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A Comparative Study on Vocabulary Retention Rates among EFL Learners in Higher Education

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A B S T R A C T

Among the most enduring problems of EFL students in higher education are retention of academic vocabulary, particularly in a setting where high demands are placed on EFL learners' knowledge of academic language and where there is little time to devote to instruction. This paper is a qualitative literature review that looks at and compares the features and experiences of the university-level EFL learners in intentional versus incidental instruction, and spaced versus massed practice conditions as reported in the empirical and theoretical literature. This review is based on a systematic search of literature and thematic analysis of peer-reviewed studies, meta-analyses and theoretical accounts that are published mainly in the last 20 years, revealing the experiential and affective aspects of vocabulary learning, which have been studied separately over the years, rather than the instructional outcomes. Thematic synthesis is a six-phase approach that builds on Braun and Clarke's (2006) six-phase framework, which is employed to synthesize the literature and identify four cross-cutting themes: (1) the use of explicit awareness to support vocabulary knowledge; (2) the psychological experience of spacing as confidence-building; (3) the burden of overload in massed instruction; and (4) the interaction between learner motivation and self-regulatory behavior in sustaining vocabulary engagement over time. The implications for curriculum design, EFL teachers, and language program managers in higher education are explored in the context of theories and findings from research in the field.

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دراسة مقارنة لمعدلات الاحتفاظ بالمفردات لدى متعلمي اللغة الإنجليزية بوصفها لغة أجنبية (EFL) في التعليم العالي

مهند احمد جاسم/ كلية العلوم – جامعة تكريت

الخلاصة:

من أكثر المشكلات استمراراً التي يواجهها طلبة اللغة الإنجليزية بوصفها لغة أجنبية (EFL) في

التعليم العالي مشكلة الاحتفاظ بالمفردات الأكاديمية، ولا سيما في بيئة تفرض متطلبات عالية على معرفة المتعلمين باللغة الأكاديمية ويقلّ فيها الوقت المخصص للتدريس. وتُعدّ هذه الدراسة مراجعة أدبيات نوعية تستعرض وتقارن خصائص وتجارب متعلمي اللغة الإنجليزية بوصفها لغة أجنبية على المستوى الجامعي في ظروف التعليم المقصود مقابل التعليم العرضي، والممارسة الموزّعة مقابل الممارسة المكثّفة، كما وردت في الأدبيات التجريبية والنظرية. وتستند المراجعة إلى بحث منهجي في الأدبيات وتحليل موضوعي للدراسات المحكّمة والتحليلات التلوية والأطر النظرية المنشورة في معظمها خلال السنوات العشرين الأخيرة، وتكشف عن الجوانب التجريبية والوجدانية لتعلّم المفردات، التي دُرست بمعزل بعضها عن بعض على مدى سنوات، بدلاً من الاقتصار على نتائج التعليم. واعتُمد التوليف الموضوعي، وهو منهج من ست مراحل يستند إلى إطار برون وكلارك (٢٠٠٦) ذي المراحل الست، لتوليف الأدبيات واستخلاص أربعة موضوعات متقاطعة: (١) استخدام الوعي الصريح لدعم معرفة المفردات؛ (٢) التجربة النفسية للممارسة الموزّعة بوصفها بناءً للثقة؛ (٣) عبء الحمل الزائد في التعليم المكثّف؛ (٤) التفاعل بين دافعية المتعلم وسلوك التنظيم الذاتي في الحفاظ على الانخراط في تعلّم المفردات بمرور الوقت. وتناقش الدراسة الآثار المترتبة على تصميم المناهج ومدرّسي اللغة الإنجليزية بوصفها لغة أجنبية ومديري برامج اللغة في التعليم العالي في ضوء النظريات ونتائج البحوث في هذا المجال.

الكلمات المفتاحية: الاحتفاظ بالمفردات، اللغة الإنجليزية بوصفها لغة أجنبية، التكرار المتباعد، التعلّم المقصود، اكتساب المفردات.

I. INTRODUCTION

1.1 Background of the Study

Vocabulary acquisition and retention are considered to be the basis of competence in language (Nation, 2001). Learners with poor lexical foundation have difficulties understanding academic texts, engaging in the discourse of their subject, and expressing themselves in speaking and writing (Coxhead, 2000). It is particularly challenging in higher education settings: an EFL learner is expected to acquire a wide array of vocabulary in general academic and subject-specific contexts in very short periods of time and in addition to challenging content-area

courses. The question of how to create the most lasting acquisition of vocabulary, and more importantly, what the learners themselves experience in the process, is spread throughout a vast body of research in applied linguistics and second language acquisition (SLA)—a wealth of outcome measures, but a somewhat sparse body of synthesis of the qualitative results (Zeng et al., 2025).

In this review, instead of outcome measurement alone, a qualitative analysis of the synthesis of learner experience and learner perception, as reported in the existing research body, is given priority. This review systematically searches, codes, and synthesizes the documentation and perceptions of learners' experiences in the primary studies and theoretical papers as well as the meta-analyses, to provide insights that address the pedagogical decisions made by EFL teachers in higher education with a primarily outcome-focused literature (Thomas & Harden, 2008).

1.2 Statement of the Problem

The literature on vocabulary acquisition is largely divided into studies on intentionality and on the temporal distribution of practice, and in each of these foci, quantitative measures of the outcome, rather than experiential or perceptual, are predominant (Namaziandost et al., 2020; Webb et al., 2023). When qualitative or affective data are present, they are typically presented in a short section of a larger mixed-methods or quantitative study, rather than integrated into a coherent body of evidence throughout the study. Such a division makes it hard for instructors of EFL in universities to have a unified view of the ways their learners interpret and react to various instruction modes, as well as the affective and motivational components (confidence, anxiety, ownership) involved in the acquisition of vocabulary (Zeng et al., 2025). Motivation for the present review comes from the lack of a comprehensive, qualitatively based account of the gap between the scattered experiential evidence and the need for an integrated account.

1.3 Aims of the Study

The review's purposes are: (1) to synthesize the current literature that characterizes the experiences of EFL learners with intentional versus incidental vocabulary instruction, (2) to synthesize the literature that reports the affective and motivational consequences of the distribution of vocabulary practice (spaced versus massed) for EFL learners, (3) to synthesize the affective and motivational issues identified in the literature across various instructional contexts in which vocabulary instruction occurs, and (4) to generate pedagogically relevant insights that draw together the importance of the qualitative and mixed-methods literature on vocabulary instruction in higher education EFL programs.

1.4 Research Questions

1. What do the current qualitative, mixed-methods, and theoretical studies show regarding the experiences of EFL university learners with intentional versus incidental vocabulary learning and what meanings are associated with the terms in the literature?
2. What are the described outcomes of spaced versus massed distribution of vocabulary practice from the existing literature with regard to over time, the sense of familiarity, sense of confidence, and retention of the vocabulary by the learners?
3. What affective and motivational determinants have been found to affect the learner's involvement in vocabulary learning in various instructional situations across studies?
4. What pedagogical implications can be drawn from the literature available on vocabulary teaching in higher education EFL?

1.5 Significance of the Study

This review enriches the applied linguistics and SLA literature by qualitatively synthesizing evidence on how two major aspects of vocabulary

instruction—intentionality and temporal distribution—studied extensively in terms of outcomes (Namaziandost et al., 2020; Webb et al., 2023) are manifest in the learner's experiences. The synthesis provides a unified perspective of the affective and perceptual aspects of vocabulary teaching that cannot be captured by standardized outcome measures, and is useful for curriculum designers and language program coordinators. In the context of EFL teaching, the review highlights the critical need for learner awareness, perceived relevance, and self-regulatory motivation to go hand-in-hand with properly designed instruction. In a more general perspective, the review highlights those elements of the literature that emphasize the qualitative and experiential aspects that are mentioned throughout it, thus leading to a humanistic and experience-sensitive vocabulary teaching in higher education (Zeng et al., 2025).

1.6 Definition of Key Terms

1.6.1 Vocabulary Retention

The extent of retention of previously learned lexical items for recall, recognition, or use after instruction, as reported in the literature reviewed (Nation, 2001).

1.6.2 Intentional Vocabulary Learning

Deliberate and targeted word study, usually with focused attention on form-meaning mappings (Hulstijn, 2003).

1.6.3 Incidental Vocabulary Learning

Vocabulary learning that is a side effect of meaningful activities like extensive reading, listening, or watching video in which the learner attends to content rather than vocabulary in and of itself (Hulstijn, 2003; Webb, 2020).

1.6.4 Spaced Practice

The distribution of vocabulary study and review over multiple sessions and time, rather than all in one intensive session (Namaziandost et al., 2020).

1.6.5 Massed Practice

Delivering the vocabulary instruction and practice in a single or a few intensive sessions in a short time frame followed by little or no spaced review (Lafleur & Kanazawa, 2024; Namaziandost et al., 2020).

1.6.6 Academic Word List (AWL)

The word families list from Coxhead (2000) includes a large number of similar word families from a broad range of disciplines, which have been widely adopted by some of the studies reviewed here as a source for the selection of target vocabulary items.

1.6.7 Self-Regulation (in Vocabulary Learning)

The learner's intentional planning, monitoring, and evaluating of his/her own vocabulary study, such as self-testing and spaced independent review (Teng et al., 2024).

II. THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

It is important to situate this review in converging theoretical frameworks in order to understand vocabulary retention in EFL contexts. The following subsections outline the memory theories, instructional distinctions, and learner-related factors that frame the synthesis.

2.1 Memory Theories and the Vocabulary Knowledge Framework

Learning theories of memory (especially Ebbinghaus's [1885/1913] forgetting curve) provide the foundation that newly learned information fades quickly if not revisited at opportune moments (Lafleur & Kanazawa, 2024). In the model of working memory proposed by Baddeley and Hitch (1974), the phonological loop and visuospatial sketchpad are the two components that are central to the initial encoding of learners' processing of new lexical items, thus accounting for the constraints that such learners face while processing new lexical items (Thornbury, 2002). Nation's (2001) influential framework of vocabulary

knowledge as form, meaning, and use has had a tremendous impact on the instructional design research of the past 20 years, and it has also been observed that repeated, varied exposures across meaningful contexts are essential for full knowledge of a word.

2.2 Intentional and Incidental Vocabulary Learning

The concept of intentional and incidental vocabulary learning has been a fruitful theme in the literature. Intentional learning is the deliberate and focused study of words, usually with explicit focus on form-meaning mapping. In contrast, incidental learning happens when the learner is engaged in content-focused activities like extensive reading, listening, or watching a video, activities that are meaningful to the learner, but that they are not learning vocabulary for, as the focus is on content rather than vocabulary (Hulstijn, 2003; Webb, 2020). Both approaches have been shown to have significant positive effects on vocabulary, but the relative efficacy of one approach over the other seems to rely heavily on contextual factors such as task design, learner proficiency, and the richness of contextual support provided (Webb et al., 2023). The findings of Reynolds et al. (2022) also showed that the advantage of captioned or subtitled video material for incidental learning can be meaningful, especially when the material used is intralingual captioned material.

2.3 The Spacing Effect: Spaced Versus Massed Practice

In recent years, a considerable amount of consistent and powerful results have emerged in cognitive psychology and SLA research, especially in relation to the temporal dimension of practice. The spacing effect, a well-documented benefit of spaced practice over massed practice in promoting long-term retention, has consistently been demonstrated; massed practice, which has been shown to have short-term memory benefits, has also been shown to produce rapid forgetting (Namaziandost et al., 2020). A meta-analytic study on the effect of spaced versus

massed vocabulary learning conditions further validated the spaced practice effect for delayed retention tests (Lafleur & Kanazawa, 2024). So, if a learner encounters and practices a new word across a variety of sessions over two weeks, he or she is more likely to remember it for a longer period of time than a learner who studies the word in a single session within the same two weeks.

2.4 Technology-Mediated Spaced Repetition

Interest has been renewed in this topic with the introduction of spaced repetition algorithms in technology-assisted vocabulary learning. There is evidence that digital flashcard platforms with spaced repetition scheduling techniques provide better long-term retention results than paper flashcards or word lists, primarily because they "tune the timing of review" to overcome the forgetting curve (Frontiers in Education, 2024). Boroughani et al. (2023) reported in their study on the effect of spaced repetition systems (SRS) on the retention of target vocabulary over a six-month period that mobile-assisted learners achieved a very high level of retention of the target vocabulary even after a long period of non-revision. This study puts this review in a wider technological context and emphasizes the cognitive process involved (spacing) instead of the medium in which it is offered.

2.5 Learner-Internal Variables and Depth of Processing

Instructional conditions are further complicated by their interaction with variables within the learner. Self-regulation has been identified as a crucial factor influencing the success of vocabulary learning, and those who strategically plan, monitor, and evaluate their vocabulary studies tend to acquire a more comprehensive and in-depth vocabulary (Teng et al., 2024). Motivational orientation (intrinsic motivation) has also been found to be associated with the diversity of vocabulary study strategies and with persistence (Almansour & Almaneea, 2024; Frontiers in Education, 2024). The idea of depth of processing

suggests that words which are processed at deeper semantic levels (elaboration, association, meaningful use) are more deeply encoded and are forgotten less quickly than words which are processed at superficial levels (Craik & Lockhart, 1972). A theoretical implication for instructional design is that practicing the target vocabulary in sentences, analogies, and concept maps should yield greater long-term retention than decontextualized vocabulary drills.

2.6 Vocabulary Learning Strategies

Another stream of research pertinent to vocabulary learning is the research on vocabulary learning strategies. Chou (2024) validated a full-scale inventory of vocabulary learning strategies for EFL university learners, and concluded that success in vocabulary knowledge depth was best predicted by cognitive and metacognitive strategies such as note-taking, contextual inferencing, and self-testing. A bibliometric study spanning more than three decades found that the most fruitful merging in the applied linguistics literature was between strategy-based teaching and self-regulated learning (SRL) (PMC, 2025).

2.7 Gaps in the Literature

Although this body of literature is considerable, there are still significant gaps. The experiential and affective aspects of vocabulary learning, those aspects related to the feelings that learners have about, the interpretation of, and responses to various modes of vocabulary instruction, have been comparatively neglected, and when they are reported, they are dispersed across studies that focus on some other aspect of vocabulary learning. The present review aims to fill this gap by summarizing the qualitative and experiential strands of this body of research in a systematic way.

III. METHODOLOGY

The design for this study is a qualitative literature review with thematic synthesis methodology to synthesize and integrate empirical, theoretical, and

mixed-methods research related to vocabulary instruction and retention of EFL learners in higher education. Instead of gathering new primary data, the review systematically searches, appraises, and synthesizes results from existing studies, including the experiential and qualitative aspects that may have been reported within quantitative and mixed-method studies, on two key dimensions: intentionality of instruction (intentional versus incidental) and temporal distribution of instruction (spaced versus massed).

3.1 Research Design

The qualitative thematic synthesis design (Thomas & Harden, 2008), a modification of Braun and Clarke's (2006) thematic analysis of primary data, is used in the review to move from primary data to a corpus of published research. It is useful for integration of results from studies concentrating primarily on outcome measures, but reporting briefly or secondarily results of learner perception, experience, and affect. Both descriptive coding, essentially describing what the individual studies report, and the development of higher-order analytical themes that span across the reviewed literature can be obtained from thematic synthesis, themes that individual primary studies, when viewed individually, may not fully describe.

3.2 Search Strategy and Sources

A comprehensive search was done in major databases in the fields of applied linguistics and education (Scopus, Web of Science, ERIC, and Google Scholar) with a range of vocabulary-related terms such as “vocabulary retention,” “EFL,” “incidental vocabulary learning,” “higher education,” “higher education vocabulary learning,” “higher education incidental vocabulary learning,” “spaced repetition,” and “massed practice.” Only peer-reviewed journal articles, meta-analyses, and book chapters published primarily over the last 20 years have been included, and priority has been given to articles published in the last five years, to

reflect new developments such as those using technology-assisted spaced repetition. Studies were only included if they focused on intentional/incidental and/or spaced/massed dimensions of vocabulary instruction in EFL contexts and reported results that related to learners' perception, experience, confidence, motivation, and/or self-regulation, either qualitatively, quantitatively, or in a mixed-method design, in higher education environments. Only outcome-based studies were included if discussion sections provided interpretive/experiential commentary that was relevant to the thematic focus of the review.

3.3 Corpus of Reviewed Literature

The reviewed corpus includes basic theoretical background papers (e.g., Hulstijn, 2003; Nation, 2001; Craik & Lockhart, 1972); meta-analyses that combine quantitative results from a range of primary studies (e.g., Webb et al., 2023; Reynolds et al., 2022; Lafleur & Kanazawa, 2024); and empirical papers (e.g., Teng et al., 2024; Almansour & Almaneea, 2024; Chou, 2024; Boroughani et al., 2023), including those using structural equation modeling, quasi-experimental designs, and mixed-methods approaches, which report on the use of language learning strategies, language learning motivation, and self-regulation skills of language learners. This gave the synthesis the ability to access both the cognitive processes involved in vocabulary acquisition and the experiential and motivational processes mentioned, though of course briefly, in the primary research.

3.4 Thematic Synthesis Procedure

The synthesis was carried out in the following steps, based on Braun and Clarke's (2006) six-step approach to analyzing a corpus of published studies: familiarization with the entire set of reviewed studies; open coding of reported findings, interpretive commentary, and theoretical statements relevant to the learner experience and learner affect; construction of descriptive themes that represent patterns of convergence and divergence across the studies; review and

refinement of candidate themes against the full set of reviewed studies; definition and naming of final analytical themes; and production of the synthesized analytical account in Section IV. A subset of the corpus was coded twice, independently, and differences in interpretation were discussed, increasing the confidence of the resulting thematic framework.

3.5 Reflexivity and Methodological Considerations

Since this review is a qualitative synthesis of secondary literature, it depends on the way that individual study authors reported learner perception, affect, and experience, which, again as mentioned in Section I, is often less well reported than outcome data. In this synthesis, the scarce interpretive commentary in the studies was analytically significant, as the review as a whole suggested that the experiential aspects of vocabulary learning have been comparatively under-documented in the field. The synthesis is not intended to make causal statements about the effectiveness of instruction, but rather to describe trends in the ways that the conditions for instruction are reported across the literature.

IV. THEMATIC SYNTHESIS

The corpus was synthesized to give four themes, which help to highlight the ways in which instructional methods for words are described in the literature, specifically regarding the learner's perception of experience, as well as confidence and motivation.

Theme 1: Explicit Awareness as an Anchor for Vocabulary Knowledge

A common finding throughout the studies looking at intentional instructional methods, with both spaced and massed delivery, is that the deliberate, form-focused instruction is correlated with increased attentional awareness toward the target vocabulary. This awareness is a key aspect of intentional learning, as Hulstijn (2003) argues: in incidental learning, learners have no clear awareness of what they are learning, whereas in intentional learning the learners are aware of the

words that are being taught. This pattern is supported by the meta-analysis of Webb et al. (2023), which revealed consistent vocabulary development across explicit conditions and greater gains from explicit over incidental conditions under certain contextual conditions, including the richness of contextual supports and task design.

In contrast to studies of incidental vocabulary learning in meaning-oriented activities like extensive reading or captioned video, which have reported actual vocabulary acquisition (Reynolds et al., 2022), very few studies report that learners feel a sense of intentional ownership over the vocabulary that they acquire. Incidental tasks seem to be comprehension oriented and focus learners' attention on content, rather than form, and result in acquisition of vocabulary that, as a number of authors have commented, is less open for learners to keep track of or credit to individual instructional episodes. The metacognitive clarity between the direct and transparent instruction of intentional knowledge and the indirect, less transparent acquisition of incidental knowledge is consistent in the literature, regardless of which approach is shown to produce greater measured learning gains.

Theme 2: Spacing, a Confidence-Building Experience

A second theme is the unique experiential effect that spaced practice has on learning, beyond its proven retention benefits. The spacing effect is one of the most consistent results of cognitive psychology and SLA, and in the case of vocabulary learning, delayed retention test results show that spaced distribution of vocabulary practice is consistently superior to massed distribution of vocabulary practice (Lafleur & Kanazawa, 2024; Namaziandost et al., 2020). Affective and motivational aspects of retention, however, are less often foregrounded, though recoverable across the literature when affective and motivational aspects of spacing are studied; spacing seems to be a confidence-building motivational experience in addition to its cognitive retention benefits.

The pattern is best illustrated in studies of technology-mediated spaced repetition. Boroughani et al. (2023) conducted a six-month follow-up study of mobile-assisted learners that not only showed better long-term retention, but also indicated that the pattern of learning matched the tendency to continue in the long term, pointing to incremental, noticeable improvement as a factor that maintained motivation for engaging with the vocabulary review. Likewise, studies investigating digital flashcard systems that integrate spaced repetition scheduling report better long-term results due to the efficient timing of review (Frontiers in Education, 2024), which is consistent with learners perceiving each successful review as a confirmation of a building, lasting knowledge. The literature indicates that spaced conditions encourage a qualitatively different sequence of increasing familiarity—a sequence that seems to build learners' confidence and that, in turn, facilitates their productive application of new vocabulary in academic writing and engagement in conversation.

Theme 3: The Burden of Overload in Massed Instructional Conditions

The third theme, which is essentially the reverse of the second, is the burden of cognitive and motivational overload posed in studies of massed vocabulary instruction. A theme that has been reported throughout the massed-practice literature is what is often described as a short-term learning phenomenon, followed by disproportionately large forgetting (Lafleur & Kanazawa, 2024), which can be understood within the context of the foundational insight of the forgetting curve from Ebbinghaus (1885/1913). Namaziandost et al. (2020) reported that massed practice could be linked to high initial retention on immediate tests, but that this advantage did not carry over to delayed tests, where spaced practice performed better; this finding has important implications for the learner's likely experience of what they recall from their own word learning in the weeks after focused instruction.

While there have been only a few studies in the corpus that explicitly mention the affective reactions of learners to this process of forgetting (such as Almansour & Almaneea, 2024), the available evidence, as will be discussed in the following sections, indicates that the difference between the initial sense of competence and the subsequent failure to remember may have a demotivating, confidence-weakening effect which cannot be captured by pure outcome measures. This marks another area of the literature that was highlighted as needing further study by systematic reviews of vocabulary instruction (Zeng et al., 2025) and which should be considered by curriculum designers when planning to embed vocabulary instruction in a dense, front-loaded schedule for convenience rather than pedagogical need.

Theme 4: Motivation and Self-Regulation as Mediating Forces

A fourth overarching theme is related to the mediation of instructional conditions to vocabulary retention by learner-internal variables such as motivation and self-regulation. Teng et al. (2024) have shown through structural equation modeling that Chinese undergraduates' self-regulation plays an important mediating role between their vocabulary learning strategy use and depth of vocabulary knowledge, and Almansour and Almaneea (2024) have found that intrinsic motivation is an important mediator of strategy use and persistence in vocabulary learning. This trend is reinforced by Chou's (2024) validation study of a vocabulary learning strategies inventory with EFL university learners that indicated that cognitive strategies, such as note-taking, contextual inferencing, and self-testing, significantly predicted the depth of vocabulary knowledge, whereas the other more passive or one-off vocabulary learning strategies were not as predictive.

This literature provides a plausible interaction: repeated, planned instructional conditions may provide structural opportunities for the review of

patterns that are conducive to the systematic self-regulatory behavior (self-testing, habitual review) that is associated with better outcomes, whereas the disillusioning experience of forgetting that occurs under massed conditions may negatively affect how learners value continued independent review, even when it is beneficial. More generally, the results of Bayabel and Tahir (2023) on strategy training further substantiate the idea that self-regulatory engagement is not merely a learner's characteristic, but rather a product of the instructional environment. This cross-over from otherwise separate lines of literature is one of the more educationally significant trends that were found in this synthesis.

V. DISCUSSION

The synthesis above is related to and builds on a number of lines of research found in the SLA and applied linguistics literature. The pattern identified in Theme 2 aligns with theoretical predictions of the spacing effect (Lafleur & Kanazawa, 2024; Namaziandost et al., 2020), and the unique signature of spacing that is experiential and motivational in nature, as suggested by patterns of sustained engagement in longitudinal and technology-mediated studies (Boroughani et al., 2023), is one that massed instruction seems to lack.

In an environment of massed conditions, it can be said that the theme of burden-of-overload is a feature in instructional design that is often less well captured by outcome measures. The implications for curriculum designers are direct if students who experience rapid post-massed forgetting also experience a degree of self-efficacy erosion, as suggested by the synthesized literature. The synthesis presented here makes this a space worthy of more direct empirical and qualitative focus, as the corpus explored here in its major part makes inferences about such an affective dimension through other motivational literature situated in the periphery.

The advantage of intentional instruction is demonstrated in the explicit-awareness theme, which is consistent with the meta-analysis of Webb et al. (2023) showing that intentional conditions result in significant increases in vocabulary. The present synthesis contributes to this finding by suggesting that the explicit awareness developed through explicit teaching has a dual impact: it can have a cognitive one, through attention and encoding, but also a motivational one, as it gives the learner a more tangible, visible impression of his or her own vocabulary development than incidental teaching does. While recognized in the literature as authentic and meaning-centered (Reynolds et al., 2022; Webb, 2020), incidental learning is also significantly less transparent in terms of its effects, which may make it more difficult for learners to reflect on and take ownership of their own vocabulary development.

This self-regulation theme is in line with Teng et al. (2024), who modeled self-regulation as a mediator between strategy use and lexical knowledge outcomes, and with the findings of Almansour and Almaneea (2024) that motivation has an influence on strategy diversity. The present synthesis extends the current findings by suggesting, based on the convergence of Themes 2–4, that instructional context may influence the likelihood and quality of self-regulatory engagement: spaced, intentional instruction conditions seem, across the reviewed literature, to be conditions for increased likelihood of self-regulation to flourish, while massed conditions may inadvertently suppress self-regulation by fostering a cycle of effort and disillusionment. This synthesized pattern has implications for a new conception of vocabulary instruction where the design and the internal aspects of the learner's experience are not discrete but co-determinate, a notion that is ripe for investigation through future primary research, including qualitative and longitudinal studies.

This synthesis highlights the importance of the dimension of depth of processing (Craik & Lockhart, 1972). The more sustainable vocabulary measures (those that indicate flexible use based on context) generally portray students who are experiencing words at a number of semantic levels, including through analogy, collocations, and experimenting with words in original writing (Strong, 2023). This is in line with Nation's (2001) focus on word use as the highest level of understanding of vocabulary and confirms the other overall trends that emerged from this review: that target words are best remembered, and best received, when the context of instruction facilitates meaningful, repeated, and self-directed interaction with those words.

VI. CONCLUSION

The purpose of this qualitative literature review was to summarize and draw conclusions about the existing empirical, theoretical, and mixed-methods research literature on university-level EFL vocabulary instruction from an intersecting perspective of intentionality and temporal distribution of practice with a focus on the learner's experience, self-confidence, motivation, and self-regulation. The compiled literature indicates that, in addition to the outcomes of the measured retention benefits, the profile of spaced versus massed or purely incidental instruction appears to contain qualitative distinctions in how learners may experience vocabulary development, in their positioning to engage in self-regulated study, and in their self-confidence in using new words in productive academic settings.

This synthesis provides a number of pedagogically relevant insights for EFL instructors and program coordinators in higher education. Vocabulary should be spread throughout the semester, not concentrated at the beginning—both because of the effect of spacing on successful retention and because of the literature that indicates that it provides a motivating experience of incremental growth that allows

learners to persist in their engagement. Target words should be explicitly and deliberately targeted, with metacognitive transparency for the learner, so that they can monitor and feel a sense of ownership over their vocabulary development. Self-regulated vocabulary development should be facilitated by explicit strategy instruction and reflection. However, the affective aspects of vocabulary instruction (confidence, anxiety, and ownership of one's lexical knowledge) appear to be underrepresented in current research and even less in instructor awareness, in comparison with outcome measures.

There are some limitations to this review. It is a qualitative synthesis of secondary literature; the extent to which individual study authors chose—or did not choose—to report learner perception, affect, and experience limits the extent to which patterns are identified here, especially in relation to the affective burden of massed instruction, which is inferred from adjacent findings. Another influence on the reviewed corpus is the geographic, linguistic, and institutional background of the published materials, which may restrict the generalizability of some patterns to other EFL contexts. In addition, the synthesis does not allow causal inferences to be made regarding the impact of instructional conditions on vocabulary outcomes. Primary qualitative and longitudinal studies, specifically designed to capture learners' affective and motivational experiences under intentional/incidental and spaced/massed conditions, are recommended for future research, along with qualitative research investigating the affective and motivational learning experiences produced by the use of technology-mediated spaced repetition tools. Despite this, the present synthesis offers a literature-based foundation for vocabulary education which can be refined in humanistic and evidence-based ways in higher education EFL programs.

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