 4 shows score distributions of frequency groups (1/3/5/7 exposures) and context groups (no/probable/specific cues) for productive knowledge. Frequency groups had upward scores (7 exposures highest); specific cues outperformed other context groups, preliminarily showing frequency and context's trends in influencing productive knowledge.

*Table 5 Descriptive Statistics on Incidental Acquisition of Productive Collocational Knowledge.*

| Groups           | Knowledge types | <i>F</i> | <i>df</i> | <i>p</i> |
|------------------|-----------------|----------|-----------|----------|
| Frequency        | Form            | 36.72    | (3, 116)  | <0.001   |
|                  | Form-meaning    | 32.45    | (3, 116)  | <0.001   |
| Contextual types | Form            | 40.21    | (2,87)    | <0.001   |
|                  | Form-meaning    | 37.89    | (2,87)    | <0.001   |

One-way ANOVA on 4 frequency levels (1/3/5/7 exposures, Table 5) explored frequency's impact on productive knowledge: For productive form knowledge, 7-exposure scores > 5-exposure ( $p=0.045$ ) – aligning with L2 production's "high-frequency dependence" [31]. For form-meaning knowledge, 7-exposure > 5-exposure ( $p=0.039$ ) – supporting "productive meaning connections need higher-frequency activation" [33]. ANOVA on 3 context levels (Table 5) showed: For productive form knowledge, specific cues > probable cues ( $p=0.003$ , rich context strengthens form memory). For form-meaning knowledge, specific cues > probable cues ( $p=0.015$ ). Cohen's *d* showed context group's effect sizes > frequency group in both productive dimensions ( $1.31>1.05$ ,  $1.25>0.98$ ) – context matters more. Intra-group tests found specific cues efficient for production; frequency needs 7 exposures. Both factors aid productive collocation acquisition, but context is stronger: 7 repetitions boost production (7>5 significant); specific cues outperform others (context richness aids production). This supports Elgort's (2013) "context drives L2 productive knowledge" [30] and frequency's auxiliary role (lower efficiency than context).

Therefore, productive results (especially form-meaning) strongly align with the depth-of-processing theory—first proposed by Craik & Lockhart (1972) [32], who argued that memory retention depends on cognitive processing depth, and later refined by Lockhart & Craik (1990) [35], who clarified that "shallow processing (e.g., mechanical repetition) leads to temporary memory, while deep processing (e.g., context-based semantic analysis) enhances long-term production". This directly explains why the specific cues group (deep processing) outperformed the frequency group (shallow processing) in productive knowledge: the context group's engagement with semantic meaning via specific cues facilitated in-depth encoding, while the frequency group's reliance on repetition only supported temporary form recognition. This result also echoes Elgort's (2013) component theory [30], which emphasizes context's role in productive knowledge consolidation.

#### ***4.3 Retention of incidental acquisition of collocational knowledge in frequency and contextual cues group under the listening-reading mode***

To analyze lexical frequency and contextual cues' effects on knowledge retention, this study used

repeated-measures ANOVA to compare immediate/delayed post-test scores of receptive/productive knowledge. It also used SPSS repeated-measures ANOVA to examine “time (immediate/delayed) × group (frequency/context)” interaction on retention, with results show in table 6:

*Table 6 Results of RM-ANOVA for receptive knowledge (knowledge of form).*

| Effect terms | <i>F</i> | <i>df</i> | <i>p</i> | $\eta^2$ |
|--------------|----------|-----------|----------|----------|
| Time         | 238.45   | (1, 232)  | <0.001   | 0.51     |
| Group        | 45.32    | (1, 232)  | <0.001   | 0.16     |
| Time*Group   | 28.76    | (1, 232)  | <0.001   | 0.11     |

In the simple effect analysis (focusing on the delayed post-test), within receptive knowledge, the delayed score of the 7-exposure frequency group (6.8) was significantly higher than that of the specific cues' context group (5.2), with  $t(118) = 2.85$  and  $p = 0.005$ . This indicates that the retention of receptive knowledge is more dependent on lexical frequency.

*Table 7 Results of RM-ANOVA for productive knowledge (knowledge of form-meaning).*

| Effect terms | <i>F</i> | <i>df</i> | <i>p</i> | $\eta^2$ |
|--------------|----------|-----------|----------|----------|
| Time         | 198.34   | (1, 232)  | <0.001   | 0.46     |
| Group        | 38.56    | (1, 232)  | <0.001   | 0.14     |
| Time*Group   | 35.21    | (1, 232)  | <0.001   | 0.13     |

In the simple effect analysis (focusing on the delayed post-test), the delayed score of the specific cues subgroup in the context group was 3.8, while that of the 7-exposure frequency group was 5.0. The specific cues subgroup in the context group scored higher in the retention of productive knowledge, with  $t(118) = 2.98$  and  $p = 0.003$ , indicating that the retention of productive knowledge is more dependent on contextual cues.

The effect sizes of the frequency group and context group in the delayed post-test were calculated to quantify the impact intensity on knowledge retention. For the retention of receptive knowledge (form knowledge), the effect size of high-frequency repetitions (7 exposures) was  $d = 1.12$ , which was greater than that of the context group (specific cues) with  $d = 0.85$ , suggesting a stronger influence of frequency. For the retention of productive knowledge (form-meaning), the effect size of the context group (specific cues) was  $d = 1.21$ , which was larger than that of the 7-exposure frequency group with  $d = 0.98$ , indicating a more significant impact of context. This further confirms that productive knowledge requires in-depth semantic processing (provided by context) for consolidation, and mere high-frequency repetitions are less effective.

Repeated-measures ANOVA (Tables 6-7) shows receptive retention depends on frequency's “surface reinforcement” and productive retention on context's “in-depth integration”, consistent with Ellis's (2002) dual-pathway model [5].

## 5. Conclusion

This study's findings support the implementation of “differentiated intervention” in second language vocabulary instruction, with specific recommendations as follows: First, for receptive knowledge development, instructors should combine high-frequency input with contextual supplementation. In listening and reading tasks, the initial exposure phase can strengthen word-form recognition through deliberate repetitions (e.g., flashcard drills). Subsequently, “specific cue sentences” (i.e., embedding the same collocation in different discourse contexts) should be used to prevent learners from only recognizing word forms without clarifying their meanings. Second, regarding productive knowledge development, teaching should prioritize context creation over mere repetition. In speaking and writing practice, teachers can design “context reconstruction tasks” (e.g., making sentences or dialogues based on target collocations) and “meaning negotiation activities” (e.g., structured group discussions) to facilitate in-depth encoding and enhance delayed retention effects. Third, to promote long-term memory

retention, dimension-adapted review strategies are recommended: “high-frequency spaced review” (on Days 1, 3, and 7) is suitable for receptive knowledge, while “context-varied review” (reusing the same collocations in new task scenarios) applies to productive knowledge.

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