THE ROLE OF CONTEXTUAL LEARNING VS. WORD LISTS IN TEACHING ACADEMIC VOCABULARY TO ESL STUDENTS

Tugsuu.J[1a], Tovuusuren.T[2b]

Doctoral Candidate, Senior Lecturer of Mandakh University, Mongolia
MA, Lecturer of Mandakh University, Mongolia
[a]tugsuu@mandakh.edu.mn
[b]tovuusuren@mandakh.edu.mn

Article received on: 20/05/2026
Article published on: 01/07/2026
https://doi.org/10.67207/mrj.2026.15.13

Abstract

This study compared contextual learning versus traditional word list memorization for teaching academic vocabulary to ESL learners. While word lists remain common in pedagogy, they often result in superficial understanding and limited application. Contextual learning through meaningful academic texts was hypothesized to promote deeper engagement, better retention, and more effective vocabulary integration.

A quasi-experimental design with pre-test/post-test measures involved 40 intermediate ESL learners randomly assigned to two groups (n=20 each). Group A received instruction via word lists with example sentences, while Group B learned the same vocabulary through content-rich reading passages. Both groups were assessed on receptive and productive vocabulary knowledge immediately post-instruction and after one week. Participants also completed feedback questionnaires and interviews.

Results showed the contextual learning group achieved significantly higher improvements in vocabulary recognition (M=8.7, SD=1.1) and production (M=7.9, SD=1.4) compared to the word list group (recognition: M=7.1, SD=1.3; production: M=5.6, SD=1.7). Independent samples t-tests confirmed statistical significance (recognition: t (38) =3.91, p<.01; production: t (38) =4.12, p<.001). Qualitative analysis revealed contextual learning participants found instruction more engaging and beneficial for retention. These findings support transitioning toward contextually enriched vocabulary instruction in ESL education, recommending reading-based tasks to enhance both receptive and productive vocabulary acquisition.

Keywords: vocabulary acquisition, long-term retention, productive knowledge, learner engagement

INTRODUCTION

Vocabulary learning has long been recognized as one of the most important components of second language acquisition (Nation I. S., Learning vocabulary in another language, 2001), (Schmitt, Vocabulary in language teaching, 2000). Without sufficient vocabulary knowledge, learners cannot access academic texts, produce scholarly writing, or engage in higher-order thinking in English-medium instruction (Hyland, 2007). Among different categories of vocabulary, academic vocabulary defined as words frequently used in academic texts but less common in everyday language plays a particularly critical role (Coxhead, 2000). Words such as *analyze, derive, establish,* and *subsequent* appear across disciplines, forming the “backbone” of academic discourse.

Mastery of academic vocabulary has been linked to improved reading comprehension (Qian, 2002), academic writing (Leki, 1994), and overall success in higher education (Baumann, 2010). However, despite its importance, academic vocabulary acquisition remains a challenge for ESL learners because it requires both depth (semantic, collocational, and pragmatic understanding) and breadth (large coverage of word families).

Traditionally, many ESL programs have emphasized word list memorization as a means of quickly expanding learners’ lexical repertoire. Word lists are easy to design, straightforward to administer, and allow for measurable short-term gains (Nation I. S., 2013). Yet research has consistently highlighted their limitations: knowledge acquired through lists tends to remain superficial and often fails to transfer to productive use (Schmitt, Review article: Instructed second language vocabulary learning, 2008). Moreover, retention beyond immediate testing situations is usually weak (Webb S. , 2007).

By contrast, contextual learning approaches introduce vocabulary in authentic or semi-authentic texts, such as academic readings, problem-solving tasks, or classroom discussions. Theoretically, contextual learning is supported by the depth of processing framework (Craik, 1972), which suggests that words encountered in meaningful contexts undergo deeper semantic encoding and are thus better remembered. The involvement load hypothesis (Hulstijn, 2001), similarly predicts that vocabulary tasks requiring higher levels of cognitive effort, such as guessing meaning from context or evaluating word use, result in stronger acquisition. Against this backdrop, the present study compares contextual learning and word list memorization in the teaching of academic vocabulary to intermediate-level ESL learners.

While international research has thoroughly examined the benefits of contextual learning, there is still a significant lack of empirical evidence in the context of Mongolian higher education. This study specifically addresses this gap by evaluating how intermediate ESL learners at a Mongolian private institute engage with academic vocabulary acquisition tasks. The primary objective of this research is to determine whether contextual immersion, as opposed to rote memorization, can help bridge the gap between receptive knowledge and productive application in an educational environment where traditional list-based pedagogy has long been the norm. By situating the study in Ulaanbaatar, this research aims to provide locally relevant insights into modernizing vocabulary instruction for Mongolian students.

1. Literature review

Academic vocabulary is distinct from both high-frequency general vocabulary and discipline-specific terminology. (Coxhead, 2000) Academic Word List (AWL), consisting of 570-word families, has become a standard resource in ESL research and instruction. Students require substantial academic vocabulary knowledge estimated at 8,000–9,000-word families for adequate reading comprehension

of university texts (Nation I. S., How large a vocabulary is needed for reading and listening? , 2006), Insufficient academic vocabulary leads to comprehension breakdowns, limited academic writing skills, and reduced participation in higher education (Hyland, 2007).

Word lists are widely used because they provide clear exposure to target items, support systematic review, and are time-efficient (Nation I. S., 2013). For learners preparing for standardized tests or seeking rapid vocabulary growth, lists may appear effective. However, they often lead to decontextualized learning (Schmitt, Review article: Instructed second language vocabulary learning, 2008). Learners may memorize definitions but struggle to recognize words in context or produce them accurately. Research also shows that retention decays quickly if learners are not exposed to words repeatedly in meaningful contexts (Webb S. , 2007).

Contextual learning emphasizes rich input and semantic elaboration. When learners encounter vocabulary items multiple times in academic passages, they not only acquire meaning but also observe collocations, word forms, and discourse functions (Webb S. &., 2017). Cognitive frameworks such as the depth of processing theory (Craik & Lockhart, 1972) and the involvement load hypothesis (Hulstijn, 2001), explain why contextually embedded tasks promote stronger retention: learners are required to infer, evaluate, and apply words rather than merely memorize.

Empirical comparisons between word lists and contextual learning yield mixed results. Laufer and Rozovski-Roitblat (Hulstijn, 2001) found that learners initially performed better on receptive recognition tests when taught with lists, but contextual instruction led to greater productive gains and better long-term retention. Webb (Webb S. , 2007) demonstrated that words encountered repeatedly in context produced significant improvements in both receptive and productive knowledge. Elgort (2011), however, argued that deliberate word list learning can also lead to durable retention if combined with extensive exposure. Schmitt (Schmitt, Review article: Instructed second language vocabulary learning, 2008) suggested that a hybrid approach where word lists serve as an initial scaffold and contextual tasks consolidate knowledge—may be most effective.

In the Mongolian context, pedagogical research has consistently focused on methods to enhance vocabulary acquisition. For example, (Nansalmaa, 2003) highlighted the importance of developing assessments that reflect actual vocabulary usage rather than just recognition. Additionally, (Dagiimaa, 2014) examined the role of cross-linguistic influence, suggesting that effectively building a lexical repertoire requires moving beyond mechanical translation in favor of a more integrated approach. This study builds on these local foundations by comparing modern contextual strategies with traditional methods in a Mongolian classroom setting.

While previous studies have provided valuable insights, two gaps remain. First, few studies have examined academic vocabulary specifically, despite its critical role in higher education. Second, most prior research has been quantitative, focusing on test scores without considering learner perceptions of engagement and usefulness. This study addresses both gaps by evaluating the effects of contextual vs. word list instruction on academic vocabulary, while also incorporating qualitative feedback from learners.

2. RESEARCH DESIGN

This study adopted a quasi-experimental pre-test/post-test design with a delayed post-test to evaluate the relative effectiveness of contextual learning versus word list memorization. Quasi-experimental designs are particularly appropriate in applied linguistics research when complete randomization is impractical, but some degree of control is maintained. Both quantitative and qualitative data were collected to provide a more comprehensive understanding of the phenomenon.

Participants were 40 intermediate-level ESL learners (22 female, 18 male), aged 18–22, enrolled in a private English language institute in Ulaanbaatar, Mongolia. Placement into the intermediate level was determined by institutional placement tests aligned with the CEFR (Common European Framework of Reference for Languages). Participants were randomly assigned into two groups of equal size:

- Group A (Word List Group, n = 20)
- Group B (Contextual Group, n = 20)

All participants provided informed consent, and pseudonyms were used in qualitative reporting to ensure confidentiality. A set of **20 academic words** was selected from Coxhead’s (2000) Academic Word List (AWL). Selection criteria included frequency across disciplines, moderate difficulty for intermediate learners, and relevance to academic study (e.g., *analyze, establish, derive, subsequent*).

- Word List Materials (Group A): Participants received a printed list of target words, each accompanied by a definition and one example sentence.
- Contextual Materials (Group B): Participants received short, content-rich academic passages (~250 words each) embedding the target words naturally. Passages were adapted from introductory textbooks in social sciences and natural sciences to ensure relevance and readability.

2.1 Instruments

1. Vocabulary Knowledge Tests
   - *Receptive Knowledge Test*: A multiple-choice recognition test where learners identified the correct meaning of each target word.
   - *Productive Knowledge Test*: A sentence completion task where learners supplied the correct target word in context. Both instruments were adapted from Nation (2001) and Schmitt (2010) to ensure validity.
2. Feedback Questionnaire
   A 10-item Likert-scale questionnaire captured learner perceptions of effectiveness, engagement, and difficulty. Items were adapted from (Gu, 2003) and piloted for clarity.
3. Semi-Structured Interviews
   Eight participants (four from each group) took part in interviews to provide deeper insights into their experiences. Interviews lasted 15–20 minutes and were audio-recorded, transcribed, and thematically coded.

2.2 Procedure

The intervention lasted four weeks:

- Week 1: Pre-tests administered (receptive + productive vocabulary).
- Weeks 2–3: Instruction delivered over three 45-minute sessions.

Group A studied the word lists through repetition, memorization, and sentence writing.
Group B engaged in reading tasks, comprehension questions, and discussions highlighting the target words.

- Week 3 (end): Immediate post-tests administered.
- Week 4: Delayed post-tests administered to measure retention.
- Week 4: Feedback questionnaires and interviews conducted.

2.3 Data Analysis

Quantitative data (pre-, post-, delayed tests) were analyzed using independent samples t-tests to compare group means, following the recommendation of (Jenifer Larson-Hall, 2010) for applied linguistics studies. Descriptive statistics (means, standard deviations) were reported. Qualitative data were analyzed thematically using (Braun, 2006) six-step framework, with themes emerging inductively from interview transcripts.

3.RESEARCH RESULTS

3.1 Receptive Vocabulary Knowledge

Both groups demonstrated noticeable improvement from pre-test to post-test, confirming that both word list memorization and contextual learning can contribute to receptive vocabulary growth. However, as shown in Table 1, the contextual group achieved significantly higher post-test scores (M = 8.7, SD = 1.1) compared to the word list group (M = 7.1, SD = 1.3).

Table 1. Receptive Vocabulary Scores (Maximum = 10)

Group	Pre-test M (SD)	Post-test M (SD)	Delayed M (SD)
Word List (n = 20)	4.9 (1.2)	7.1 (1.3)	6.4 (1.5)
Contextual (n = 20)	5.0 (1.1)	8.7 (1.1)	8.1 (1.3)

The independent samples *t*-tests confirmed that these differences were statistically significant (t (38) = 3.91, $p < .01$). Importantly, while both groups retained less knowledge at the delayed post-test, the contextual group maintained significantly higher receptive knowledge (M = 8.1 vs. 6.4).

These findings resonate with (Craik, 1972) depth of processing framework, which posits that information processed more deeply—such as vocabulary encountered in meaningful contexts—is more likely to be retained. They also align with (Webb S. , 2007) findings that contextual encounters enhance recognition more effectively than rote memorization.

3.2 Productive Vocabulary Knowledge

Productive knowledge results mirrored receptive knowledge but showed an even wider gap between groups (see Table 2). The contextual group achieved nearly 8 correct items (M = 7.9, SD = 1.4) on the immediate post-test, compared to just 5.6 (SD = 1.7) for the word list group.

Table 2. Productive Vocabulary Scores (Maximum = 10)

Group	Pre-test M (SD)	Post-test M (SD)	Delayed M (SD)
Word List (n = 20)	3.8 (1.1)	5.6 (1.7)	4.9 (1.8)
Contextual (n = 20)	3.9 (1.0)	7.9 (1.4)	7.2 (1.5)

The differences were highly significant (t (38) = 4.12, $p < .001$). At the delayed post-test, the contextual group continued to outperform (M = 7.2) the word list group (M = 4.9). These results strengthen the claim that contextual learning facilitates not only recognition but also the ability to use words actively, which was a central objective highlighted in the introduction. This finding is consistent with (Hulstijn, 2001) who observed that contextual learning produced stronger productive vocabulary outcomes than list memorization.

Both groups experienced some decline between immediate and delayed post-tests, consistent with typical forgetting curves in vocabulary research. However, the contextual group’s performance remained significantly higher across both receptive and productive measures. This suggests that contextual learning slows the rate of forgetting, which supports (Webb S. &., 2017) argument that repeated contextual exposure strengthens memory traces more effectively than isolated repetition.

3.3 Learner Perceptions and Qualitative Insights

The quantitative gains reported in the tests were strongly supported by the mixed-methods analysis. Specifically, the high scores for Engagement (M=4.6) and Perceived Usefulness (M=4.7) in the questionnaire were validated through participant interviews.

Table 3. Learner Perceptions (Likert 1–5)

Dimension	Word List Group M	Contextual Group M
Engagement	3.2	4.6
Perceived Usefulness	3.4	4.7
Long-term Retention	3.0	4.5
Ease of Application	3.1	4.4

While participants using the word list described the process as 'mechanical' and 'boring,' which resulted in lower engagement scores (M=3.2), the contextual group indicated that the reading passages provided a 'natural' framework that facilitated the recall of complex terms. This triangulation of data suggests that the superior test performance of the contextual group is not merely a result of cognitive effort, but also stems from higher learner motivation and a clearer understanding of the vocabulary's real-world utility.

4.Discussion

The results provide strong evidence that contextual learning is more effective than word list memorization for teaching academic vocabulary to ESL learners. The quantitative data showed significantly greater gains in both receptive and productive knowledge for contextual learners, while the qualitative data revealed that learners found contextual methods more engaging and beneficial. Together, these findings support the central argument outlined in the introduction: that deeper cognitive processing enhances retention and transfer. The findings are consistent with earlier studies that emphasize the superiority of contextual approaches. (Rozovski-Roitblat, 2011) similarly reported that contextual learning yielded stronger productive outcomes, while (Webb S. , 2007) demonstrated that repeated exposure in meaningful contexts enhanced retention. The present study extends these findings to the domain of academic vocabulary, confirming that contextualized input is especially beneficial for words that require nuanced understanding and flexible application. The results also corroborate theoretical frameworks:

- Depth of Processing Theory (Craik, 1972): Contextual encounters require semantic elaboration, explaining higher retention rates.
- Involvement Load Hypothesis (Hulstijn, 2001): Contextual tasks demand higher levels of need, search, and evaluation, which lead to superior acquisition compared to rote memorization.

The distinct roles of the two methods can be understood through the perspectives of Cognitive Load Theory and Schema Theory. The function of word lists seems to be limited to offering an initial, low-

stakes framework for surface-level recognition. However, they do not aid in the construction of complex mental schemas.

On the other hand, contextual learning acts as an 'integrator.' By requiring learners to engage in 'search' and 'evaluation' - as suggested by the Involvement Load Hypothesis - the contextual method compels the brain to engage in deeper semantic encoding. This leads to a more substantial neural trace, which explains why the contextual group not only learned more words but also retained them more effectively during the delayed post-test (M=8.1 compared to M=6.4).

The results clarify the distinct roles of the two instructional methods. Word lists serve a 'priming' role, offering immediate but fragile access to word meanings. In contrast, contextual learning functions in a 'constructivist' capacity, enabling learners to build their cognitive schemas. From a cognitive perspective, the success of the contextual group (M=8.7) compared to the word list group (M=7.1) confirms that when Mongolian learners engage in deeper semantic processing, they manage cognitive load more effectively. This leads to more robust long-term memory traces.

4.1 Pedagogical Implications

From a pedagogical perspective, these results have several implications:

1. Teachers should incorporate context-rich activities, such as reading passages, discussion tasks, and problem-solving exercises, to promote deeper engagement with academic vocabulary.
2. Curriculum designers should integrate academic texts and context-based vocabulary tasks into ESL syllabi, ensuring that vocabulary is taught not as isolated items but as part of meaningful discourse.
3. Learners may still benefit from word lists as supplementary review tools, particularly for initial exposure, but lists should not be the sole method of instruction.

4.2 Limitations

While the findings are robust, the study has limitations. The sample size (n = 40) was relatively small, which may limit generalizability. The study also focused only on intermediate learners; results may differ for beginners or advanced learners. Finally, the retention interval was only one week, which does not capture long-term retention patterns.

4.3 Directions for Future Research

Future studies could address these limitations by:

- Including larger, more diverse samples across proficiency levels.
- Extending delayed post-tests over several months to track long-term retention.
- Exploring hybrid approaches, combining the efficiency of word lists with the depth of contextual learning.
- Investigating how digital tools such as AI-based vocabulary apps or adaptive reading platforms can enhance contextual learning opportunities.

CONCLUSION

The findings from this study provide compelling evidence that contextual approaches to academic vocabulary instruction are significantly more effective than traditional word list memorization for intermediate ESL learners. By requiring deeper cognitive engagement through meaningful tasks and discourse-level input, contextual learning led to superior gains in both receptive and productive vocabulary knowledge. These results reinforce key theoretical frameworks on the benefits of elaborate processing and learner involvement.

The pedagogical implications are clear - teachers and curriculum designers should prioritize integrating context-rich vocabulary activities, such as reading passages, discussions, and problem-solving exercises, to promote nuanced understanding and flexible use of academic terms. While word lists may serve as helpful supplementary tools, they should not be the sole instructional method.

Future research should explore how to optimally blend the efficiency of word-level exposure with the depth of contextual learning, as well as leverage emerging digital tools to enhance vocabulary acquisition in naturalistic settings. Expanding the sample size, proficiency levels, and retention intervals will also help solidify the generalizability and long-term impacts of these findings. Ultimately, this study underscores the importance of embedding vocabulary instruction within meaningful, communicative contexts to foster ESL learners' academic language development.

АШИГЛАСАН НОМ ЗҮЙ

1. Baumann, J. F. (2010). What is academic vocabulary? *Journal of Adolescent & Adult Literacy* , 54(1), 4–12.
2. Braun, V. a. (2006). Using thematic analysis in psychology. . *Qualitative Research in Psychology*, 3 (2). pp. 77-101.
3. Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2), 213–238.
4. Craik, F. I. (1972). Levels of processing: A framework for memory research. *Journal of Verbal Learning and Verbal Behavior*, 11(6), 671–684.
5. Dagiimaa, S. (2014). *Enriching students' Russian and English vocabulary based on the native language.* Ulaanbaatar.
6. Elgort, I. (2011). Deliberate learning and vocabulary acquisition in a second language. *Language Learning*, 61(2), 367–413.
7. Gu, P. Y. (2003). Fine Brush and Freehand: The Vocabulary-Learning Art of Two Successful Chinese EFL Learners. *TESOL Quarterly*, 37, 73-104.
8. Hulstijn, J. H. (2001). Some empirical evidence for the involvement load hypothesis in vocabulary acquisition. *Language Learning*, 51(3), 539–558.
9. Hyland, K. &. (2007). Is there an “academic vocabulary”? . *TESOL Quarterly*, 41(2), 235–253.
10. Jenifer Larson-Hall, R. H. (2010). Improving Data Analysis in Second Language Acquisition by Utilizing Modern Developments in Applied Statistics . *Applied Linguistics, Volume 31, Issue 3*, 368–390.
11. Leki, I. &. (1994). Students’ perceptions of EAP writing instruction and writing needs across the disciplines. *TESOL Quarterly,* , 28(1), 81–101.
12. Nansalmaa, B. (2003). *Methodology for developing tests to assess English vocabulary enrichment and usage skills.* Ulaanbaatar.
13. Nation, I. S. (2001). *Learning vocabulary in another language.* London: Cambridge University Press.
14. Nation, I. S. (2006). How large a vocabulary is needed for reading and listening? . *Canadian Modern Language Review*, 63(1), 59–82.
15. Nation, I. S. (2013). *Learning vocabulary in another language (2nd ed.).* . London: Cambridge University Press.
16. Qian, D. D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52(3), 513–536.
17. Rozovski-Roitblat, B. L. (2011). Incidental vocabulary acquisition: The effects of task type, word occurrence and their combination. *Language Teaching Research* , 15(4):391-411.
18. Schmitt, N. (2000). *Vocabulary in language teaching.* London: Cambridge University Press.
19. Schmitt, N. (2008). Review article: Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329–363.
20. Webb, S. &. (2017). *How vocabulary is learned.* London: Oxford University Press.
21. Webb, S. (2007). The effects of repetition on vocabulary knowledge. *Applied Linguistics*, 28(1), 46–65.