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Research Article

Lexical Sesquipedaliophobia Among Foreign Language Learners: A Thematic Analysis of Anxiety Toward Complex Vocabulary

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Abstract

Lexical sesquipedaliophobia—the fear or anxiety associated with long and complex words—represents an affective barrier to language acquisition, yet it remains underexamined in the context of foreign language learning. This thematic analysis identified the patterns, contextual variations, and proposed mitigation strategies related to lexical sesquipedaliophobia among foreign language learners in the Davao Region, Philippines. Forty participants were purposively selected based on predefined inclusion and exclusion criteria to ensure variation across all groups involved. Data were collected through in-depth interviews and a focus group discussion, and analyzed thematically using Creswell's analytic framework. Findings unearthed that lexical sesquipedaliophobia manifests through three interrelated psychological domains: communication apprehension, test anxiety, and fear of negative evaluation. These internal experiences were further shaped by various sociodemographic profiles. Despite these barriers, participants identified actionable strategies to manage lexical sesquipedaliophobia, including media-facilitated exposure, non-judgmental learning environments, peer-based correction practices, and vocabulary enrichment activities. This study affirms that anxiety towards lengthy and complicated lexicons is not merely a linguistic issue but a socially and psychologically embedded phenomenon. It calls for affectively responsive and inclusive pedagogical interventions that can lower learners' affective filters and promote confident engagement with complex vocabulary in foreign language classrooms.

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1. Introduction

Lexical sesquipedaliophobia, commonly referred to as long word anxiety, is a form of language-related anxiety characterized by feelings of fear or discomfort when individuals encounter lengthy or polysyllabic words during spoken or written communication (Aldrich, 2002). As a form of language anxiety, lexical sesquipedaliophobia affects learners emotionally, cognitively, and physiologically (Kim et al., 2025; Han et al., 2022), yet remains underexplored in tertiary English classrooms. Speaking and reading in English, which involves long or complex words, can cause hesitation, avoidance, and reduced participation, leading to communication breakdowns and lower comprehension (Tsai & Lee, 2018).

In the United States of America, Nicolaidis et al. (2020) reported that populations with intellectual disabilities show that complex vocabulary and confusing terms are direct triggers of anxiety and avoidance among participants. At the local level in Mindanao, students often freeze, hesitate, or avoid participation when faced with unfamiliar or lengthy words which affect learner motivation and engagement (Salvacion & Napil, 2025). Further, Labicane (2021) reported that anxiety which highlights the fear of making mistakes, especially with the correct use and pronunciation of complex words was manifested among Filipino college students. This particular fear of long or complex words is especially concerning given that English is a primary medium of instruction in higher education.

Related literature suggests three converging themes explaining the relationship between complex vocabulary and language anxiety. First, vocabulary difficulty and anxiety appear to be closely linked. Studies in Saudi Arabia and China show that limited vocabulary knowledge and heightened reading anxiety significantly reduce learners' reading comprehension and word recognition when they encounter complex lexical items (Alqurashi, 2024; Zhao et al., 2013). Learners tend to struggle more when

texts contain unfamiliar or lengthy words, which increases cognitive load and often leads to avoidance behaviors. Second, pronunciation-related anxiety further intensifies this challenge. When students fear mispronouncing long or unfamiliar words, their attention becomes divided between decoding the lexical form and managing anxiety, which slows down recognition and comprehension processes (Suleimenova, 2013). Third, lexical complexity in second language learning contributes to declining proficiency as academic language becomes more demanding.

As learners progress through higher levels of education, they are exposed to increasingly technical and multisyllabic vocabulary, which requires greater cognitive processing and linguistic competence. Evidence from Malaysia indicates that a large proportion of learners demonstrate low proficiency when confronted with complex English terms, reflecting the growing difficulty of lexical demands in advanced language learning contexts (Zhou et al., 2025). Collectively, these studies suggest that lexical complexity not only increases cognitive effort but also amplifies anxiety, ultimately influencing learners' comprehension and engagement with second language texts.

While language anxiety has been extensively investigated, little research has focused specifically on anxiety triggered by complex lexical structures. With the growing adoption of English-medium instruction in higher education, addressing this underexplored form of anxiety has become increasingly urgent, as it significantly impacts students' participation, comprehension, and academic confidence. Specifically, this study sought answers to the following research questions: (1) What are the patterns of experiences of foreign language learners on lexical sesquipedaliophobia in academic settings?; (2) How does the grouping analysis affect the different patterns of experiences of foreign language learners

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regarding their lexical sesquipedaliophobia?; and (3) What are the insights provided by the participants to lessen the lexical sesquipedaliophobia among foreign language learners?

In addressing these questions, the study sought not only to advance scholarly discourse but also to provide actionable solutions that directly enhance student learning experiences. This study was seen through Foreign Language Anxiety

Theory (Horwitz et al., 1986) and Krashen's (1982) Affective Filter Hypothesis. Horwitz et al. conceptualize foreign language anxiety as comprising three interrelated components: communication apprehension, test anxiety, and fear of negative evaluation.

Building on this, Krashen's Affective Filter Hypothesis posits that increased worry functions as an impediment that obstructs the effective processing of verbal input.

2. Materials and Methods

2.1. Research Design

This study used qualitative design employing a thematic analysis, which explored the patterns of experiences of learners when faced with lexical sesquipedaliophobia in classroom settings. This approach served as the interpretive lens to identify the core ideas in how learners perceive the anxiety-inducing impact of polysyllabic or technical vocabulary. Further, this approach followed the guidance of Denzin and Lincoln (2011, as cited in Creswell & Poth, 2018), who underscore the value of naturalistic inquiry. In this study, the IDI and FGD elicited data on the "what" and "how" of students' experiences, allowing the researcher to synthesize recurring clusters of ideas and interpret their implications in educational contexts. Moustakas (1990) and Strauss and Corbin (1998, as cited in Creswell & Poth, 2018) support this technique for its ability to capture the core essence of a shared experience across diverse individuals.

2.2. Research Participants

A total of forty (40) foreign language learners were involved, with twenty (20) participating in the In-Depth Interviews (IDIs) and another twenty (20) taking part in the Focus Group Discussion (FGD). For the IDIs, participants were purposively selected from each province in the Davao Region—one male and one female from each participating higher education institution—while ensuring representation across degree programs, provincial classification (urban and rural), school type (college and university),

and sex (male and female). Participants were identified through purposive sampling guided by the set of inclusion and exclusion criteria. The participants were aged 18–24 years old and were currently enrolled as first- to fourth-year college students. In addition, a Focus Group Discussion (FGD) was conducted with a total of twenty (20) student participants, all of whom were different from those who took part in the IDIs. Two representatives were selected from each participating higher education institution, ensuring broad coverage of Davao Region and balanced representation across different grouping variables. In terms of language background, the participants were multilingual speakers who commonly used Filipino and regional languages (e.g., Cebuano) in daily communication, while English was primarily used in academic settings. Their English proficiency was generally at the intermediate to advanced level, based on their sustained exposure to English as a medium of instruction in higher education. As stated by Creswell (2013), this selective yet inclusive strategy maintained methodological relevance and representational diversity, which are essential for rigorous thematic analysis.

2.3. Data Collection

Data collection was conducted using both face-to-face and online modalities. For face-to-face sessions, including survey administration and in-depth interviews, the researcher personally met participants at their

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respective institutions, distributed printed Informed Consent Forms (ICFs), secured signed consent forms, and provided printed questionnaires or conducted recorded interviews on-site. Each in-depth interview lasted approximately 30–45 minutes and followed a semi-structured interview protocol designed to explore participants' patterned experiences and perspectives related to the phenomenon under study. For online data gathering, specifically the focus group discussions, participants were sent digital copies of the ICF in advance, which they were required to read and sign electronically prior to joining the Google Meet session. Only participants who had submitted the signed ICF were admitted to the online sessions. At the beginning of the online meeting, the researcher reiterated the voluntary nature of participation to ensure continued informed consent. The focus group discussion lasted 2 hours 30 minutes and was guided by the same semi-structured protocol used in the interviews to facilitate consistent thematic exploration among participants.

2.4. Data Analysis

Transcripts from the in-depth interviews (IDIs) and focus group discussions (FGDs) were analyzed using thematic analysis to capture learners' pattern of experiences on lexical sesquipedaliophobia in academic contexts (RQ1), the patterned variations in these experiences across programs, locality, institutional settings, and sex (RQ2), and participants' proposed strategies for reducing such anxiety (RQ3). Although survey-derived constructs communication apprehension, test anxiety, and fear of negative evaluation—served as initial sensitizing concepts, the analysis remained primarily inductive, allowing codes and themes to emerge directly from the data. Guided by Creswell's (2013) framework, I transcribed, anonymized, and organized the

interviews by key demographic variables. I closely read the transcripts, highlighting emotional expressions and noting early patterns.

The analysis involved two cycles of coding. In the first cycle, open coding was conducted to identify significant statements and recurring ideas across the transcripts. In the second cycle, focused coding was applied to refine and cluster the initial codes into broader conceptual categories. Codes were manually applied and grouped into broader categories. These categories were then compared and synthesized to generate preliminary themes, which were further reviewed and refined based on their relevance to the research questions and the recurrence of supporting evidence across participants' responses. Final themes were established once thematic saturation and conceptual coherence were observed across the dataset. Throughout the process, I maintained an audit trail of coding decisions and field notes in my research journal, conducted peer debriefing with my dissertation adviser, and shared thematic summaries with selected participants for validation (member checking). Any discrepancies in the interpretation of codes and themes raised during peer debriefing were discussed and resolved through analytic consensus, ensuring the credibility and consistency of the thematic interpretations.

2.5. Trustworthiness

Trustworthiness was enhanced through methodological triangulation, an audit trail of analytic decisions, peer debriefing, and member-checking of key thematic summaries with selected participants. Further, the study adhered to the framework of Lincoln and Guba (1985), which focuses on credibility, confirmability, transferability, and dependability.

3. Results

This section presents the key findings from the study, which explored the experiences of higher education students related to lexical

sesquipedaliophobia. The analysis was guided by three research questions focusing on students' personal patterns of experiences

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(RQ1), group-based variations (RQ2), and suggested strategies for reducing anxiety (RQ3). Themes and core ideas were developed through inductive coding and thematic analysis of

interview and focus group data. Verbatim excerpts are included to support each theme and illustrate the range and depth of participant insights.

3.1. Patterns of Experiences of Foreign Language Learners on Lexical Sesquipedaliophobia in Academic Settings

Presented in Table 1 are the major themes and core ideas reflecting the patterns of experiences of higher education students in Region XI regarding their lexical sesquipedaliophobia.

Following a systematic analysis of the participants' responses, three essential themes emerged across the two study groups: communication apprehension, test anxiety, and fear of negative evaluation.

Table 1. Patterns of Experiences of Foreign Language Learners on Lexical Sesquipedaliophobia in Academic Settings

Essential Themes (a Priori)	Core Ideas
<i>Communication Apprehension</i>	• experiencing anticipatory cognitive anxiety when required to produce unfamiliar or complex words • experiencing pressure to pronounce complex lexical items accurately • experiencing increased anxiety when required to speak in the presence of a large audience • developing negative self-perceptions and lingering emotional distress • avoiding the use of lengthy or complex words deliberately as a coping strategy
<i>Test Anxiety</i>	• experiencing physiological triggers during oral recitations • experiencing heightened anxiety in recalling of prior unsuccessful assessment experiences • engaging in verbal and non-verbal avoidance behaviors
<i>Fear of Negative Evaluation</i>	• experiencing anxiety and hesitation due to fear of being judged, ridiculed, or criticized • experiencing diminished self-confidence as a result of unfavorable comparison • overthinking one's performance due to concern about failing to meet others' expectations • developing tendencies toward social and academic withdrawal • fearing corrective feedback due to perfectionistic tendencies and concern over public judgment

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Communication Apprehension

Participants consistently described experiencing anticipatory cognitive anxiety when required to produce unfamiliar or complex words during oral recitations and reporting tasks.

During oral recitation and oral reporting [...] It is very unfamiliar. If it is difficult, Sir, you really cannot correct its pronunciation. It is possible that it won't come out right. Nervousness comes first. And when you get nervous, you experience a mental block. (IDI-5)

In our department, Sir, we often do reporting, and one of the words I mentioned was "signage," which I mispronounced. It was an interesting experience because almost everyone knows how to pronounce it, but I mispronounced it due to nervousness. (FGD_9)

Test Anxiety

Participants claimed to have experienced physiological triggers when speaking in front of their classmates, particularly during oral recitations and reporting tasks.

Uhhh, about the rank of hierarchy mode, [...] while I was in front, I was holding a script, and my hands were trembling. (IDI-16)

I really sweat on my forehead, and my face, Sir, feels like it is shaking, like it is vibrating. It is like my eye is twitching. (IDI-15)

Fear of Negative Evaluation

Participants consistently reported experiencing anxiety and hesitation due to fear of being judged, ridiculed, or criticized by both peers and instructors.

There are really times like that. It keeps repeating in your mind, that one thing—you did not pronounce it correctly. [...] Of course, we are here in the Philippines, even if the mistake is very small, there are times that people laugh. (IDI-2)

When I encounter a long, complex English word, [...] my classmates will laugh, or think that I am less capable as a student. [...] I am afraid of being laughed at. (IDI-3)

3.2. Grouping Analysis Affecting the Patterns of Experiences of Foreign Language Learners on their Lexical Sesquipedaliophobia

Presented in Table 2 are the major themes and core ideas that describe the patterned variations in the learners' experiences of lexical sesquipedaliophobia across degree programs, locality, institutional settings, and sex in Davao Region.

Program-Based Pressure

Participants expressed that their program of study shaped their exposure to complex vocabulary, particularly in disciplines with highly technical or specialized terminologies.

Many described anxieties stemming from expectations to pronounce field-specific terms fluently and confidently during oral tasks.

There are many difficult terminologies in Nursing, so we get used to them. (IDI-5)

There are so many words we need to memorize, especially in Criminology. (IDI-16)

Geographic Language Exposure

Learners from rural areas described experiencing less exposure to English, both at home and in their previous schools, contributing to reduced confidence with polysyllabic vocabulary. They perceived urban students as having more practice and ease in using complex terms.

In the mountains, cellphones or Wi-Fi aren't common and it affects our exposure to lengthy words. (IDI-2)

Others are more exposed because they live in the city. (IDI-15)

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Table 2. Grouping Analysis Affecting the Patterns of Experiences of Foreign Language Learners on Lexical Sesquipedaliophobia

Essential Themes	Core Ideas
<i>Program-Based Pressure</i>	- encountering technical terminologies in specialized courses - facing performance pressure during academic tasks - managing expectations of fluency within specific disciplines - struggling with subject-specific vocabulary unfamiliarity - conforming to language norms imposed by program culture
<i>Geographic Language Exposure</i>	- accessing limited digital and educational resources in rural areas - experiencing low exposure to academic English vocabulary - struggling with pronunciation due to minimal language immersion - perceiving urban students as more fluent and confident - navigating unequal preparation across geographic backgrounds
<i>Institutional Language Immersion</i>	- gaining broader exposure to academic vocabulary in universities - experiencing fewer immersion opportunities in colleges - benefiting from structured specialization in advanced institutions - associating institutional prestige with lexical competence - struggling with anxiety regardless of institutional classification
<i>Sex-Based Response Patterns</i>	- internalizing fear of mispronunciation among female students - downplaying lexical struggles among male students - over-preparing to compensate for performance pressure - relying on peer correction instead of teacher support - coping through sex-based emotional regulation strategies

Institutional Language Immersion

Learners attending universities often reported more structured opportunities for immersion in academic English, while those from colleges described fewer encounters with complex vocabulary. However, lexical anxiety was still present regardless of institution type.

Those in universities are more skilled... they are more exposed to lengthy words. Their teachers are also more competent due to requirements. (IDI-15)

In small colleges, our topics are very simple, with very few lengthy words. (IDI-8)

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Sex-Based Response Patterns

Female learners often reported internalizing fear and overpreparing, while male students tended to downplay mistakes or rely more on informal peer correction. Emotional responses to language tasks appeared to follow sex-based coping styles.

I really take it to heart as a woman, especially when I struggle to read long words that have silent letters. (IDI-11)

For guys, it's just a mistake. Just laugh it off. (IDI-6)

3.3. Insights Provided by Foreign Language Learners to Address Lexical Sesquipedaliophobia

Presented in Table 3 are the major themes and core ideas that capture participants' insights and suggested strategies for reducing lexical sesquipedaliophobia among foreign language learners in Davao Region.

Table 3. Insights Provided by Foreign Language Learners to Address Lexical Sesquipedaliophobia

Essential Themes	Core Ideas
<i>Media-Facilitated Exposure</i>	- utilizing digital platforms for vocabulary enhancement - practicing reading aloud using online sources - watching content creators who model pronunciation - integrating vocabulary learning apps and games - engaging in informal conversations using English
<i>Non-Judgmental Learning Environment</i>	- promoting encouragement over criticism during speaking tasks - avoiding public ridicule when students commit errors - supporting open expression of language difficulties - encouraging teachers to model empathy in correction - fostering a safe space for academic risk-taking
<i>Peer-Based Correction Practices</i>	- receiving help from classmates during difficult terms - normalizing non-judgmental peer corrections - encouraging informal vocabulary sharing within groups - practicing together in oral drills and reporting - creating a supportive peer feedback culture
<i>Vocabulary Enrichment Practices</i>	- implementing daily or weekly word-building routines - playing classroom word games and quizzes - encouraging dictionary use and personal word banks - posting new or unfamiliar words on bulletin boards - conducting word exposure through themed group tasks

Media-Facilitated Exposure

Participants suggested that consistent exposure to digital media—such as videos, apps, or online reading—helped reduce anxiety associated with unfamiliar vocabulary. They emphasized the role of informal, self-initiated learning outside the

classroom to build pronunciation and confidence.

I watch English vloggers and TED Talks to learn how they pronounce difficult words. (IDI-15)

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Word games on my phone help me get familiar with big words, even if it's just for fun. (IDI-8)

Non-Judgmental Learning Environment

Learners emphasized the importance of a safe and supportive classroom environment. They noted that encouragement rather than ridicule was key to building confidence, especially during oral tasks where mistakes were likely.

If I say something wrong, I hope the teacher corrects me in a nice way, not in front of the whole class. (IDI-12)

People laugh even at small mistakes—that's what makes me hesitate to try. (IDI-11)

Peer-Based Correction Practices

Several participants shared how peer support helped them manage anxiety when dealing with long or unfamiliar words. They valued peer feedback when delivered respectfully and

reported that group practices eased their fear of speaking.

My classmates correct me, but in a helpful way, not to embarrass me. (IDI-6)

We practice as a group before reporting, so I become more confident. (IDI-2)

Vocabulary Enrichment Activities

Learners suggested structured word-building routines and engaging vocabulary-related tasks to help manage their sesquipedaliophobia. These included word-of-the-day activities, games, and classroom posters featuring new terms.

We had a "word of the week" on the bulletin board, and it helped me remember tough words. (IDI-3)

Vocabulary quizzes make me nervous, but they also help me learn new terms. (IDI-16)

4. Discussion

This section interprets the findings of the study in relation to existing theories and literature on language anxiety and vocabulary acquisition. Drawing from Horwitz et al.'s (1986) Foreign Language Classroom Anxiety Theory and Krashen's Affective Filter Hypothesis, the discussion contextualizes the patterns of experiences of students with lexical sesquipedaliophobia and examines how individual, institutional, and sociocultural factors contribute to or mitigate their anxiety in foreign language learning settings.

4.1. Patterns of Experiences of Foreign Language Learners on Lexical Sesquipedaliophobia in Academic Settings

The findings of the present study support the claims of Ahmad et al. (2013), which reported that a majority of Malaysian respondents experienced worry and emotional distress when confronted with complex vocabulary, largely due to uncertainty in pronunciation. Such reactions suggest that unfamiliar lexical forms can trigger

heightened cognitive and emotional responses, particularly in situations that require immediate language production. Similarly, Asfour et al. (2024) emphasized that anxiety-related cognitive interference, such as mental blocking and misinterpretation of instructions, commonly occurred among Saudi learners during vocabulary-intensive assessments. Consistent with these findings, Karalik and Mer (2025) noted that difficulties with complex vocabulary and grammar in second language learning can heighten anxiety levels in university settings, thereby negatively affecting learners' communication and comprehension performance. Pedagogically, this suggests the need for instructional strategies that gradually introduce complex vocabulary through contextualized exposure, pronunciation scaffolding, and low-stakes communicative tasks to reduce anxiety and build learner confidence. Additionally, the present findings echoed the affirmations of Zólyomi (2021), which reported that Hungarian EFL students' performance in

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high-stakes assessments declined markedly when unfamiliar vocabulary was introduced, largely due to heightened emotional and psychological strain. This aligns with Bodie (2010), who explained that long word anxiety is often accompanied by physiological trigger and behavioral responses, such as increased heart rate, trembling, and sweating. Similarly, Docena et al. (2023) identified apprehension, distress during oral presentations, spotlight-related fears, and physical trembling as common difficulties encountered by students, particularly when language disruptions occurred. Collectively, these findings support the present study's observation that physiological reactions are central manifestations of test anxiety during oral recitations involving lengthy and complex lexical items.

Further, the findings are consistent with research characterizing fear of negative evaluation as distress arising from others' judgments and the anticipation of being evaluated unfavorably, which can lead to heightened anxiety and hesitation in language-related tasks (Hu et al., 2024; Yilmaz & De Jong, 2024). In Turkish EFL contexts, Aydin (2008) reported that learners' fear of negative evaluation stemmed from concerns about classmates' or teachers' judgments, fear of making grammatical or pronunciation errors, and fear of disapproval. These factors closely mirror the experiences of students in the present study, particularly when hesitation arises from the use of long or complex lexical items, reinforcing fear of negative evaluation as a central component of lexical sesquipedaliophobia.

4.2. Grouping Analysis Affecting the Patterns of Experiences of Foreign Language Learners on Lexical Sesquipedaliophobia

In the context of degree program, findings suggest that criminology students experienced greater lexical sesquipedaliophobia, primarily due to difficulties with technical and legal vocabulary that limited their confidence in using English. Consistent with this, Bangcaya et al. (2025) reported that criminology students

struggled with crime-related and legal English as a result of limited exposure, which heightened their anxiety toward complex lexical items. Similarly, Alsheikh and Masoud (2022) found that criminology cadets received little to no specialized English training and that existing English courses failed to address their academic language needs, further intensifying long word anxiety. From a sociolinguistic perspective, the limited exposure to discipline-specific English may create a linguistic gap between everyday language use and professional discourse, thereby increasing learners' apprehension when encountering technical vocabulary.

In the context of provincial classification, the qualitative findings surfaced that students from rural areas experienced more lexical sesquipedaliophobia compared to their urban counterparts. This pattern is consistent with Francisco (2021), who reported that rural students were more likely to avoid speaking or reading aloud in English classes, particularly when encountering unfamiliar or polysyllabic vocabulary due to fear of making mistakes. Similarly, Fu and Liu (2024) found that rural Chinese students demonstrated greater avoidance behaviors and relied on surface-level learning strategies when faced with difficult vocabulary in language tasks. Parallel findings were also reported by Idrus and Tab Hamid (2021), who observed that learners from rural public schools in Malaysia frequently skipped complex lexical items during oral recitations because of fear of mispronunciation and peer judgment. These patterns may have occurred because rural learners often have fewer opportunities for sustained exposure to English in both academic and sociocultural environments, which may limit their familiarity with complex lexical structures.

In terms of school type, the qualitative findings unearthed that college students are more exposed to experience lexical sesquipedaliophobia compared to those enrolled in universities. This finding aligns with Wang and Zhang (2021), who reported that college

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students experienced greater test anxiety and fear of negative evaluation when confronted with unfamiliar or lengthy academic terms, particularly during oral assessments and reading-intensive tasks. On the contrary, students from university settings demonstrated lower levels of lexical sesquipedaliophobia, which, as noted by Pabro-Maquidato (2021), attributed to the development of stronger metacognitive strategies that help regulate anxiety and facilitate engagement with complex vocabulary. This pattern may have occurred because university environments often provide broader academic exposure, research-oriented tasks, and more sustained engagement with complex academic texts, which gradually strengthen learners' lexical familiarity and coping strategies.

When it comes to sex, it became evident that, through the qualitative findings, female students are more prone to experience lexical sesquipedaliophobia compared to male students. This pattern is consistent with Pappamihel (2010), who found that female learners reported significantly higher anxiety when using English in mainstream academic settings, where performance pressure and evaluative demands are more pronounced.

However, male students were found to be less affected by speaking difficulties involving lengthy vocabulary, albeit still experiencing moderate levels of anxiety, as reported by Pristiyaputri et al. (2023). These findings suggest that while both sexes experience lexical sesquipedaliophobia, female students are more vulnerable to evaluative and performance-related pressures associated with complex vocabulary use.

4.3. Insights Provided by Foreign Language Learners to Address Lexical Sesquipedaliophobia

The theme of media-facilitated exposure in this study reinforces existing literature on the role of digital platforms in reducing language anxiety and supporting vocabulary acquisition. Ahmad

et al. (2023) emphasized that students from urban environments often benefit from regular exposure to English through digital media, which helps lower anxiety and increase confidence. Similarly, participants in this study described using social media, video content, and mobile apps to practice pronunciation, encounter unfamiliar words, and build fluency in informal, low-pressure settings. These practices reflect what Mondahl and Razmerita (2014) describe as socially driven and collaborative language learning, where learners engage with authentic content outside the classroom. Thus, the findings suggest that media-based exposure is not merely supplemental but central to learners' strategies for managing lexical sesquipedaliophobia, particularly in environments where formal instruction may be limited.

The importance of a non-judgmental learning environment in the present study is supported by Sadighi and Daspak's (2017) findings that learners' fear of tests and negative evaluation is often rooted in personal dispositions but can be intensified by classroom conditions. They argued that while such anxiety may stem from individual traits, unsupportive or evaluative environments can exacerbate students' apprehension toward language use.

This perspective is further reinforced by Muthumaniraja et al. (2025), who identified perfectionism as a major affective barrier in Japanese EFL contexts, noting that instructional climates emphasizing accuracy, high standards, and error-free performance tend to heighten anxiety and suppress learners' willingness to speak. Similarly, participants in the current study stressed the need for compassionate correction, private feedback, and classroom atmospheres that normalize mistakes, indicating that reducing evaluative pressure is crucial for mitigating lexical sesquipedaliophobia. Taken together, these studies and present findings highlight how pedagogical climates that privilege encouragement over judgment can substantially lessen language-related fears and promote communicative risk-taking.

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The present study's emphasis on peer-based correction practices aligns with Al-Shboul et al. (2013), who observed that anxiety related to complex vocabulary can heighten fear of negative evaluation, particularly when learners anticipate criticism from peers or instructors after mispronouncing long or unfamiliar terms. This heightened apprehension often discourages students from participating in oral tasks, thereby limiting essential opportunities for language growth.

While teacher feedback remains a critical factor—as Das (2020) found, with over 70% of students reporting increased motivation and confidence when supported by positive reinforcement—participants in this study also highlighted the powerful role of peer interaction. They described feeling safer and more confident when peers offered gentle, non-judgmental corrections, suggesting that a classroom culture of mutual support can reduce anxiety and promote engagement. These findings reinforce the idea that structured peer feedback not only complements teacher input but also fosters a more inclusive environment for managing lexical sesquipedaliophobia.

5. Conclusion

This study unearthed that lexical sesquipedaliophobia among foreign language learners in the Davao Region is influenced by communication apprehension, test anxiety, and fear of negative evaluation, with variation across degree program, geographic location, institutional type, and sex. To manage these anxieties, learners employed strategies such as media-assisted practice, peer support, and structured vocabulary routines. Theoretically, the findings advance understanding of lexical sesquipedaliophobia as a multifaceted

6. Recommendations

Government agencies overseeing language education are urged to recognize lexical sesquipedaliophobia as a legitimate affective

The present study's findings on vocabulary enrichment practices are supported by previous research highlighting the value of structured and engaging strategies for expanding learners' lexical competence. Styles et al. (2014) emphasized that vocabulary enrichment programs significantly improve word recognition and usage, particularly when activities are embedded in regular classroom routines. Similarly, Tabassum and Naveed (2024) underscored the effectiveness of interactive strategies—such as games, word walls, and group-based vocabulary tasks—in enhancing learner engagement and retention in EFL settings.

Participants in this study echoed these findings, recommending word-of-the-day routines, vocabulary quizzes, and collaborative exercises as helpful tools in reducing anxiety around long and unfamiliar words.

These learner-informed practices illustrate how enriching vocabulary in supportive, interactive ways not only boosts lexical familiarity but also helps mitigate the fear and avoidance behaviors associated with lexical sesquipedaliophobia.

phenomenon encompassing psychological, academic, and sociocultural dimensions, highlighting the interaction of affective and contextual factors in second language learning.

Pedagogically, the results underscore the importance of scaffolded, context-rich instruction, inclusive classroom environments, and guided practice opportunities that foster learner autonomy, build confidence, and mitigate anxiety when engaging with complex vocabulary.

barrier in foreign language learning. National curriculum frameworks may integrate lexical anxiety reduction strategies, particularly in oral

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communication components. Policymakers may also allocate support for capacity-building initiatives—such as training programs on affective language pedagogy and the development of digital tools—that promote lexical resilience and learner confidence across educational levels.

Colleges and universities (both public and private) are encouraged to embed vocabulary-building interventions within language programs, including structured vocabulary enrichment modules, use of language learning technologies, and accessible support services such as language labs or tutoring centers. Higher education institutions (HEIs) may foster cross-disciplinary collaboration among departments to ensure that technical and field-specific vocabulary instruction is accompanied by scaffolding and pronunciation support. Moreover, HEIs may advocate for inclusive classroom cultures by integrating affective objectives into their quality assurance frameworks.

Academic leaders like VP for Academic Affairs, Deans, and Program Heads play a crucial role in operationalizing institutional support. They are recommended to include lexical sesquipedaliophobia as part of curriculum reviews and encourage the alignment of instructional practices with inclusive and student-centered language pedagogy.

They may provide incentives for faculty to pilot or adopt innovative classroom practices—such as peer-supported oral reporting, pronunciation modeling, and informal language exposure activities—that lessen anxiety and increase engagement with complex vocabulary.

Language educators may actively foster non-judgmental learning environments by offering private corrective feedback, modeling tolerance for linguistic errors, and reinforcing effort over perfection. The use of digital platforms, pronunciation modeling, and

classroom games can provide students with consistent exposure to polysyllabic vocabulary in low-pressure contexts. Professors are also encouraged to integrate peer-based correction practices that promote collaboration and mutual support while reducing lexical sesquipedaliophobia.

Students are advised to adopt self-directed strategies for managing lexical anxiety, such as using vocabulary learning apps, participating in group practice sessions, and engaging with English-language media to increase oral fluency. Learners may also be encouraged to view mistakes as part of the language acquisition process and seek support from both peers and professors when encountering lexical challenges.

Future researchers are encouraged to investigate lexical sesquipedaliophobia across diverse linguistic and cultural contexts to determine whether patterns of lexical anxiety remain stable or vary across foreign language populations.

Longitudinal research designs are particularly recommended to document learners' developmental trajectories over time and to capture changes in affective responses as instructional interventions are implemented.

Quasi-experimental studies comparing instructional approaches or learner groups would further strengthen causal inferences regarding the effectiveness of specific pedagogical strategies, while ethnographic inquiries embedded within foreign language classrooms could provide rich, contextualized accounts of how lexical anxiety unfolds in authentic learning environments.

Finally, mixed-methods approaches employing triangulation across qualitative and quantitative data sources are strongly advocated to generate more comprehensive and methodologically robust understandings of lexical sesquipedaliophobia and its pedagogical implication

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7. Limitations of the Study

While this study offers valuable insights into the patterns of experiences, contextual variations, and insights related to lexical sesquipedaliophobia among foreign language learners in Davao Region, several limitations should be acknowledged.

First, the qualitative data were drawn from a purposively selected group of participants within a specific geographic and educational context, which may limit the generalizability of findings to other regions, institutions, or learner populations. Second, although efforts were made to ensure representativeness across sex, program, and school type, the sample size of forty remained relatively small and may not capture the full diversity of long word anxiety experiences among foreign language learners. Third, the reliance on self-reported experiences during interviews and focus groups introduces potential biases, including selective recall and

social desirability, which may influence how participants articulated their anxieties and coping mechanisms. Fourth, while the thematic analysis followed established procedures, the interpretive nature of qualitative research means that findings are shaped by the researcher's positionality, background, and analytic lens.

Finally, the study's cross-sectional design provides a snapshot of lexical anxiety but does not account for how these experiences may evolve over time. Despite these constraints, the study provides an important exploratory foundation for understanding a localized and under-researched phenomenon. Future research may address these limitations through longitudinal, quasi-experimental, and mixed-methods designs to enrich the depth, breadth, and applicability of findings across educational settings.

Supplementary Details

Author Contributions:

Prof. Caloc - introduction, interpretation of results, and discussion of findings; Dr. Baradillo - comprehensive review, validation, critical refinement of the entire manuscript.

Informed consent:

Informed consent was obtained from all experts prior to their participation in the study. The experts were provided with a detailed explanation of the study's objectives, procedures, and their expected contributions, ensuring they fully understood their roles and rights, including the confidentiality and voluntary nature of their participation.

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Data availability and sharing policy:

Due to data-sharing restrictions, individual-level data cannot be publicly posted. However, the datasets used and analysed during the current study are available from the corresponding author on reasonable request.

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References

- Al Shboul, M. M., Ahmad, I. S., Nordin, M. S., & Rahman, Z. A. (2013). Foreign language anxiety and achievement: Systematic review. *International Journal of English Linguistics*, 3(2): 32-45. <http://dx.doi.org/10.5539/ijel.v3n2p32>
- Aldrich, C. (2002). *The Aldrich dictionary of phobias and other word families*. Trafford Publishing.
- Ahmad, I. S., Al-Shboul, M. M., Nordin, M. S., Rahman, Z. A., Burhan, M., & Madarsha, K. B. (2013). The potential sources of foreign language reading anxiety in a Jordanian EFL context: A theoretical framework. *English Language Teaching*, 6(11), 89-110. <https://doi.org/10.5539/elt.v6n11p89>
- Ahmad, A., Rao, I. S., & Rao, M. S. (2023). ESL students' anxiety in English as a second language learning from the perspective of linguistic skills. *Pakistan Journal of Humanities and Social Sciences*, 11(4), 3943-3951. <https://doi.org/10.52131/pjhss.2023.1104.0663>
- Alqurashi, N. (2025). Exploring how language proficiency and reading anxiety influence reading comprehension in EFL learners: An analytical study of key contributing factors and implications. *Journal of Language and Linguistic Studies*, 20(2). <https://www.jlls.org/index.php/jlls/article/view/5690>
- Alsheikh, N., & Masoud, K. M. (2022). Requirements and barriers of learning English for specific purposes: Criminology cadets at AL ISTIQLAL University. *Rihan Journal for Science Publishing*, (21).
- Asfour, N. M., Helal, S. A., Almahdi, A. H., & Basha, A. M. (2024). Cognitive deficits in generalized anxiety disorder: Impairments in attention, executive functioning, and cognitive flexibility among young adults. *Integrative Biomedical Research*, 8(11), 1-7. <https://doi.org/10.25163/angiotherapy.81110029>
- Aydin, S. (2008). An investigation on the language anxiety and fear of negative evaluation among Turkish EFL learners. *Online Submission*. <https://files.eric.ed.gov/fulltext/ED512266.pdf>
- Bangcaya, S., Lumawag, A., Mencias, J., Tagalog, A. J., & Escandallo, J. C. (2025). An analysis of the English language needs among criminology students: Basis for curriculum development. *EPRA International Journal of*

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- Multidisciplinary Research (IJMR)*, 11(6), 1195-1210. <https://doi.org/10.36713/epra22568>
- Bodie, G. D. (2010). A racing heart, rattling knees, and ruminative thoughts: Defining, explaining, and treating public speaking anxiety. *Communication Education*, 59(1), 70-105. <https://doi.org/10.1080/03634520903443849>
- Creswell, J.W. & Poth, C.N. (2018). *Qualitative inquiry and research design: Choosing among five approaches*. 4th Edition, SAGE Publications, Inc., Thousand Oaks.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Das, C. (2020). Students' perceptions of their English language anxiety and its role on their classroom participation: An exploration of EFL anxiety in urban and peripheral contexts of Bangladesh. *International Journal of English Literature and Social Sciences*, 5(1), 271-288. <https://dx.doi.org/10.22161/ijels.51.47>
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. Sage Publications.
- Docena, V. T., Buenaventura, K. H., Lobingco, W., Manlimos, S., Nacionales, J. J., & Claridad, N. (2023). Investigating oral presentation anxiety of freshmen English major students in a Philippine higher educational institution. *Journal of Language and Pragmatics Studies*, 2(3), 173-189. <https://doi.org/10.58881/jlps.v2i3.27>
- Francisco, R. (2021). Virtual learning: Challenges and coping mechanisms of language learners in rural areas. *Journal of Learning and Development Studies*, 1(1), 40-52. <https://doi.org/10.32996/jlds.2021.1.1.59>
- Fu, H., & Liu, H. (2024). A comparative study of learners' conceptions of and approaches to learning English between high school students in urban and rural areas of China. *Frontiers in Psychology*, 15, 1324366. <https://doi.org/10.3389/fpsyg.2024.1324366>
- Han, S., Li, Y., & Haider, S. A. (2022). Impact of foreign language classroom anxiety on higher education students' academic success: Mediating role of emotional intelligence and moderating influence of classroom environment. *Frontiers in Psychology*, 13, 945062. <https://doi.org/10.3389/fpsyg.2022.945062>

¹Corresponding Author: Louie Jay R. Caloc

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- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125-132. <https://doi.org/10.2307/327317>
- Hu, X., Zhang, X., & McGeown, S. (2024). Foreign language anxiety and achievement: A study of primary school students learning English in China. *Language Teaching Research*, 28(4), 1594-1615. <https://doi.org/10.1177/13621688211032332>
- Idrus, F., & TAb Hamid, M. H. (2021). Profiling English language learning anxiety among selected rural area secondary school students in Malaysia: A case study. *International Journal of English Language Teaching*. <https://ssrn.com/abstract=3776577>
- Karalık, T., & Merç, A. (2025). Linguistic, cognitive, and affective components of L2 listening comprehension: A multidimensional model. *Porta Linguarum: Revista Internacional de Didáctica de las Lenguas Extranjeras*, (43), 273-293. <https://doi.org/10.30827/portalin.vi43.30647>
- Kim, C., Aichler, L., Bridgett, T., Nicolarakis, O., Hanumantha Lacy, S., Sortino, R., & Pizzie, R. (2025). Language anxiety: Understanding past research and new directions with d/Deaf, DeafBlind, and hard of hearing communities. *Frontiers in Psychology*, 16, 1558714. <https://doi.org/10.3389/fpsyg.2025.1558714>
- Krashen, S. (1982). *Principles and practice in second language acquisition*. ISBN: 0-08-028628-3. Pergamon Press, Inc.
- Labicane, G. E. M. (2021). Foreign language anxiety experiences of Filipino students across the four macro skills. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 5(1), 254-264. <https://doi.org/10.30743/ll.v5i1.3761>
- Mondahl, M., & Razmerita, L. (2014). Social media, collaboration and social learning a case-study of foreign language learning. *Electronic Journal of E-learning*, 12(4), pp. 339-352. <https://academic-publishing.org/index.php/ejel/article/view/1703>
- Nicolaidis, C., Raymaker, D. M., McDonald, K. E., Lund, E. M., Leotti, S., Kapp, S. K., ... & Zhen, K. Y. (2020). Creating accessible survey instruments for use with autistic adults and people with intellectual disability: Lessons learned and recommendations. *Autism in Adulthood*, 2(1), 61-76. <https://doi.org/10.1089/aut.2019.0074>
- Moustakas, C. (1990). *Heuristic research: Design, methodology, and applications*. Sage Publications.
- Muthumaniraja, S., Vashisht, D., & Khurana, P. (2025).

¹Corresponding Author: Louie Jay R. Caloc

*Corresponding Email: lcloc_240000000073@uic.edu.ph

- Perfectionism and anxiety in Japanese EFL classrooms: A conceptual exploration. *TPM–Testing, Psychometrics, Methodology in Applied Psychology*, 32(S8 (2025): Posted 05 November), 2318-2327. Retrieved from <https://tpmap.org/submission/index.php/tpm/article/view/3220>
- Pabro-Maquidato, I. M. (2021). The experience of English-speaking anxiety and coping strategies: A transcendental phenomenological study. *International Journal of TESOL & Education*, 1(2), 45-64. <https://i-jte.org/index.php/journal/article/view/32>
- Pappamihel, N. E. (2001). Moving from the ESL classroom into the mainstream: An investigation of English language anxiety in Mexican girls. *Bilingual Research Journal*, 25(1-2), 31-38. <https://doi.org/10.1080/15235882.2001.10162783>
- Pristiyaputri, A. E., Afiqoh, M., Jauhari, M. A., Al Afghani, M. J., & Kurniasih, K. (2023). The differences of speaking anxiety across academic levels and gender. *The Journal of English Literacy Education: The Teaching and Learning of English as a Foreign Language*, 10(1), 63-80. <http://dx.doi.org/10.36706/jele.v10i1.20292>
- Sadighi, F., & Dastpak, M. (2017). The sources of foreign language speaking anxiety of Iranian English language learners. *International Journal of Education and Literacy Studies*, 5(4), 111-115. <http://dx.doi.org/10.7575/aiac.ijels.v5n4p.111>
- Salvacion, J. D., & Napil, M. (2025). Intercultural competence, language anxiety, and Filipino language learning motivation of indigenous students: A mixed-methods study. *Asian Journal of Advanced Research and Reports*, 19(6), 528-544. <https://doi.org/10.9734/ajarr/2025/v19i61076>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques*. Sage Publications.
- Suleimenova, Z. (2013). Speaking anxiety in a foreign language classroom in Kazakhstan. *Procedia-Social and Behavioral Sciences*, 93, 1860-1868. <https://doi.org/10.1016/j.sbspro.2013.10.131>
- Styles, B., Stevens, E., Bradshaw, S., & Clarkson, R. (2014). Vocabulary enrichment intervention programme: Evaluation report and executive summary. *Education Endowment Foundation*.
- Tabassum, A., & Naveed, A. (2024). Interactive strategies for enriching English as a Foreign Language (EFL) vocabulary: A comprehensive exploration. *Journal of Applied Linguistics and Language Research*, 11(1), 1-16.

¹Corresponding Author: Louie Jay R. Caloc

*Corresponding Email: lcloc_240000000073@uic.edu.ph

- Tsai, Y. R., & Lee, C. Y. (2018). An exploration into factors associated with reading anxiety among Taiwanese EFL learners. *TEFLIN Journal: A Publication on the Teaching & Learning of English*, 29(1). <https://doi.org/10.15639/teflinjournal.v29i1/129-148>
- Wang, X., & Zhang, W. (2021). Psychological anxiety of college students' foreign language learning in online course. *Frontiers in Psychology*, 12, 598992. <https://doi.org/10.3389/fpsyg.2021.598992>
- Yilmaz, T., & De Jong, E. (2024). The role of native speaker peers on language learners' fear of negative evaluation and language anxiety. *Bogazici University Journal of Education*, 41(1), 1-17. <https://doi.org/10.52597/buje.1389669>
- Zhao, A., Guo, Y., & Dynia, J. (2013). Foreign language reading anxiety: Chinese as a foreign language in the United States. *The Modern Language Journal*, 97(3), 764-778. <https://doi.org/10.1111/j.1540-4781.2013.12032.x>
- Zhou, X., Sulaiman, N. A., & Ismail, H. H. (2025). A flipped class on enhancing EFL academic vocabulary acquisition for non-English major college students. *Getsempena English Education Journal*, 12(1), 91-107. <https://doi.org/10.46244/geej.v12i1.3209>
- Zólyomi, A. (2021). Focusing on the explicit and implicit language learning-related beliefs and the habits of Hungarian adult English as foreign language learners. *Working Papers in Language Pedagogy*, 16, 82-108. <https://doi.org/10.61425/wplp.2021.16.82.109>

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