

Vocabulary Booster: Dynamics Of ChatGPT Utilization In Lexical Development Among State University Students

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Abstract — This study investigates the dynamics of ChatGPT utilization in lexical development among state university students. Employing a mixed-method exploratory sequential design, it explores how students engage with ChatGPT to enhance vocabulary acquisition, comprehension, and application. Results reveal that ChatGPT serves as a valuable supplementary tool for vocabulary learning, offering real-time feedback, contextual examples, and personalized support. However, challenges such as dependency, occasional inaccuracies, and limited engagement with complex vocabulary were identified. Despite these limitations, ChatGPT outperforms traditional tools in accessibility and interactivity, making it a promising resource for augmenting language learning. The study underscores the importance of balancing AI-assisted and traditional instructional methods to ensure comprehensive language development. Recommendations include fostering critical thinking, encouraging responsible use of AI tools, and further integrating ChatGPT into educational frameworks to enhance digital literacy and academic outcomes.

Keywords — ChatGPT, lexical development, vocabulary acquisition, AI in education, language learning tools

I. INTRODUCTION

With its release in November 2022, ChatGPT quickly became the fastest-growing internet application, reaching 100 million monthly users within two months [39]. Its rise is largely due to its advanced capabilities in Natural Language Processing (NLP), outperforming earlier chatbots through its neural network-based language modeling [50]. Unlike traditional tools, ChatGPT generates coherent, human-like responses [30], making it adaptable for a variety of uses—from creating plans and bedtime stories to scriptwriting [40]. It has since become the most commonly used AI tool by students in 2022, capturing 60% of all AI tool visits, amounting to four billion user visits between September 2022 and August 2023 [10]. These trends raise critical questions about how students utilize ChatGPT—whether they meaningfully learn new vocabulary or simply rely on it for shortcuts. This research explores those dynamics in a state university setting, aiming to assess how ChatGPT contributes to lexical development among English major students.

The importance of vocabulary acquisition in academic success and communication is well documented. Lexical development, which involves the progressive acquisition and use of words, underpins reading, writing, listening, and speaking. Students exposed to unfamiliar vocabulary—especially through tools like ChatGPT—need to engage meaningfully with new words to develop language competence. However, some words generated by ChatGPT may be vague or complex, posing comprehension challenges. Investigating whether students understand and apply this vocabulary is essential. Previous studies, such as [35][36], show that ChatGPT can improve vocabulary acquisition in structured learning environments. His research on Saudi male students at Jouf University demonstrated improved vocabulary retention using ChatGPT-based exercises. However, the study had limitations: it excluded diverse populations, overlooked long-term retention, and did not examine student perceptions or tool accessibility. These gaps warrant further research across diverse learners using both qualitative and quantitative approaches to understand the tool's impact in broader educational settings.

In the Philippine context, integrating ChatGPT aligns with national efforts toward digital transformation in education, as supported by Republic Act No. 11927 (Philippine Digital Workforce Competitiveness Act) and R.A. 11899 (Second Congressional Commission on Education Act II). These legislative frameworks promote equipping students with digital-era skills, reinforcing the use of tools like ChatGPT in learning. Its educational potential has been recognized in its ability to support personalized instruction, vocabulary retention, and language production [9][12][2]. However, concerns have been raised regarding its predictive algorithms potentially encouraging surface-level learning, reducing originality, and fostering dependency [10][11]. Hence, educators must guide its use to ensure it fosters critical thinking, creativity, and genuine language development.

Supporting these concerns, Vygotsky's theory [47] of active learning underlines the importance of co-constructed knowledge and learner interaction [20] [38] advocate for ChatGPT's value in constructivist pedagogy, especially in tertiary education. It enables students to reflect on and negotiate language use while receiving individualized feedback. Yet, the risk of misuse, including plagiarism and over-reliance, calls for clear academic policies [22]. In writing instruction, ChatGPT has been shown to aid logical structuring, vocabulary use, and grammar accuracy [8][32]. Nonetheless, its effectiveness is heightened when it complements rather than replaces traditional methods [2]. Scholars also recommend teacher training and regulatory guidelines to ensure responsible usage [14][6][2].

This research aims to examine the effectiveness and limitations of ChatGPT in vocabulary acquisition among English major students. Specifically, it seeks to (1) identify the perceived benefits of ChatGPT in vocabulary learning; (2) describe the challenges students face when using ChatGPT for vocabulary enhancement; (3) examine how ChatGPT promotes meaningful vocabulary acquisition through contextual examples; (4) compare ChatGPT with other digital tools used by students in enhancing vocabulary; and (5) determine how ChatGPT can complement traditional classroom instruction. By doing so, the study supports Sustainable Development Goal 4: Quality Education and aligns with the vision of *Ambisyon Natin 2040* by promoting lifelong learning and preparing students for a knowledge-driven workforce. The findings are expected to contribute practical recommendations for students, educators, and future researchers on maximizing AI's role in lexical development while ensuring responsible and inclusive educational practices.

II. METHODS

This study employed a mixed-method exploratory sequential design to examine ChatGPT's role in students' lexical development. The qualitative phase involved in-depth, semi-structured interviews to explore students' experiences, perceptions, and usage of ChatGPT. These insights informed the quantitative phase, which used a researcher-made vocabulary test to assess ChatGPT-related word knowledge. Interviews and surveys were primarily conducted face-to-face, but online options (Messenger, Google Meet, Zoom) were used when necessary to ensure accessibility. This design provided a comprehensive understanding by integrating narrative data with measurable outcomes.

The study was conducted at a state university in Cebu City, involving English major students from programs such as BSEd-English, BA Literature, and BA English Language. Participants were selected through purposive sampling based on three criteria: (a) enrolled at the university, (b) ChatGPT users, and (c) English majors. Initially, 15 students were selected, with the final number based on data saturation. Interviews took place in quiet classrooms or online, depending on availability. The researchers served as the primary data collectors. Instruments used were a validated interview guide and a vocabulary test, pilot-tested for clarity. Participants were coded as "P-#" to ensure confidentiality.

Qualitative data were analyzed using Colaizzi's method [11]: transcription, extraction of significant statements, formulation of meanings, theme clustering, and participant validation. Quantitative data were analyzed using frequency counts, and both sets of data were integrated to assess how ChatGPT usage contributed to vocabulary growth. Ethical considerations were strictly followed, including informed consent, voluntary participation, data privacy, and the right to withdraw. The study was approved by the university's Research Ethics Committee (REC Code 1258 / 2024-10 Devio et al.), and participants received ₱40 compensation via load or GCash.

III. RESULT AND DISCUSSION

The study focused on the dynamics of ChatGPT utilization in lexical development among state university students. From the analysis of 446 significant statements and 39 categories of formulated meanings, a total of three index themes emerged for Research Problem 1 (RP1), two index themes for RP2, two index themes for RP3, and five index themes for RP4. This thematic structure was developed through Colaizzi's phenomenological method [11], allowing the researchers to capture participants' lived experiences in a systematic manner.

This section presents findings based on participants' responses concerning their general engagement with ChatGPT. It explores their overall perceptions of the tool, purpose of usage, frequency of use, role in vocabulary acquisition, and typical session duration—aspects supported by prior studies highlighting ChatGPT's influence on vocabulary learning and learner motivation [1][32][35].

General Perceptions of ChatGPT

ChatGPT as an Academic Aid and Learning Companion

Participants perceive ChatGPT as an AI-powered academic aid that supports students in understanding complex topics and enhancing their learning experiences. They regard it as a helpful companion for academic tasks, particularly in simplifying information and generating ideas. [26] highlights ChatGPT's capabilities in managing complex tasks, influencing educators to adopt it for writing support and vocabulary enhancement. However, participants collectively emphasized that ChatGPT should not replace genuine academic effort, and that its use must be carefully monitored to prevent dependency, a concern also raised in related studies [6][15]. As two participants shared:

"Yes, I've heard about ChatGPT. My general understanding is that it's meant for guidance. It should be used to help students with their academics, guiding them on what to do. In general, its purpose is really to provide guidance." (P-2)

"ChatGPT is a type of AI, and these days it's very controversial. It's not something to copy from, but when there's complicated literature that I really can't understand or can't process in my brain, that's when I ask ChatGPT for help." (P-3)

These insights illustrate the dual role of ChatGPT—as both a supportive academic tool and a platform that requires responsible usage to preserve academic integrity and promote independent learning [6][15][26].

ChatGPT as a Tool with Limitations and Risks of Overreliance

Participants recognize ChatGPT's value as an academic tool, while also acknowledging its limitations and the potential risks associated with overuse. Although it aids in idea generation, enhances creativity, and simplifies academic tasks, concerns persist about overreliance, which may hinder critical thinking, originality, and independent problem-solving. [15] highlighted ChatGPT's effectiveness as a learning aid but also cautioned against drawbacks such as reduced originality and increased learner dependency. Two participants remarked:

"I don't think it's useful if you rely on it 100%. But if you use it to generate ideas or provide prompts, it's really helpful." (P12)

"It was really helpful because it made things easier, but at the same time, it held back my own ideas, knowledge, or skills. I think

ChatGPT is helpful, but it must be used properly and not relied upon solely." (P15)

These reflections underscore the importance of adopting a balanced approach to ChatGPT—ensuring that its use supports learning while safeguarding against the erosion of independent thinking and critical cognitive skills [15].

Purpose of Using ChatGPT

A Supplemental Tool for Academic Tasks and Idea Generation

Participants view ChatGPT as a supplementary tool for academic tasks, particularly in idea generation and structuring written work. Its role in fostering creative writing and enhancing language skills has been well-documented, making it a versatile resource in tertiary education [38]. Participants reported using ChatGPT to gather references, obtain suggestions for creative projects, or brainstorm when experiencing difficulty. One participant mentioned using it for essay topics and academic writing:

"ChatGPT helps me come up with ideas or gives me a clearer understanding of a subject." (P-14)

While acknowledging that it should not replace independent thought, participants recognize ChatGPT's efficiency in supporting academic work, particularly in initiating or refining ideas [6][15][38].

Role in Vocabulary Acquisition

An Occasional Aid for Vocabulary Development, Helping Students Understand, Apply, and Explore New Words

Participants regard ChatGPT as a useful aid in vocabulary development, particularly when encountering unfamiliar terms. Research has shown significant improvement in vocabulary acquisition among EFL students who use ChatGPT, underscoring its potential in language learning contexts [35]. While it is not their primary source for learning new words, participants consider it helpful for generating ideas and offering alternative expressions, especially in support of academic tasks. They emphasized that it should supplement, not replace, traditional and independent vocabulary study. As one participant shared: find it valuable for generating ideas and alternative expressions, aiding in academic tasks. They emphasize that it should supplement, not replace, traditional independent vocabulary study. As one participant shared:

"ChatGPT helps me with vocabulary, but I still need to study words on my own." (P-9)

Frequency and Session Duration of ChatGPT Usage in Academic Tasks

Students reported using ChatGPT two to three times per week, with session durations typically ranging from 5 to 30 minutes. Its use varies depending on the complexity of tasks and immediate academic needs, often serving as a quick reference for short tasks or specific aspects of academic work. This flexible usage pattern complements traditional learning methods without replacing them [1][15][35].

Table 1.

Summary of Themes and Subthemes.

| Themes |
|---|
| Research Problem 1. <i>Perceived benefits and Challenges of using ChatGPT</i> |
| A Supplementary Learning Tool |
| Efficiency and Accessibility Booster |
| A Double-Edged Sword: Dependency and Reliability Concerns |
| Research Problem 2. <i>ChatGPT's ability to use unfamiliar words in providing context-relevant examples and descriptions in helping students understand and use the new vocabulary.</i> |
| Supports Vocabulary Acquisition and Application |
| Expansion of Writing and Communication Skills |
| Research Problem 3. <i>ChatGPT's ability compared to other traditional or digital language tools and resources in affecting and supporting vocabulary growth.</i> |
| Advance than other Vocabulary Tools |
| Drawbacks of ChatGPT Compared to other Digital Tools |
| Research Problem 4. <i>ChatGPT's ability to enhance vocabulary growth beyond traditional classroom methods</i> |
| Complementary and Flexible Support for Vocabulary Acquisition |
| Active Engagement and Vocabulary Retention |
| A Balanced, Comprehensive Approach for Vocabulary Development |

Table 1 presents the themes and subthemes derived from the data sets and the following the data analysis steps espoused by Collaizi [11].

Research Problem 1. *Perceived benefits and Challenges of using ChatGPT*

A Supplementary Learning Tool

ChatGPT serves as a valuable supplementary learning tool, enabling students to explore knowledge beyond the classroom. ChatGPT was employed as an academic support tool, and students' academic performance [9]. ChatGPT facilitates autonomy in learning through enabling learners to ask questions, seek clarification, and get quick feedback on their comprehension. The utterances from different participants are extracted from the field noted. Shown on succeeding pages of manifested utterances are coded names used for each participant in which P stands for participant and a number after each dash refers to representing a number of each participant. Accordingly, participants mentioned that:

"ChatGPT is a supplement to better understand the specific topic or the specific goal I am getting from the ChatGPT itself."

(P-3)

"ChatGPT is like a tool, an Artificial Intelligence tool, that may help you correct your grammar, compose essays, and more things." (P-9)

"I know ChatGPT as a guide of AI guide as well as what is a mode of learning also." (P-11)

This emphasizes its role in enhancing comprehension and achieving targeted learning objectives. In addition, this indicates its range in supporting various aspects of academic tasks, from improving writing skills to generating ideas and refining work. ChatGPT supports traditional teaching techniques by giving quick input and guidance, as well as encouraging learners to take control of their educational path, comprehension gaps, and confidence in their abilities. While ChatGPT can improve learning, students and educators should treat it as a supplement rather than a crutch, ensuring that critical thinking and verification remain key to the learning process.

Efficiency and Accessibility Booster

ChatGPT is efficient, quick, and easy to use, making it a great resource for students. It enables prompt solutions to a wide range of questions, not only offering basic information but also addressing specific needs such as language acquisition. Students can easily find the meanings, synonyms, and context of unknown words, allowing them to develop their vocabulary in real-time. Accordingly, participants mentioned that:

"It's also quick in providing more synonyms and words to help me understand that word better." (P-5)

"First, its availability and accessibility 24/7 is a big advantage. Second, it provides quick responses when needed. And third,

its responses are generated automatically." (P-11) ChatGPT has a significant amount of untapped potential to improve the accessibility and quality of education [33]. The efficiency stems from its capacity to digest and distribute information instantaneously. Avoiding the wait time commonly associated with traditional means of research or requesting clarification from teachers. The accessibility allows learners to access ChatGPT whenever the students need it, making it a crucial resource for facilitating ongoing learning outside of the classroom.

A Double-Edged Sword: Dependency and Reliability Concerns

While ChatGPT has various benefits, it also brings some obstacles, making it a two-edged sword. One key problem is the risk of over-reliance on the tool. Students may become reliant on ChatGPT for quick answers, sacrificing critical thinking and autonomous problem-solving skills, both of which are necessary for learning. This reliance can impede the development of deeper cognitive talents, like as analysis and synthesis, because students may rely on AI-generated responses rather than participating in critical thought. Accordingly, participants mentioned that:

"ChatGPT is making us limited or, like, caged in our own knowledge. That's the thing, miss, that I end up depending on it and

can't really show what I'm truly capable of, relying on ChatGPT all the time." (P-7)

"I've become too dependent on it to the point that I can no longer construct my own ideas." (P-8)

"For example, if you just rely on it and don't create your own work, especially as an English major, you can usually tell when

something is AI-generated because it tends to repeat similar patterns. When you present it in the classroom, it's obvious that many others have the same output. That's why you need to be mindful and responsible. The authenticity of your work gets lost

because it no longer comes from you." (P-12)

Reliance on ChatGPT is therefore concerned with the extent that students consider it to be integral to their learning processes [39]. Additionally, dependability is a critical concern. While ChatGPT has accurate and helpful information in many situations, it is not perfect. The accuracy of its responses varies, and it may occasionally deliver outdated or erroneous information. This can be troublesome, especially in academic environments where exact, reliable knowledge is required. Students who blindly believe the tool without first validating the facts risk spreading misinformation or missing out on deeper, more insights. Users can profit from ChatGPT's benefits while avoiding the traps of over-reliance and untrustworthy information.

Research Problem 2. ChatGPT's ability to use unfamiliar words in providing context-relevant examples and descriptions in helping students understand and use the new vocabulary.

Supports Vocabulary Acquisition and Application

ChatGPT plays a significant role in vocabulary acquisition and application by helping students discover, understand, and use new words. Participants reported using ChatGPT to search for definitions, understand word usage in context, and incorporate

new vocabulary into their writing and speaking. ChatGPT enhances vocabulary by offering definitions, synonyms, and contextual applications of unfamiliar words. It also provides diverse, relatable examples, aiding in deeper comprehension.

Participants found ChatGPT helpful in acquiring new vocabulary by offering multiple meanings and applications. P-1 noted its ability to clarify word meanings and offer a variety of related terms, while P-2 appreciated how it deepened understanding by providing words used in different contexts. Participants also highlighted ChatGPT's adaptability in creative tasks such as poem writing (P-5) and essay generation (P-10), which introduced new words. This supports findings that AI-driven tools like ChatGPT improve vocabulary acquisition and foster independent exploration [21][22].

Further, participants also emphasized how ChatGPT's diverse examples helped them better understand word usage. P-1 appreciated its use of natural language, making terms easier to grasp, while P-2 and P-4 found the examples practical for various contexts. P-9 noted how ChatGPT could shift perspectives, such as framing "death" positively, which encouraged critical thinking and adaptability in language use. This aligns with Vygotsky's theory, which highlights the importance of contextual learning and meaningful interactions [37]. Participants shared:

"I use it for examples, and when I don't understand certain words, I immediately ask ChatGPT because it provides many meanings or terms related to those words." (P-1)

"I was able to learn more deeply about words—not just one meaning or definition, but now it's more diverse." (P-2)

"I can understand unfamiliar words better, and it also provides examples of how to use those specific words in a sentence." (P-4)

"There was just one word I came across that I didn't expect to be used in that way. It showed me that it can actually be used in a different style or perspective." (P-9)

These findings align with research indicating that ChatGPT fosters vocabulary comprehension and application through interactive and contextual learning [20][37].

Expansion of Writing and Communication Skills

The findings reveal that ChatGPT significantly enhances students' writing and communication skills by providing corrective feedback, introducing advanced vocabulary, and refining sentence structure. P-2 noted how ChatGPT expanded their word choices, improving written and spoken communication. Similarly, P-3 emphasized its role in correcting errors, which they could apply in future conversations. Participants like P-7 and P-8 highlighted how ChatGPT unconsciously influences sentence construction and word usage, which improves both formal and creative writing. Accordingly, participants mentioned that:

"It's like a substitute for the basic words I know. I can now use it in my written works and sometimes even in conversations with my friends and others." (P-2)

"So, there was a wrong word I used that ChatGPT corrected. Moving forward, I can use the words ChatGPT suggested to make my sentences or conversations better." (P-3)

"I've acquired the words that I discovered through ChatGPT, and it has also helped enhance my written skills, like I mentioned earlier, miss, that it improves my writing." (P-7)

"Unconsciously, you end up writing with the right structure and even the pivotal elements of sentences. There's a pattern that

develops, and it feels like you're learning from AI, where you can carry that style with you." (P-8)

The findings highlight that ChatGPT plays a pivotal role in developing English language skills by offering personalized feedback that enhances coherence, refines sentence construction, and broadens vocabulary usage in writing. This aligns with observations that tailored guidance from ChatGPT enables learners to improve their language accuracy and fluency [6]. Moreover, the interactive nature of ChatGPT resonates with Vygotsky's constructivist theory, which emphasizes the importance of active

engagement and social interaction in fostering meaningful learning experiences [37]. By engaging students in dynamic exchanges, ChatGPT not only reinforces their understanding but also encourages the application of language in varied contexts. Additionally, its practical integration in both written and spoken tasks aligns with communicative language teaching (CLT) principles, as noted by previous research [24], by simulating real-world language use and promoting functional communication skills.

Research Problem 3. ChatGPT's ability compared to other traditional or digital language tools and resources in affecting and supporting vocabulary growth.

ChatGPT as an Advanced Vocabulary Tool

ChatGPT has emerged as a more advanced vocabulary tool compared to traditional resources due to its flexibility, creativity, promptness, and interactivity. It offers students an innovative and effective means of enhancing their vocabulary acquisition, surpassing conventional tools like dictionaries. Through its real-time learning capabilities, personalized assessments, and interactive approach, ChatGPT provides an enriched learning experience that caters to a variety of academic needs. The tool's ability to deliver immediate feedback and corrections enables students to explore word meanings, usage, pronunciation, and etymology in a dynamic,

engaging manner. As one participant noted:

"ChatGPT gives immediate responses with relevant examples, making learning more accessible" (P-2).

This aligns with modern pedagogical practices, where real-time interactions are crucial for effective language development [19][26].

Additionally, ChatGPT fosters efficient, multi-faceted vocabulary acquisition by offering contextualized examples and personalized explanations. Unlike traditional sources such as Merriam-Webster, which can sometimes provide vague or brief definitions, ChatGPT offers detailed, understandable, and relatable content that enhances the learning experience [4][15]. Respondents emphasized that ChatGPT provides tailored responses and contextual examples, making vocabulary growth more effective:

"ChatGPT can give detailed meanings and examples that help us understand better than other tools" (P-8).

Moreover, ChatGPT's explanations are clear, comprehensive, and accessible, catering to individual learners' levels and needs.

As highlighted by participants:

"ChatGPT explains things in simple terms and gives clear examples" (P-10).

This ability to adjust explanations ensures that vocabulary learning is not only easier to grasp but also more relevant to the learner's context [8][27].

Lastly, ChatGPT promotes interactive and dynamic learning, which is essential for vocabulary retention. Instead of relying on rote memorization, it encourages active engagement by providing immediate feedback, visual cues, and context-based examples. This fosters a deeper connection with new vocabulary, aiding retention. As one participant noted:

"The ability to ask for contextual examples really helps in understanding and remembering words" (P-15).

Research supports this, indicating that such dynamic learning environments improve vocabulary retention by offering frequent, personalized practice [9][24][33].

Overall, ChatGPT proves to be a powerful tool for vocabulary development, surpassing traditional methods by offering a flexible, interactive, and personalized learning experience [10][18].

Drawbacks of ChatGPT Compared to other Digital Tools

While ChatGPT offers significant advantages in language learning, including personalized responses and interactive engagement, it is essential to acknowledge its limitations, especially in comparison to other digital tools. Despite its innovative features, ChatGPT has certain drawbacks that may affect its reliability and accessibility, which can impact its effectiveness as a primary resource for language development.

One of the primary concerns is reliability and accuracy. As an AI-driven tool, ChatGPT generates responses based on patterns in the data it has been trained on. This process can sometimes lead to errors, inconsistencies, or misunderstandings, particularly in complex or specialized contexts. Unlike expert-driven resources such as academic databases or language-focused platforms, ChatGPT may not always provide precise or contextually appropriate information [6][23]. Respondents pointed out the variability in its reliability:

"I think Merriam-Webster is more reliable" (P-12).

"ChatGPT is not always reliable, so we can't fully trust AI" (P-14).

While ChatGPT is a powerful learning tool, its occasional inaccuracies highlight the need for learners to use it in conjunction with other trusted resources [7][25]. Educators must supervise its use to prevent the reinforcement of linguistic inaccuracies or biases, ensuring that learners receive accurate and well-rounded language guidance [11][28].

Another notable limitation of ChatGPT is its offline accessibility. Unlike traditional tools such as Merriam-Webster, which can be used without an internet connection, ChatGPT requires a constant online connection to function. This reliance on the internet makes it less convenient for learners in areas with limited or no internet access. One respondent remarked:

"While ChatGPT is more advanced than Merriam-Webster, it's not accessible offline, whereas Merriam-Webster is." (P-3).

This limitation makes ChatGPT less practical for students who need a reliable tool for vocabulary learning in offline settings. The necessity for an internet connection can restrict its usability, especially in regions where internet access is unreliable or unavailable [12][29].

While ChatGPT offers significant benefits for language learners, such as interactivity and personalized learning, its reliability and offline accessibility present challenges that must be addressed. To maximize its effectiveness, ChatGPT should be used as a supplementary tool, alongside other reliable resources, and with appropriate guidance from educators to ensure accurate and comprehensive language development [13][20]. Its potential in language learning remains high, but learners must approach it with critical consideration of these limitations.

Research Problem 4: ChatGPT's ability to enhance vocabulary growth beyond traditional classroom methods

Complementary Support of Traditional Classroom Methods for Vocabulary Acquisition

ChatGPT serves as a complementary tool to traditional classroom methods, enhancing vocabulary acquisition beyond the confines of the classroom. Many participants highlighted that ChatGPT does not replace traditional learning but rather supports and reinforces it. By offering immediate access to definitions, examples, and synonyms, it enables learners to explore words at their own

pace. One participant noted:

"ChatGPT is actually very helpful in improving my vocabulary because, as you mentioned, we're not always in the classroom, and our professors can't always teach us everything. But when we turn to ChatGPT, we can learn more." (P-4)

This aligns with the research by Garrison and Anderson, who suggest that digital tools can offer personalized learning experiences, reinforcing traditional instruction [36]. ChatGPT's flexibility allows students to interact with the tool at any time and from anywhere, providing additional vocabulary support when classroom instruction might not be available. As one participant shared:

"I use ChatGPT as a complement and ask for examples and use it for certain hard words, so it's like an additional device to my

learning." (P-1) Thus, ChatGPT's flexibility and supplemental nature make it an ideal tool for supporting vocabulary learning outside the classroom environment [13][29].

Active Engagement and Vocabulary Retention

Active engagement is key to retaining new vocabulary, and ChatGPT offers a unique way to achieve this. The AI's conversational style of interaction allows students to practice and apply new words repeatedly, reinforcing their learning in

dynamic

contexts. One participant remarked:

"There are times when my interaction with ChatGPT is more conversational, unlike search bars on Google, which are more direct." (P-3)

This conversational approach helps deepen understanding and improves retention. Another participant emphasized:

"ChatGPT helped me learn and retain new words by providing more context and examples. It gives clear and specific explanations." (P-10)

Research supports this finding, showing that repeated engagement and application of vocabulary in active contexts lead to better retention [30][35]. ChatGPT's ability to engage learners in conversation helps reinforce vocabulary over time, making it more memorable. By offering examples and encouraging users to ask follow-up questions, ChatGPT turns vocabulary learning into an interactive experience that boosts long-term retention [24][33].

A Balanced, Comprehensive Approach for Vocabulary Development

A key theme that emerged in the study is the importance of balancing ChatGPT's use with traditional classroom methods. While ChatGPT provides flexibility and personalized learning, many participants emphasized that it should not replace the structured environment of traditional instruction. A balanced approach ensures that students benefit from both worlds: the immediate, personalized assistance of ChatGPT and the guided, interactive instruction provided in the classroom. One participant shared:

"The positive thing about ChatGPT is that when you get home, you can search for meanings and understand what certain words symbolize or their meaning in context, like in poems. Traditional classrooms don't always have the time to cover every vocabulary word, and sometimes, only a few words are introduced. But with ChatGPT, you can search at home and learn more without it being

time-consuming." (P-12)

This balance allows learners to explore vocabulary in-depth when classroom time is limited. As another participant noted:

"It's better to have both because both traditional and ChatGPT are beneficial. ChatGPT sparks new inquiries, and with traditional learning, you can get a structured foundation." (P-14)

Research supports the idea that combining digital tools with traditional teaching methods results in a more comprehensive and engaging learning experience [31][38]. By blending the structure of classroom learning with the flexibility of AI tools, students can develop a richer, more robust vocabulary [20][32].

Table 2.

Summary of Participant's Scores.

| PARTICIPANT | SCORE |
|-------------|-------|
| P1 | 17 |
| P2 | 11 |
| P3 | 13 |
| P4 | 12 |
| P5 | 7 |
| P6 | 14 |
| P7 | 12 |
| P8 | 12 |
| P9 | 17 |
| P10 | 19 |
| P11 | 14 |
| P12 | 18 |

| | |
|------------|-----------|
| P13 | 15 |
| P14 | 18 |
| P15 | 12 |

Table 2 presents the participants' scores in the vocabulary test. The participants' test scores ranged from 7 to 19, with the most frequent score being 12. The results showed a variety of performance levels, with some participants scoring on the lower end while others achieved higher scores. This range highlights differences in vocabulary knowledge among the participants.

Figure 1.

Total Points Distribution

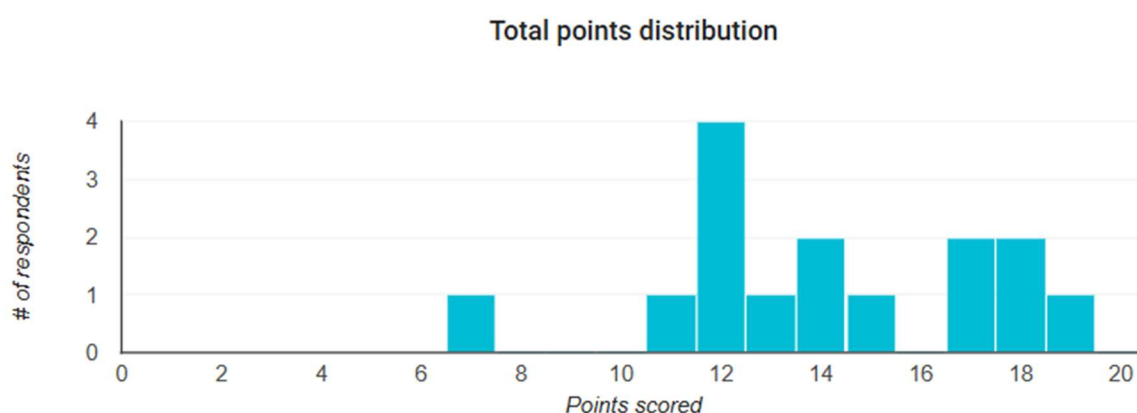
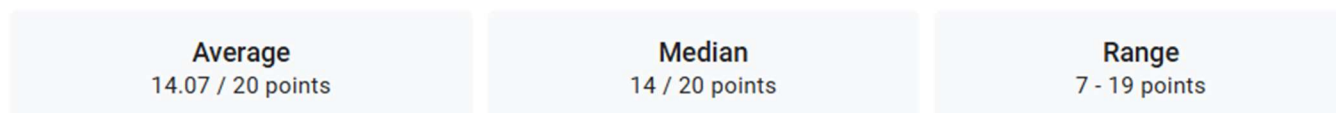


Figure 1 presents the total points distribution in the vocabulary test. The results of the vocabulary test reveal important insights into participants' proficiency levels. The mean score was 14.07 out of 20, indicating an overall moderate level of vocabulary knowledge among the group. The median score was 14, suggesting a balanced distribution, as half of the participants scored above

and half scored below this value. The mode, or the most frequently occurring score, was 12, highlighting a common performance level among several participants. The range of scores was 12 points, spanning from 7 to 19, which illustrates the variation in vocabulary knowledge within the group.

Analysis of the most missed words provides further insights into specific areas of difficulty. Only 4 out of 15 participants answered correctly for the word *Rudimentary*, while *Extrapolate* and *Taciturn* were correctly identified by 6 participants each. The word *Eviscerated* was correctly answered by 7 participants. These results suggest that participants struggled more with advanced or less commonly used vocabulary, reflecting potential gaps in their lexical development.

Qualitative Insights

Insights from the interview suggest a correlation between the participants' use of ChatGPT and their vocabulary improvement. While ChatGPT appears to have supported the learning of commonly encountered words, its effectiveness in helping users grasp complex or less frequently used vocabulary, such as *Rudimentary*, *Extrapolate*, *Taciturn*, and *Eviscerated*, was limited. This indicates that while the tool may enhance general vocabulary knowledge, there is room for improvement in addressing more nuanced or advanced terms.

These findings are supported by studies and theories which highlight ChatGPT's role in vocabulary acquisition [25]. Some

studies also emphasize its limitations in addressing nuanced or advanced terms, aligning with participants' struggles with complex vocabulary [11,33]. These findings reflect a learning theory that stresses the need for contextual and interactive learning to deepen understanding [24].

Implications for Lexical Development

The test results have significant implications for lexical development. One significant strength is that the majority of participants scored at or above the mean, indicating a good grasp of language generally. This shows that tools such as ChatGPT can help with vocabulary development, especially for intermediate-level words [10,25]. However, difficulties persist with words that have complicated meanings or are rarely used in conversational circumstances. Addressing these gaps could entail implementing targeted learning strategies for less common vocabulary [12,33].

IV. CONCLUSION

The study explored the dynamics of ChatGPT's use in lexical development among state university students, focusing on how students understand and utilize newly acquired vocabulary. The findings emphasize that ChatGPT can serve as a valuable tool for enhancing vocabulary, but its use requires critical engagement to avoid overreliance.

The results suggest that ChatGPT effectively supports vocabulary acquisition by providing context-relevant examples and personalized feedback, enhancing students' comprehension and application of new words. While it outperforms traditional vocabulary tools in certain aspects, such as offering real-time responses and personalized explanations, its limitations—like occasional inaccuracies and dependency on internet access—highlight the need for a balanced approach that integrates both AI and traditional learning methods. The broader implication of this study is the potential for ChatGPT to transform vocabulary learning, offering students immediate, interactive learning experiences that support both basic and intermediate vocabulary development. However, its role should remain supplementary to more traditional educational methods to ensure comprehensive language acquisition. This research contributes to the growing body of knowledge on AI's role in education, underlining the importance of fostering critical thinking and responsible use of technology in academic settings. Hence, it is recommended that ChatGPT be integrated thoughtfully into instruction to support language development while promoting digital literacy and academic integrity.

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