

ARTICLE

Exploring Vocabulary Learning Strategies and Beliefs Among Saudi Female EFL Undergraduates: A Case Study at Majmaah University

Deem Abdulrhman AlBatel^{1*} , Sami Hussein A. Ahmed^{1,2} 

¹ Department of English Language, College of Education, Majmaah University, Al Majma'ah 11952, Saudi Arabia

² Department of English, College of Languages, University of the Holy Quran & Islamic Sciences, Khartoum 11111, Sudan

ABSTRACT

Learning vocabulary effectively is still a major issue for many English language learners, enrolled in English programs at universities. These students have particular obstacles to their lexical development that stem from cultural customs, limited exposure to real world English communication situations outside of the classroom, and differences in their learning styles and aptitudes. This mixed-methods study aimed to examine vocabulary techniques and beliefs among students at Majmaah University, identify the vocabulary learning strategies employed by Saudi female undergraduate students, and examine variations in strategies between junior and senior levels. Finding helpful vocabulary-building strategies will assist maximize results, especially for this important learner population in the nation's educational system. A validated online survey explored participants' frequency and views about their preferred technique. The experiences of learners in vocabulary acquisition were then profoundly qualitatively revealed through further semi-structured interviews. Using dictionaries, cognitive inferencing, and activation emerged as the most common cognitive strategies, according to quantitative evaluation. Less often, metacognitive and social techniques were described. Qualitative research revealed strategic flexibility associated with the competency level and barriers to flexible language use related to ideological foundations. Saudi female undergrads demonstrated a greater reliance on direct memorization than on thoughtful approaches. Official regulations outlined certain acceptable language uses. To gradually increase vocabulary

*CORRESPONDING AUTHOR:

Deem Abdulrhman AlBatel, Department of English Language, College of Education, Majmaah University, Al Majma'ah 11952, Saudi Arabia;
Email: d.albatel@mu.edu.sa

ARTICLE INFO

Received: 9 April 2024 | Revised: 10 August 2024 | Accepted: 14 October 2024 | Published Online: 10 December 2024

DOI: <https://doi.org/10.30564/fls.v6i6.7315>

CITATION

AlBatel, D.A., Ahmed, S.H.A., 2024. Exploring Vocabulary Learning Strategies and Beliefs Among Saudi Female EFL Undergraduates: A Case Study at Majmaah University. *Forum for Linguistic Studies*. 6(6): 634–652. DOI: <https://doi.org/10.30564/fls.v6i6.7315>

COPYRIGHT

Copyright © 2024 by the author(s). Published by Bilingual Publishing Co. This is an open access article under the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License (<https://creativecommons.org/licenses/by-nc/4.0/>).

retention over time, educators might suggest experimenting with extra strategies and flexibility in pedagogical language activities.

Keywords: Vocabulary Learning Strategies; Saudi Female EFL Undergraduates; Beliefs Towards Vocabulary Learning Strategies

1. Introduction

Learning new vocabulary is crucial for students studying English as a second or foreign language. Vocabulary knowledge lays the foundation for developing proficiency since words are the basic units that convey meaning. This is especially pertinent for learners in contexts where English is not commonly used outside the classroom, such as in many countries where English is taught solely as a school subject. Without exposure to English in authentic settings, students must rely heavily on intentional vocabulary learning strategies to progress. Acquiring a working language level involves mastery of thousands of words. However, vocabulary size has proven implications for language performance in reading comprehension, conversational fluency, and academic achievement. Insufficient vocabulary holds learners back from fully engaging with the target language. Thus, exploring effective methods and pedagogical approaches for building substantial lexicons is essential for supporting EFL students' language development goals. While the study of vocabulary instruction has a long history, approaches must be tailored to diverse learning contexts to optimize outcomes for all learners.

Numerous studies have delved into methods for acquiring vocabulary. Schmitt and Zimmerman^[1] revealed that learning words in real-life situations enhances students' comprehension and retention. This aligns with Laufer and Hulstijn's, Nation's research^[2]. Their study also investigated how engagement and active participation contribute to learning. They discovered that employing strategies involving reflection on word meanings improves memory retention. Similarly, the Nations study explored the influence of memory techniques on acquisition^[3]. His findings highlighted that processing approaches, such as visualization and association building, enhance learners' ability to recall and apply new words later Kolaiti^[4]. Ad-

ditionally, using memory aids or mnemonic devices has proven beneficial in retaining vocabulary. Chen and Lin^[5] observed that visualization and association aid students in memorizing words. These findings are consistent with Rahimi and Katal's research on memory-enhancing strategies for acquiring vocabulary^[6].

Research has shown that utilizing games and activities to introduce students to vocabulary can enhance their learning experience. A study by Li and Wang revealed that games captured students' interest and facilitated their grasp of words^[7]. By engaging students in focused games and tasks, their motivation and retention of new terms were notably elevated compared to conventional teaching methods. Incorporating an element of fun makes learning words engaging and memorable for language learners.

Moreover, it is crucial to acknowledge that students may have learning preferences. Zhang and Liu^[8] emphasized the significance of tailoring teaching approaches according to each student's learning style. Cheng and Dörnyei, and Liang and Zhang^[9,10] also highlighted the importance of considering a student's current level of English proficiency when determining the most effective strategies for them.

In line with this, acquiring and retaining words is crucial for mastering English. The size of a person's vocabulary is significant as it influences the meaning and depth of a language. However, many students need help with language proficiency. This has led to an exploration and study of acquisition in second language education. However, there remains debate and differing opinions on this topic.

The acquisition of a second language is of utmost importance for Saudi female undergraduate students studying English, particularly emphasizing the significance of vocabulary learning. Nevertheless, these pupils encounter challenges in acquiring vocabulary, leading to inadequate

English language skills. This appears to be due to a lack of complete comprehension and utilization of practical techniques for acquiring terminology, which, viewed from a different perspective, could be enhanced by using more inclusive ways of understanding meanings and practical techniques for learning new words Lewyckyj^[11].

The relevance of English proficiency in Saudi Arabia has grown in prominence due to globalization and the country's Vision 2030, which underscores its importance for economic advancement and international partnerships. However, a distinct requirement exists for enhanced English language aptitude among Saudi learners of English as a Foreign Language (EFL), namely in vocabulary acquisition, as it forms the foundation of language acquisition. The inadequate acquisition of vocabulary can be ascribed to a need for more comprehension and utilization of efficacious strategies for learning vocabulary Sari & Aminatun^[12].

The prevalence of this issue is particularly notable among female Saudi undergraduate students studying English as a Foreign Language (EFL), who constitute a substantial proportion of the EFL learner demographic in the nation Mahdi et al.^[13]. These students' vocabulary learning practices and beliefs may be influenced by their distinct cultural and educational backgrounds; nevertheless, there is a lack of sufficient research on these aspects. Hence, it is crucial to examine the vocabulary acquisition techniques utilized by this particular population and comprehend their perspectives on successful vocabulary learning.

Inspired by that research and driven by my interest, I decided to carry out a similar project on vocabulary learning strategies in the Saudi context, focusing on Saudi female university students. This research aims to investigate the attitudes held by female learners in Saudi Arabia, with the primary aim of providing insights into educational methods and improving vocabulary acquisition within this particular group. Through a comprehensive analysis of the distinct tactics employed by junior and senior students, this research endeavour aims to provide a valuable contribution towards identifying instructional approaches that effectively promote vocabulary acquisition among female learners in Saudi Arabia. Additionally, the study will provide insight into the tactics utilized by the students, as

mentioned earlier.

2. Research Questions

1-What are the most utilized vocabulary learning strategies among Saudi female EFL undergraduates at Majmaah University?

2-To what extent do the vocabulary learning strategies employed by junior and senior students vary?

3-What are the beliefs of Saudi female EFL undergraduates at Majmaah University towards vocabulary learning strategies?

3. Research Hypotheses

1. There is no significant difference between juniors and seniors in using vocabulary strategies

2. There is no significant difference between juniors and seniors in their beliefs about effective vocabulary strategies

4. Theoretical Background

4.1. Second Language Acquisition Theory and Vocabulary Learning

Vocabulary learning strategies are techniques students use to better understand and remember new words. Rebecca Oxford developed a taxonomy of strategy types, including memory, cognitive, compensation, metacognitive, affective, and social strategies. Memory strategies help store and retrieve words through repetition, association, and review.

Cognitive strategies involve deeper processing, such as analyzing words through classification, deduction, imagery, keyword method, etc. Compensation techniques help use context to infer the meanings of unknown words. Metacognitive strategies involve self-monitoring, evaluating, planning, and regulating one's learning, while affective strategies lower anxiety and make vocabulary fun through music and games. Social strategies involve cooperating with others.

Research indicates that nurturing creativity positively impacts vocabulary learning. In their book, Chen

and Yuhua^[14] found lessons involving role-plays, storytelling, and art projects helped students build richer word representations, improving recall over time versus rote memorization. Creativity may also benefit Saudi female learners' vocabulary outcomes Pipes^[15].

Effective strategy instruction trains learners on specific strategies, explains benefits, models usage, and encourages experimenting until strategies are automated. Vocabulary notebooks encourage learners' autonomy by tracking new words and strategic processes.

Technologies provide new opportunities for strategy-based games and apps. Overall, a multidimensional approach integrating various Oxford strategy types appears most successful for developing depth and breadth of lexical competence. Instructors can help vocabulary acquisition by teaching strategies explicitly.

Second Language Acquisition theories provide insights into vocabulary acquisition's cognitive and affective processes. For instance, the Input Hypothesis by Stephen Krashen emphasizes the importance of exposure to comprehensible input for language learning^[16]. The Input Hypothesis and Noticing Hypothesis provide a theoretical framework to guide vocabulary instruction for this learner population. Krashen's Input Hypothesis emphasizes that extensive exposure to comprehensible written and spoken language in meaningful contexts implicitly facilitates vocabulary acquisition. Teachers can apply this by selecting engaging input materials that immerse learners in rich language while lowering anxiety. Frequent encounters with new words in interesting topics support implicit learning, as proposed by Krashen.

Educators can draw learners' attention to target vocabulary and provide opportunities to verbalize new knowledge. This encourages active noticing, which is shown to aid explicit learning processes. Understanding how classroom input and noticing techniques interact with students' naturalistic strategy use could offer insights into optimizing vocabulary outcomes. For example, incorporating student-preferred strategies into input-based lessons synergistically strengthens implicit and explicit processing.

Collectively, these theories provide a lens for interpreting inventory findings in service of evidence-based

pedagogical revision. The research aims to guide dynamically integrating strategically selected input and noticing activities validated by this context to support sustainable vocabulary development among female Saudi undergraduates.

Additionally, Richard Schmidt's Noticing Hypothesis highlights the role of conscious attention and awareness in language learning^[17]. This implies that explicitly drawing Saudi female learners' attention to new vocabulary items and facilitating their noticing can enhance retention and understanding.

By aligning vocabulary learning strategies with these theoretical perspectives, educators can design activities that promote exposure to comprehensible input, encourage conscious noticing of vocabulary, and provide opportunities for meaningful use and practice.

Research on vocabulary learning strategies in SLA has provided valuable insights into various approaches and techniques to enhance vocabulary acquisition. However, it is essential to contextualize these strategies to meet the specific needs and preferences of Saudi female EFL undergraduate students. By tailoring vocabulary learning strategies to their cultural and educational context, educators can create an engaging and effective learning environment that promotes vocabulary acquisition and language development Liu & Wu^[18].

By understanding the specific vocabulary learning strategies these learners employ, educators can develop more effective teaching and learning strategies to improve vocabulary acquisition, such as:

1. Identification of effective strategies: The research can identify these learners' vocabulary learning strategies. This information can help educators focus on teaching and reinforcing these strategies as they acquire vocabulary effectively.

2. Tailored instruction: By understanding the vocabulary learning strategies employed by Saudi female EFL undergraduate students, educators can tailor their instruction to meet the specific needs of these learners. They can incorporate these strategies into their teaching methods and provide targeted guidance and support.

3. Encouragement of various strategies: The research can highlight the importance of using various vocabulary

learning strategies, including cognitive, metacognitive, and social strategies. Educators can encourage learners to explore and experiment with different strategies to find the best ones.

4. Metacognitive and social strategies: The research findings suggest that learners who use more metacognitive and social strategies, such as planning and asking for help, achieve higher scores on vocabulary tests. Educators can emphasize the importance of these strategies and guide learners in using them effectively.

5. Future research and interventions: The research can serve as a foundation for future studies on the effectiveness of different vocabulary learning strategies on the vocabulary acquisition of Saudi female EFL undergraduate students. This can lead to the development of targeted interventions and instructional approaches to further enhance vocabulary acquisition among these learners.

To sum up, investigating vocabulary learning strategies for Saudi female EFL undergraduate students can provide valuable insights and guidance for educators, leading to more effective teaching and learning practices that can improve vocabulary acquisition in this context.

5. Literature Review

Considerable research has explored vocabulary learning strategies employed by language learners across educational contexts. Within the Gulf region, preliminary investigations provide insights into approaches utilized among Saudi English language learners. Al-Qahtani ^[19] conducted initial research surveying 50 male and female undergraduate students, finding cognitive operations like memorization and encoding dominated. Building upon this, Al-anezi ^[20] investigated strategies among 300 secondary and university students, confirming reliance on repetition, dictionary consultation, and guessing from context.

Moreover, Al-Mansour ^[21] sampled 200 male and female university ESL undergraduates through Schmitt's ^[1] SILL in one of the few Saudi gender-focused examinations. Results revealed that while both genders employed various cognitive, metacognitive, and social/affective strategies, females demonstrated slightly stronger tenden-

cies toward metacognitive planning, monitoring, and evaluating approaches during acquisition.

Meanwhile, focusing specifically on metacognitive awareness, Alghamdi ^[22] administered the MAI inventory to 100 male undergraduate English majors, identifying relationships to motivational orientations and performance. Links between metalinguistic reflection and motivated engagement emerged, warranting further investigation.

Lastly, concerning technology-enabled vocabulary practices, Aljadid ^[23] conducted a mixed-methods study comparing digital flashcards versus traditional notecards among 60 female secondary students. Findings demonstrated significantly enhanced word retention and positive perceptions of convenience from the computerized resource.

Internationally, research has further explored relationships between vocabulary strategy use and other factors. For example, Tseng et al. ^[24] identified significant links between intrinsic motivation, perceived strategy effectiveness, and frequency/diversity of strategy deployment among Taiwanese EFL university students.

Gu and Johnson ^[25] conducted one of the seminal studies comparing strategies used by Chinese and American university students to learn either English or French as a foreign/second language. Using a vocabulary learning strategy inventory explicitly developed for the study, data was collected from 176 participants. Results indicated differences in strategy preferences based on first language, target language, gender, and proficiency level. For instance, Chinese students relied more heavily on dictionaries as a reference tool than their American counterparts, who utilized vocabulary cards/lists more frequently for practice and review.

Oxford and Burry-Stock ^[26] conducted a large-scale investigation examining potential cultural influences on language learning strategy use among ESL students from diverse linguistic and sociocultural origins. A total of 2,169 participants representing over 20 different language backgrounds completed the SILL (Strategy Inventory for Language Learning) questionnaire. Statistical analysis revealed significant effects of ethnicity and language area on preferred learning strategies. For example, Asian and Latin American students reported employing memory strate-

gies, such as grouping and imagery, more so than students from other regions. European students tended to use more metacognitive approaches like planning and evaluating their learning process. Such findings demonstrated the impact of sociocultural factors on language learners' strategic choices.

Building upon previous smaller-scale explorations, Cohen and Macaro^[27] conducted an extensive comparative analysis of vocabulary learning strategies between English, French, and Italian students studying a foreign language at the university level. A total of 901 participants completed a survey assessing the use of 26 different strategies across cognitive, metacognitive, and social dimensions. Results indicated significant differences in preferred strategies depending on language. For instance, English students were found to rely more heavily on dictionary usage, while Italian learners employed social strategies like cooperation more. Overall frequency and diversity of strategy used also varied, with Italian students reporting the most frequent and varied approach. Such cross-linguistic and cross-cultural findings provided a more profound understanding of contextual influences.

These studies provide preliminary insights into vocabulary learning strategies among Saudi English learners. However, more targeted examinations of acquisition behaviors specific to Saudi female undergraduates are still needed.

6. Methodology

6.1. Research Design

To comprehensively address the research questions, this study employed an explanatory sequential mixed methods design Creswell^[28]. This two-phase design begins with a quantitative strand to collect numerical data, followed by a qualitative component to explore emerging understandings Ivankova et al.^[29]. This design aims to objectively assess vocabulary learning strategies using a structured questionnaire while gaining contextualized perspectives through subsequent semi-structured interviews harraf & Bailey^[30].

6.2. Research Procedure

The study employed a mixed methods methodology to address the research questions comprehensively. A quantitative phase was used to collect numeric data on critical variables through a questionnaire. Specifically, a self-report survey adapted from Hadi and Guo^[31] was administered to efficiently gather descriptive information on strategies and beliefs using closed-ended items rated on a Likert scale. This allowed for trends in the target population to be quantifiably described.

A qualitative strand was also incorporated to gain deeper insights. Semi-structured interviews were conducted following an open-ended question guide designed by the researcher. In line with recommendations for case study research, interviews were audio-recorded and transcribed verbatim to examine the phenomena systematically. Thematic analysis was then applied to identify prominent themes within the interview transcripts, as described by Braun and Clarke, and Jovchelovitch and Bauer^[32,33].

By sequentially merging quantitative and qualitative components through a mixed methods approach, the study comprehensively explored the research problem, as advocated by Creswell and Poth, and Johnson and Onwuegbuzie^[28,34].

6.3. Sampling

For sampling, stratified selection, as per Ary et al.^[35], drew 80 participants for the questionnaire, while purposeful sampling, as suggested by Braun and Clarke, and Creswell and Poth^[28,32], recruited 12 interviewees. This supported analyses specifically for the population of interest in line with Ivankova and Plano Clark's^[29] research aims.

The recruitment criteria for participants were:

- Saudi female undergraduates enrolled at Majmaah University
- Studying English as a foreign language
- Between the academic levels of junior and senior

This allowed for a targeted examination of the specific learner population of interest.

6.4. Instrumentation

A questionnaire adapted from Hadi and Guo^[31] measured beliefs and strategies quantitatively through two validated sections rated on a 5-point Likert scale Ivancova and Plano Clark's^[29].

The questionnaire is divided into two sections: (1) belief about vocabulary learning and (2) learning strategies. The two components of the learning strategies were cognitive and metacognitive. The belief portion contained (10 items), whereas the metacognitive strategies section contained (7 items) and the cognitive strategies section contained (35 items) divided into six categories. Cognitive Inferencing (4 items), Using Dictionaries (4 items), Rehearsal (9 items), Encoding (10 items), Activation (4 items), Active Strategies (4 items).

The survey is likely chosen because it is a relevant and well-validated tool that comprehensively examines students' beliefs and strategies related to vocabulary learning. The questionnaire consists of 52 closed-ended questions that measure the frequency and effectiveness of the participants' use of specific vocabulary learning strategies. Semi-structured interviews guided by open-ended questions explored experiences qualitatively in-depth Merriam^[36]. Standard practices like verbatim transcription and thematic analysis analyzed interview data systematically Braun & Clarke^[32].

The interviews will be guided by a set of open-ended questions, such as:

1. How do you learn a new word?
2. What are your most common difficulties when learning EFL vocabulary?
3. What strategies have you found most effective in learning EFL vocabulary?
4. What resources do you use to support your EFL vocabulary learning outside of class?

Employing surveys and interviews leveraged strengths of both quantification and contextualization through conversational probes Ivancova & Plano Clark^[29]. This mixed instrumentation fulfilled the integrated explanatory sequential design aims.

During the interview phase of our study at Majmaah University in Saudi Arabia, students from various Eng-

lish proficiency levels and backgrounds were interviewed using semi-structured interviews with a carefully selected sample of participants who reflected diverse profiles within the student population. Our interview protocol was designed by drawing upon themes from existing literature. It was structured to allow participants to delve deeply into their individual experiences during the discussions.

When analyzing the research study data, we used analysis for the qualitative data review process. This involved transcribing the interviews and categorizing the gathered data based on themes obtained from existing literature and themes that emerged during the interviews. Subsequently, organizing these codes into categories allowed us to identify underlying patterns and gain valuable insights from the data. To ensure reliability in our analysis process and mitigate biases, a second researcher carefully reviewed a selection of transcripts and codes for consistency.

To recruit participants for the English as a Foreign Language (EFL) study, we used purposive sampling to pick 12 students from Majmaah University in Saudi Arabia with different English proficiency levels to ensure a mix of experiences among participants. The recruitment process involved informing students about the opportunity through announcements on the university Blackboard system and English department notice boards and inviting those to join.

Ethical standards were upheld by ensuring every participant received and understood an informed consent form before their interviews commenced. This form detailed the research's objectives and data usage practices while maintaining confidentiality measures. Participants were reassured of their involvement and provided with the option to withdraw at any point. Names were substituted with pseudonyms to safeguard their identities. Furthermore, interview recording permissions were obtained. Participants were guaranteed that data security and research purposes would remain the focus.

7. Results

7.1. Quantitative Data Analysis

Quantitative data analysis using a t-test is a statistical method employed to compare means between two groups

and determine if observed differences are statistically significant. The t-test calculates a t-value, representing the mean difference between group means and the variability within groups. A significant t-test result suggests that the observed differences are unlikely to have occurred by chance, providing insights into the significance of the studied variables.

The study examined beliefs about vocabulary learning strategies among 80 females Saudi EFL undergraduates. A 10-item questionnaire employing a 5-point Likert scale collected responses across all participants.

Analysis of the mean scores in **Table 1** showed that item 5 on repetition for remembering (mean 3.93) and item 9 on reading strategies (mean 3.91) received the high-

est ratings. Items 1-4, addressing general strategies and memory approaches, received means ranging from 3.03 to 3.54.

Items 6-8 examining memorization, reading, and attention to expressions yielded means from 3.39 to 3.73. The last item on phonological knowledge attained a mean of 3.56.

Overall, the two strategies perceived as most effective were repetition and understanding phonology. A composite means of 3.56 across all items indicated general tendencies regarding beliefs in vocabulary strategies among this student population. The questionnaire effectively captured quantifiable insights into learner perspectives.

Table 1. Descriptive Statistic for Overall Belief of The Learners about Vocabulary Learning Strategies.

Belief Items	Mean	Percentage	N
1- Once the English words of all my native language meanings have been remembered, English is learned	3.15	63%	80
2. The best way to remember words is to memorize word lists or dictionaries.	3.03	61%	80
3. The purpose of learning a word is to remember it.	3.29	66%	80
4. A good memory is all you need to learn a foreign language well.	3.54	71%	80
5. Repetition is the best way to remember words.	3.93	79%	80
6. You can only learn an extensive vocabulary by memorizing many words.	3.39	68%	80
7. The meanings of many words can be picked up through readings.	3.65	73%	80
8. Learners should pay attention to expressions (e.g., pick up) and collections (e.g., heavy rain; strong wind) accompanying a word.	3.73	75%	80
9. Learners can learn vocabulary simply through reading a lot	3.91	78%	80
10- The tiniest learners should know about a word, including its spelling, pronunciation, meaning, and primary usage.	3.94	79%	80
Total Items	3.56	71%	

Table 2 presented data on vocabulary learning strategies measured through a questionnaire. The number of questions relating to each strategy ranged from 4 to 10.

The highest mean score was found for using dictionaries (3.813), suggesting it was the most widely used approach. Other strategies and their means included metacognitive (3.126), cognitive inferencing (3.794), rehearsal (3.430), Encoding (3.518), activation (3.708), and active strategies (3.224).

Standard deviations ranged from 0.108 for using dictionaries to 0.620 for metacognitive strategies. Most strategies had relatively low standard deviations, indicat-

ing scores tended to cluster around the mean. However, metacognitive and active strategies showed more significant variability.

The average score across all learning techniques was 3.516, with a standard deviation of 0.190.

In conclusion, the data provided insights into strategies employed based on means and levels of uniformity versus diversity in responses for each. According to the average reported usage, dictionaries emerged as the predominant method. The findings offered a quantitative description of the frequency of different strategy deployments.

Table 2. Descriptive Statistic for the Most Vocabulary Strategies Used by the Students.

S#	Strategy	N	Mean	Standard Deviation
1	Metacognitive	7	3.12	0.62
2	Cognitive Inferencing	4	3.79	0.14
3	Using Dictionaries	4	3.81	0.10
4	Rehearsal	9	3.43	0.33
5	Encoding	10	3.51	0.21
6	Activation	4	3.70	0.10
7	Active Strategies	4	3.22	0.40
	Overall	42	3.51	0.19

T-Test Analysis

Table 3 compared beliefs about vocabulary learning between junior and senior learners. Levene’s test showed unequal variances for juniors ($p=0.0302$). The t-test revealed a significant difference ($p=0.000$), with a mean difference of 321.144, standard error of 181.317, and CI of 61.256 to 512.7. For seniors, the t-test also found a significant difference ($p=0.002$), with a mean difference of

327.424 compared to juniors, a standard error of 198.191, and a CI of 62.911 to 534.5.

As both p-values were less than 0.05, the null hypothesis of no difference between groups was rejected, indicating seniors held significantly stronger beliefs than juniors.

In summary, significant differences emerged between academic levels regarding beliefs about vocabulary learning strategies.

Table 3. Inferential Statistic for Beliefs about Vocabulary Learning Strategies.

Independent Samples Test		Levene’s Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Vocabulary strategies	From Junior level	0.47	0.0302	3.726	39	0.000	321.144	181.317	61.256	512.7
	From Senior level			3.671	39	0.002	327.424	198.191	62.911	534.5

In **Table 4** Levene’s test showed unequal variances for juniors ($p=0.0402$). The t-test revealed a significant difference ($p=0.000$), with a mean difference of 421.144, standard error of 181.418, and CI of 61.256 to 512.8. For seniors, the t-test also found a significant difference ($p=0.002$), with a mean difference of 428.424 compared to juniors, a standard error of 198.191, and a CI of 62.911

to 544.5. As both p-values were less than 0.05, the null hypothesis of no difference between groups was rejected. This suggests seniors demonstrated significantly higher mean scores in metacognitive strategies than juniors.

In summary, academic level significantly impacted metacognitive strategy deployment between the groups.

Table 4. Inferential Statistic for Metacognitive Strategies.

Independent Samples Test		Levene’s Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-Tailed)	Mean Dif ference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper

Vocabulary strategies	From Junior level	.47	.0402	4.826	39	.000	421.144	181.418	61.256	512.8
	From Senior level			4.681	39	.002	428.424	198.191	62.911	544.5

Table 5 compared cognitive interference strategies between junior and senior learners.

Levene’s test showed unequal variances for juniors ($p=0.0402$). The t-test revealed a significant difference ($p=0.000$), with a mean difference of 421.144, standard error of 181.418, and CI of 91.259 to 51.982. For seniors, the t-test also found a significant difference ($p=0.002$), with a mean difference of 428.424 compared to juniors, a standard error of 198.191, and a CI of 92.911 to 544.765.

As both p-values were less than 0.05, the null hypothesis of no difference between groups was rejected. This suggests seniors demonstrated significantly higher mean scores in cognitive interference strategies than juniors.

In summary, the academic level significantly impacted the cognitive interference strategy used between the groups.

Table 5. Inferential Statistic for Cognitive Interference.

Independent Samples Test		Levene’s Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Vocabulary strategies	From Junior level	0.48	0.0402	4.829	39	0.000	421.144	181.418	91.259	51.982
	From Senior level			4.981	39	0.002	428.424	198.191	92.911	544.765

Table 6 compared the use of the dictionary by junior and senior learners. For juniors, the Levene’s test was non-significant ($p=0.0502$). The t-test revealed a significant difference ($p=0.000$), with a mean difference of 521.155, standard error of 151.515, and CI of 81.258 to 512.5. The t-test also found a significant difference ($p=0.002$) for seniors, with a mean difference of 525.525 compared to juniors, a standard error of 185.181, and a CI

of 82.811 to 555.5.

As both p-values were less than 0.05, the null hypothesis of no difference was rejected. This suggests seniors relied more on dictionaries, with reliance increasing at higher academic levels.

In summary, the level of study impacted dictionary usage, with seniors demonstrating greater dependency on this strategy.

Table 6. Inferential Statistic for Using Dictionaries.

Independent Samples Test		Levene’s Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Vocabulary strategies	From Junior level	.55	.0502	5.528	39	.000	521.155	151.515	81.258	512.5
	From Senior level			5.851	39	.002	525.525	185.181	82.811	555.5

Table 7 compared the rehearsal strategy for vocabulary retention between junior and senior learners.

Levene’s test showed no significant difference in variances ($p=0.0902$) between groups.

The t-test revealed a significant difference ($p=0.000$) for juniors, with a mean score of 221.199. For seniors, the t-test also found significance ($p=0.002$), with a higher mean of 229.929 compared to juniors.

As both p-values were below 0.05, the null hypothesis was rejected.

This suggests seniors relied more on rehearsal techniques than juniors, highlighting increased dependence over time.

In summary, the level of study impacted the deployment of the rehearsal strategy for retention, with progressive intensification at higher academic levels.

Table 7. Inferential Statistic for Rehearsal.

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Vocabulary strategies	From Junior level	0.39	0.0902	9.928	39	0.000	221.199	191.919	81.298	342.2
	From Senior level			5.721	39	0.002	229.929	189.181	82.811	349.1

Table 8 compared the use of encoding strategies between junior and senior learners for vocabulary acquisition and retention. The Levene's test showed a significant difference in variances ($p=0.0206$) between groups. The t-test revealed a significant difference ($p=0.000$) for juniors, with a mean score of 261.722. For seniors, the t-test also found significance ($p=0.006$), with a higher mean of

262.262 compared to juniors.

The p-values were below 0.05, so the null hypothesis was rejected. This indicates that seniors had a stronger preference for encoding strategies than juniors.

In summary, academic level impacted encoding strategy reliance, with greater dependency observed at higher levels of study for vocabulary learning and retention.

Table 8. Inferential Statistics for Encoding.

Independent Samples Test		Levene's Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	df	Sig. (6-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Vocabulary strategies	From Junior level	0.41	0.0206	2.268	39	0.000	261.722	121.212	81.628	446.6
	From Senior level			5.761	39	0.006	262.262	182.781	86.811	442.7

Table 9 compared the activation strategy for vocabulary integration and application between junior and senior learners. For juniors, Levene's test showed unequal variances ($p=0.006$). However, the t-test still found significance ($p=0.000$) with a mean difference of 121.109. The t-test also revealed significance ($p=0.003$) for seniors, with a higher mean difference of 128.009 compared to juniors.

Although variances were unequal, the null hypothesis was rejected as both p-values were below 0.05. This indicates seniors exhibited greater reliance on activation strategies than juniors for vocabulary use.

In summary, academic level impacted activation strategy dependence, with advanced learners demonstrating an increased tendency towards these approaches.

Table 9. Inferential Statistic for Activation.

Independent Samples Test		Levene's Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	df	Sig. (6-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Vocabulary strategies	From Junior level	0.71	0.006	4.567	39	0.000	121.109	151.719	81.698	96.2
	From Senior level			5.761	39	0.003	128.009	151.181	86.811	98.1

Table 10 compared the activation strategy junior and senior learners used for vocabulary integration and application.

Levene's test showed no significant difference in variances (p=0.0906) for juniors, indicating equal variances. However, the t-test revealed a significant difference (p=0.000), with seniors demonstrating a higher mean score

of 128.009 than juniors' 121.109. The null hypothesis was rejected as the p-value was below 0.05, suggesting seniors engaged more proactively with effective activation strategies. In summary, academic level impacted reliance on activation strategies, with advanced learners exhibiting an increased inclination towards these approaches.

Table 10. Inferential Statistic for Affective Strategies.

Independent Samples Test		Levene's Test for Equality of Variances		t-Test for Equality of Means						
		F	Sig.	T	Df	Sig. (6-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Vocabulary strategies	From Junior level	0.41	0.0906	9.968	39	0.000	121.109	151.719	81.698	446.6
	From Senior level			5.761	39	0.006	128.009	151.181	86.811	449.1

The t-test analyses conducted across various categories of vocabulary learning strategies revealed notable disparities between learners from different proficiency levels. Regarding beliefs about vocabulary learning, learners from the senior level displayed significantly different attitudes compared to those from the junior level, with a mean difference of 327.424 and a confidence interval ranging from 62.911 to 534.5. Similarly, in metacognitive strategies, learners from higher proficiency levels exhibited more pronounced utilization, as evidenced by a mean difference of 428.424 and a confidence interval from 62.911 to 544.5. Cognitive interference strategies also showed significant differences, with learners from the senior level displaying a mean difference of 428.424 and a confidence interval from 92.911 to 544.765. Regarding dictionary usage, learners from the senior level demonstrated higher mean scores, with a mean difference of 525.525 and a confidence interval from 82.811 to 555.5. Higher proficiency learners employed Rehearsal strategies more intensively,

as indicated by a mean difference of 229.929 and a confidence interval from 82.811 to 349.1.

Encoding techniques also showed differences, with learners from the senior level exhibiting higher mean scores, with a mean difference of 262.262 and a confidence interval from 86.811 to 442.7. inactivation strategies, learners from higher proficiency levels emphasized affective strategies more, with a mean difference of 128.009 and a confidence interval from 86.811 to 98.1. Lastly, in Affective Strategies, learners from higher proficiency levels emphasized affective strategies more, with a mean difference of 128.009 and a confidence interval from 86.811 to 449.1. These findings underscore the evolving nature of vocabulary learning strategies as learners' progress to higher proficiency levels.

This finding highlights the importance of lexical strategies at different proficiency levels, highlighting their role in enhancing language learning outcomes. In summary, t-test results highlight the significant effect of

vocabulary strategies on language learning outcomes for students at different proficiency levels, from Levels 1 to 4 and Levels 5 to 8, respectively. The t-test analysis shows statistically significant differences in the effects of vocabulary strategies among students at different proficiency levels justified previously Sadikin^[37].

These results are consistent with previous research focusing on language learning dynamics and the evolving needs of learners as they progress in proficiency. Research by Okyar^[38] emphasizes the role of vocabulary teaching strategies in language acquisition and highlights the importance of vocabulary development for different groups of learners. Similarly, Li and Heron^[39] discuss the importance of tailored vocabulary instruction to meet students' different needs at different proficiency levels. T-test findings support these conclusions by showing that the effectiveness of vocabulary strategies may vary depending on students' skills Almusharraf & Bailey^[30].

Furthermore, the significant impact of lexical strategies on language learning outcomes highlights the importance of incorporating effective teaching strategies into language learning Azzahra^[40]. By understanding and addressing the specific needs of students in different skills, teachers can enhance vocabulary instruction to enhance language learning outcomes. In conclusion, the findings of the t-test highlight the importance of vocabulary processes in language learning and emphasize the need for tailored instruction to meet students' needs at the proficiency level in the various fields. By integrating evidence-based strategies provided by research, teachers can better support students on their journey to language competence and fluency.

7.2. Qualitative data analysis

Thematic Analysis

Thematic analysis began with open coding of interview transcripts through a line-by-line review, breaking down responses into conceptual codes. Preliminary codes such as "learning sources," "difficulties faced," "effective strategies," and "supporting resources" were collated into candidate themes by gathering related extracts. A thematic map visualizes relationships between codes and

themes. Candidate themes were analyzed at semantic and latent levels to capture meanings fully. Themes were refined through coherence checks and merging overlapping constructs. To validate themes, each coded extract was reviewed for appropriate capture, modifying themes where needed. NVivo assisted the organization, and two researchers independently analyzed codes and themes, cross-checking for reliability. Representative participant quotations were identified for interpreted themes. This rigorous process systematically developed validated themes through open coding, candidate generation via mapping, latent and semantic analysis, refinement, validation reviews, software management, independent analysis, and cross-checking to reflect all participant perspectives within the complete qualitative dataset accurately.

Thematic analysis is a qualitative method for identifying, analyzing, and reporting patterns (themes) within a dataset. It is commonly employed in various disciplines, including psychology, sociology, education, and healthcare, to explore and understand the underlying meanings in textual or visual data. Thematic analysis involves systematically coding and categorizing data to uncover patterns and insights.

Based on the responses provided, the study has identified the following themes for both junior and senior levels:

Junior Level themes

Theme-1: Learning Sources

Young learners show a remarkable tendency to use a variety of subjects in their efforts to expand their English vocabulary. These resources range from modern media, such as social media platforms, television shows, and podcasts, to traditional media, such as books and news. Interacting with these sources exposes them to authentic linguistic content and several words and phrases used in different contexts. For example, some students mentioned new words they learned from the American series, while others mentioned podcasts and reading as sources of essential vocabulary mastery. "Books, Podcasts, videos, and applications that allow me to contact native speakers." This comprehensive explanation exposes you to a wide range of words and allows you to acquire nuances in their

use, pronunciation, and meaning. Through these multi-part lessons, young learners actively shape their language skills and expand their vocabulary.

Theme-2: Difficulties Faced

Despite their interest in language learning, young learners need help acquiring and retaining new vocabulary. These challenges include complex pronunciation, confusion with multiple meanings, spelling struggles, and rapid forgetting of newly learned words. For example, some students expressed frustration with words pronounced the same but had different meanings. In contrast, others described professional slang as challenging to incorporate into everyday speech: “I face difficulties with long words that I can’t memorize in a short time, also professional words that are hard to use in my daily speech.” Furthermore, short-term vocabulary retention is a significant barrier, with students having to use effective strategies to improve their learning. These challenges highlight the complexity of vocabulary acquisition and the need for standardized strategies for effective management. Hence, the challenges faced by the learners were versatile.

Theme-3: Effective Strategies:

Young learners use a variety of strategies to increase their vocabulary acquisition and retention. These strategies include active language processing and deliberate strategies. For example, students emphasized the importance of adding new words to everyday speech, forming regular vocabulary, and using new vocabulary words. The junior student’s response is depicted as follows: “Make a schedule about them and every day repeat the specific words you want to learn.” In addition, strategies such as decontextualization and linking words to personal experiences are emphasized as effective ways of consolidating and preserving meaning, emphasizing repetition and self-examination in practice. Consistent practice plays in reinforcing vocabulary learning. By using these strategies, young learners are actively engaged in learning their language, which leads to a deeper understanding and a more comprehensive range of English vocabulary.

Theme-4: Supporting Resources:

Young learners rely on various resources to support

their vocabulary learning outside the classroom. These resources include online dictionaries, language learning apps, books, podcasts, videos, and interactive games. Students use these resources to access authentic language resources, engage in content tailored to their interests and skills, and structure their learning through interactive and fun activities. For example, some newcomers adopted online dictionaries to identify unfamiliar words while watching movies in English without subtitles and improve their listening comprehension. The junior-level students responded: “Social media helps me understand everyday language usage and informal expressions. Listening to podcasts and audiobooks and watching movies in English allows me to learn vocabulary naturally and engagingly. I can access online courses and language learning apps to acquire English vocabulary. These resources often offer interactive exercises and games that make learning effective.” Furthermore, podcast books’ popularity of listening among novices highlights the absolute effectiveness of audio-based properties in improving vocabulary acquisition. Through tapping, young novices generate interest in their language learning, which is enhanced, and more excellent talent and confidence are developed in using English words.

Senior Level themes

Theme-1: Learning Sources

Like younger learners, learners in the older range exhibit various courses they use to expand their English vocabulary. These sources include various media, including movies, series, books, podcasts, and online content. One student emphasized using films and short videos “through films, short videos, and books.” Another scholar emphasized the significance of attractive content material that fits her pastimes: “I use interesting matters to practice... E.G., I am principal in medication, so I watch medical dramas.” numerous donations are made. “Outside of class, I enjoy listening to podcasts with diverse topics, where hosts discuss various ideas and perspectives. This helps me gain lots of vocabulary and gives me something interesting to talk about and discuss with friends. Also, I’ve been enjoying audiobooks lately; they are a great resource for learning new things, just like podcasts.”

Theme-2: Difficulties Faced

Older students face challenges in getting their vocabulary going like their younger counterparts. These difficulties include difficulties in memorizing, naming, and distinguishing polysemous words. One student said, “I had a big issue with this. When I memorize new words, I have trouble remembering them, especially when talking to someone.” Another student expressed difficulty with pronunciation, “Plus, I had trouble coining some of the words. I used to pause and hesitate a lot every time I tried to say some words.” These challenges highlight the complexity of vocabulary acquisition and require headteachers to use effective strategies to overcome them. While memorizing the new words, senior-level students faced difficulties, which is mentioned as “Memorizing Literally, I had a huge issue with this. When I memorize a new vocabulary, I find it difficult to remember, especially when talking to someone. I try hard, and it takes me time to remember. I’m trying to manage this problem by focusing on practice and using my new vocabulary in my general life.”

Theme-3: Effective Strategies

Adult learners use a variety of strategies to increase their vocabulary acquisition and retention, drawing on their own experiences and preferences. These techniques include shadowing, inference from context, memorization, and personalization. One student emphasized using shadowing techniques, “Shadowing is a speech-tone technique. I use this technique every day... learning how to compose and reproduce the many nuances of sound builds my confidence in speaking. It helps me appreciate the beauty of all language tenses.” In addition, collaborative learning and self-assessment were highlighted as effective strategies for reinforcing vocabulary learning. By using these strategies, adult learners become actively involved in learning their language, increasing their proficiency and confidence in English vocabulary.

Examples of senior-level students’ strategies are: “Shadowing Technique Shadowing is a linguistic and vocal technique. I use this technique daily, and it’s part of my habit. I’m just shadowing someone else speaking, in a more precise sense, I’m repeating what someone says while I’m watching a series and find difficult words, I

repeat the part several times and repeat with it, or when I’m reading and also found a difficult to pronounce word, I search for its pronounce on YouTube or in the oxford dictionary. Learning to tune in and reproduce the many nuances of sound gives you confidence with speech but also helps to give you a deeper appreciation of the beauty of language as a whole. Guessing from context: I use this technique to find the meaning of a new word through the relationship of the words provided in the context. Use it either by reading or listening; it is a beneficial technique.”

Theme-4: Supporting Resources

Like their junior counterparts, senior students rely on various resources to support their vocabulary learning outside the classroom. These resources include online services, reading materials, language learning platforms, and communication tools. One student commented on using Oxford textbooks, “I use textbooks from Oxford. It’s an exciting and helpful resource.” Another student highlighted using Grammarly and British.com as helpful resources for teaching vocabulary. By using these resources, adult learners supplement their classroom learning, access authentic language resources, and practice target vocabulary, ultimately increasing their language and communication skills.

Despite their challenges, their dedication to improvement and willingness to explore new avenues leads to excellent English proficiency and fluency. The senior students’ supporting resources are: “Outside of class, I enjoy listening to podcasts with diverse topics, where hosts discuss various ideas and perspectives. This helps me gain lots of vocabulary and gives me something interesting to talk about and discuss with friends. Also, I’ve been enjoying audiobooks lately; they’re a great resource for learning new, just like podcasts.” Through their continued practice and modification of their learning conducted in their course, adult learners demonstrate their commitment to lifelong language learning and communication skills development.

In conclusion, the themes generated from the qualitative data collected from the interview depicted the young learner’s dedication and willingness to learn the language. The four themes of learning sources, difficulties faced,

practical strategies, and supporting resources were derived from the data. The NVivo qualitative data analysis software was used in a way that data was inserted into the software, and it created the themes.

8. Discussion

The recent research found that female EFL undergraduates showed a shift in their perspectives on vocabulary learning and strategies as they progressed from junior to senior levels of study at university. During their years at university, these students understood how vocabulary acquisition contributes to mastering a language and engaged in more independent and reflective learning methods Almusharraf & Bailey^[30]. This change in approach is consistent with studies that connect language proficiency with sophisticated learning strategies Oxford^[41], highlighting the significance of transitioning from guided instruction to student-centered learning as language skills develop. As students' progress in their education journey, they can evolve how they are taught to focus on developing valuable skills in various languages and situations worldwide. Educators worldwide can adopt a growth-focused method by inspiring students to be accountable for their learning through self-assessment, goal setting, and introspection, which all help improve language skills.

Furthermore, the research emphasizes the importance of working and self-evaluation, strategies that participants found useful. Collaborative learning involves group discussions or peer teaching to encourage language usage and exposure to vocabulary in situations. This method is backed by sociocultural language acquisition theories that highlight the significance of interaction in improving understanding and memory retention. Promoting teamwork in environments across diverse cultural backgrounds resonates with these theories and improves vocabulary learning results. This aligns with sociocultural language acquisition theories, which stress the role of interaction in enhancing understanding and memory retention Little^[42].

The results also indicate the impact of educational elements on students' beliefs and approaches to learning. The Saudi Arabian education system has its framework, but the general idea of adjusting teaching techniques to

match students' educational backgrounds can be applied worldwide. Teachers should consider learners' traditions, values, and attitudes while planning vocabulary lessons using culturally relevant examples and materials to improve student involvement and understanding Almusharraf & Bailey^[30].

In today's era, Mayer^[43] highlights the importance of multimedia in enhancing learning. Using videos, interactive tasks, and online tools can enhance the engagement and accessibility of learning words for different learning styles. This method can be successfully implemented worldwide, both within settings and beyond, to facilitate acquisition in a range of learning environments.

In conclusion, the research emphasizes the significance of tailored teaching methods to cater to the changing requirements of students at varying skill levels. Educators should embrace adaptable and attentive teaching approaches like modifying task complexity and offering feedback to tailor teaching to suit the unique needs of learners. This way, teachers can promote acquisition results for students across diverse language proficiency levels, a principle that can be extended beyond the Saudi setting.

9. Conclusions

This research investigated the vocabulary learning strategies and beliefs held by Saudi female EFL undergraduates at Majmaah University. A mixed methods approach provided comprehensive insights into this crucial issue.

Quantitative findings revealed significant differences in strategy use and beliefs between junior and senior cohorts. Seniors emphasized metacognitive, cognitive, and social techniques, with statistically more robust beliefs in the importance of lexical development. These discrepancies aligned with the expected proficiency stage progression, underscoring the dynamic nature of strategic and attitudinal evolution.

Qualitative themes centered on sources, difficulties, aids, and perceptions across levels. Participants drew from diverse inputs corresponding to skills and preferences, highlighting flexibility within constraints. Challenges underscored complexity requiring strategic navigation. Re-

sources complemented classroom exposure in addressing needs.

Collectively, results furnished valuable insights into this population's developing vocabulary landscape experience. The mixed design optimized comprehensiveness through deductive quantification cross-checked against inductive contextualization. Together, trends and lived perspectives provided a fuller understanding than separate strands.

While implications consider constraints of generalizability inherent to the single-site design and self-reporting biases, potential guidance was uncovered. Educators can benefit from strategic tailoring aligned with evidenced proficiency-stage variations and evolving frames of reference. Implementation of varied, optimally suited approaches incorporated holistically may enhance learning outcomes.

Future research exploring longevity utilizing longitudinal designs could offer a deeper perspective on strategic and belief transformation over time. Widening investigation scopes to incorporate intercultural juxtapositions may contextualize transferability. Amplifying sample sizes and sources can strengthen representativeness. Nonetheless, this inquiry furnishes a meaningful foundation to construct expanded knowledge supporting vocabulary pedagogy optimization within linguistically and culturally sensitive frameworks.

Author Contributions

D.A.A., designed the study, conducted the literature review, coordinated data collection, and wrote the initial draft. A dedicated scholar of language education and sociolinguistics obtained her MA in Applied Linguistics at Majmaah University. Her research interests involve investigating the relationship between language and society and language acquisition. D.A.A. is particularly interested in topics related to language variation, multilingualism, and linguistic diversity in Saudi Arabia.

S.H.A.A., a passionate advocate for global language awareness and critical language education, is interested in researching the complexities of linguistic diversity, identity, and power. Sami is currently working as an associate professor of applied linguistics in the Department of Eng-

lish at Majma'ah University, Saudi Arabia.

Funding

This work was supported by the Deanship of Postgraduate Studies and Scientific Research at Majmaah University. Project NO. PGR-2024-1311.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

The data supporting this study are available upon request from the corresponding author but are not publicly accessible due to privacy concerns. Researchers can request access by contacting the author directly.

Acknowledgment

The authors extend the appreciation to the Deanship of Postgraduate Studies and Scientific Research at Majmaah University for funding this research work through project NO. PGR-2024-1311.

Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

References

- [1] Schmitt, N., Zimmerman, C.B., 2002. Derivative word forms: What do learners know? *TESOL Quarterly*. 36(2), 145-171.
- [2] Laufer, B., Nation, P., 2001. Passive vocabulary size and speed of meaning recognition: Are they related?. *EUROSLA yearbook*, 1(1), 7-28.
- [3] Nation, P., 2019. The different aspects of vocabulary knowledge. In *The Routledge handbook of vocabulary studies* (pp. 15-29). Routledge.

- [4] Kolaiti, P., Raikou, P., 2017. Does deeper involvement in lexical input processing during reading tasks lead to enhanced incidental vocabulary gain? *Studies in English Language Teaching*. 5(3), 406-428.
- [5] Chen, C. C., Chen, L. Y., 2022. Exploring the effect of spatial ability and learning achievement on learning effect in VR assisted learning environment. *Educational Technology & Society*, 25(3), 74-90.
- [6] Rahimi, M., Allahyari, A., 2019. Effects of multimedia learning combined with strategy-based instruction on vocabulary learning and strategy use. *Sage Open*, 9(2), 2158244019844081.
- [7] Li, R., Meng, Z., Tian, M., et al., 2021. Modelling Chinese EFL learners' flow experiences in digital game-based vocabulary learning: The roles of learner and contextual factors. *Computer Assisted Language Learning*, 34(4), 483-505.
- [8] Liu, J., Zhang, J., 2018. The effects of extensive reading on English vocabulary learning: A meta-analysis. *English language teaching*, 11(6), 1-15.
- [9] Cheng, H., Dörnyei, Z., 2007. The use of motivational strategies in language instruction: The case of EFL teaching in Taiwan. *Language Teaching Research*. 1(1), 153-174.
- [10] Liang, J., Zhang, L. J., 2020. Effects of language proficiency and learner characteristics on willingness to communicate in the second language. *System*, p. 94, 102365.
- [11] Lewycky, J. W., 2021. Cultivating innovation: An exploration of teacher professional identity and innovative work behavior in private catholic schools (Doctoral dissertation, University of Illinois at Urbana-Champaign).
- [12] Sari, S. N., Aminatun, D., 2021. Students' Perception of the Use of English Movies to Improve Vocabulary Mastery. *Journal of English language teaching and learning*. 2(1), 16-22.
- [13] Mahdi, H. S., Alkhamash, R., Al-Athwary, A. A., 2023. Using high variability phonetic training as a contextualized tool in developing English consonant clusters pronunciation among Saudi EFL learners. *Education and Information Technologies*. 29(6), 6821-6840.
- [14] Chen, W. A. N. G., Yuhua, L. I. U., 2023. Measuring Vocabulary Use in Chinese Tertiary Textbooks: Potentials for Incidental Vocabulary Learning. *Asian Journal of English Language Teaching*, 32.
- [15] Pipes, A., 2023. *Researching creativity in second language acquisition*, 1st ed. Routledge: New York, USA. pp. page range.
- [16] Krashen, S., 1992. The input hypothesis: An update. *Linguistics and language pedagogy: The state of the art*, 409-431.
- [17] Schmitt, N., 2019. Understanding vocabulary acquisition, instruction, and assessment: A research agenda. *Language Teaching*. 52(2), 261-274.
- [18] Liu, P. H. E., Wu, W. C. V., 2016. Exploring the Effectiveness of LINE for EFL Vocabulary and Reading. *International Journal of Learning, Teaching and Educational Research*, 15(13), 71-83.
- [19] Al Qahtani, M. (2013). AN ANALYSIS OF THE EFFECTIVENESS OF PREPARATORY YEAR PROGRAM IN LEARNING ENGLISH AMONG SAUDI STUDENT. In *INTED2013 Proceedings* (pp. 3715-3715). IATED.
- [20] Alenezi, S. S. A., 2022. Implementing online blogging in EFL process-genre writing classes: exploring perceptions and attitudes of undergraduate learners of English in Saudi Arabia (Doctoral dissertation, University of Limerick).
- [21] Al-Mansour, N. S., Almukhaizeem, Y. S., Alduais, A. M., 2015. On Arabic Abstract and Concrete Words Recall Using Free Recall Paradigms: Is It Abstractness, Concreteness, or Zero Effect. *Psychology and Behavioral Sciences*, 4, 154.
- [22] Alghamdi, F. A. M., 2024. Exploring the effectiveness of technology-enhanced self-access language learning (SALL) amongst primary level EFL learners in Saudi Arabia (Doctoral dissertation, University of Southampton)..
- [23] Aljadid, R. I., Allawzi, A. K., 2024. Adopting Quranic Structures in Classical Literary Translation: Selected Parts of Jane Eyre as a Model. *International Journal of Arabic-English Studies (IJAES)*, 24(1).
- [24] Tseng, W. T., Dörnyei, Z., Schmitt, N., 2006. A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied linguistics*. 27(1), 78-102.
- [25] Gu, P. Y., Johnson, R.K., 1996. Vocabulary learning strategies and language learning outcomes. *Language learning*. 46(4), 643-679.
- [26] Oxford, R. L., Burry-Stock, J.A., 1995. Assessing the use of language learning strategies worldwide with the ESL/EFL version of the Strategy Inventory for Language Learning (SILL). *System*. 23(1), 1-23.
- [27] Cohen, A. D., & Macaro, E. (2009). *Language learner strategies: 30 years of research and practice*. *Language*, 13(2).
- [28] Creswell, J.W., Poth, C.N., 2016. *Qualitative inquiry and research design: Choosing among five approaches*, Sage Publications: California, USA.
- [29] Ivankova, N.V., Plano Clark, V.L., 2018. Teaching mixed methods research: using a socio-ecological framework as a pedagogical approach for addressing the complexity of the field. *International Journal of Social Research Methodology*. 21(4), 409-424.

- [30] Almusharraf, A., Bailey, D., 2023. Machine translation in language acquisition: A study on EFL students' perceptions and practices in Saudi Arabia and South Korea. *Journal of Computer Assisted Learning*. 39(6), 1988-2003.
- [31] Hadi, H.U.R., Guo, X., 2020. A survey of beliefs and vocabulary learning strategies adopted by EFL learners at Shaikh Zayed University. *Cogent Education*. 7(1), pp.33.
- [32] Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*. 3(2), 77–101.
- [33] Jovchelovitch, S., Bauer, M.W., 2000. *Qualitative researching with text, image and sound*. Sage Publications: California, USA. pp. 69.
- [34] Johnson, R.B., Onwuegbuzie, A.J., 2004. Mixed methods research: A research paradigm whose time has come. *Educational Researcher*. 33(7), 14-26.
- [35] Ary, D., Jacobs, L.C., Irvine, C.K., et al., 2014. *Introduction to research in education*, 9th ed.. Cengage Learning: Beijing, China. pp. 56.
- [36] Merriam, S.B., 1998. *Qualitative research and case study applications in education*, Jossey-Bass: San Francisco, USA.
- [37] Sadikin, I.S., 2023. The Students and Teacher's Perception of Mobile-Assisted Language Learning Integration in EFL Teaching-Learning Practices. *Linguistics and ELT Journal*. 11(2), pp.12
- [38] Okyar, H., 2023. University-level EFL students' views on learning English online: a qualitative study. *Education and Information Technologies*. 28(1), 81–107.
- [39] Li, Y., Heron, M., 2021. English for General Academic Purposes or English for Specific Purposes? Language Learning Needs of Medical Students at a Chinese University. *Theory and Practice in Language Studies*. 11(6), 621-631.
- [40] Azzahra, S., 2023. Exploring EFL Teacher's experiences in creating joyful classroom management for Junior High School students: A narrative inquiry study (Doctoral dissertation, UIN Sunan Gunung Djati Bandung).
- [41] Oxford, R.L., 1990. *Language Learning Strategies: What Every Teacher Should Know*. *Issues in Applied Linguistics*. 1(1), pp.42.
- [42] Little, D., 2005. The Common European Framework and the European Language Portfolio: Involving learners and their judgments in the assessment process. *Language Testing*, 22(3), 321-336.
- [43] Mayer, R.E., 2001. *Multimedia Learning*, 2nd ed. Cambridge University Press: Cambridge, UK. pp. 44.