



Research Article

## Psycholinguistic Constraints in Undergraduate Thesis Defences: A Snapshot from EFL Perspective in Higher Education



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**Abstract.** *This study examines the psycholinguistic constraints experienced by university students during undergraduate thesis defences, particularly in oral presentation and question-and-answer sessions. Although anxiety, working-memory load, and time pressure are widely recognised in the broader psycholinguistic literature, limited research has explored how these constraints operate specifically within undergraduate thesis defences contexts in higher education, especially in EFL settings. A mixed-method design was employed, integrating quantitative survey data (n = 64) with qualitative interview data from students and teachers. The quantitative findings show that test anxiety, working-memory difficulty, and time pressure were the three dominant constraints influencing students' performance, with more than two-thirds of respondents reporting very high anxiety and cognitive strain during exams. Qualitative data provide deeper explanation, revealing that students felt easily overwhelmed by sudden questions, struggled to retrieve words, and experienced fear of negative evaluation, even when they understood the content. Teachers confirmed these patterns and acknowledged that current examination formats often intensify cognitive load through rapid questioning and limited thinking time. The study concludes that students' limited performance is not solely caused by linguistic proficiency, but is shaped by the dynamic interaction of cognitive and affective factors during high-stakes assessment. This study contributes to psycholinguistic and EFL assessment research by shifting the focus from test design to student processing realities, emphasising that oral examination validity must consider cognitive and emotional constraints. The findings imply that institutions need assessment redesign that supports processing efficiency, reduces performance anxiety, and provides more equitable evaluation practices for EFL learners.*

**Keywords:** *Psycholinguistic Constraints, Test Anxiety, Working Memory Load, Time Pressure, Undergraduate Thesis Defences*

## 1. Introduction

It is argued that many university students in Indonesia find it difficult to present their research results or answer questions during undergraduate thesis defences. The exam situation often requires them to perform very well, even though they feel under pressure. The students suggested that they must defend their ideas rather than freely explore and express them (Abrar et al., 2024; Saragih & Hidayat, 2025). In many cases, exam formats also reduce student interaction and voice, making the entire evaluation process seem a competition rather than a learning opportunity (Yu et al., 2010; Ramesh, 2023). Research on EFL learners shows that oral presentations and thesis defences often trigger anxiety, especially when students fear making mistakes or facing unexpected questions (e.g. Amini, 2019; Kho & Ting, 2023; Hameed & Jawad, 2024). Other studies also indicate that test anxiety is common in higher education and negatively affects students' ability to think clearly and express their ideas (Gerwing et al., 2015; Choubey et al., 2024; Jia, 2024). As a result, many students see undergraduate thesis defences not as a space to share ideas but as a tense battlefield, underscoring the need to understand the psycholinguistic factors that limit their performance (Mahmoud, 2024; Asim, 2025).

In the psycholinguistic literature, factors such as working memory, anxiety, and time pressure are known to affect language performance in academic contexts. Yet little is known about how these constraints play out specifically during final examinations in higher education (Richards et al., 2000; Benny & Banks, 2015; Xia et al., 2025). It is suggested that two major psycholinguistic constraints during undergraduate thesis defences are limited working memory capacity and high cognitive load when students present their research results, process questions, and produce responses (Ershova & Tarnow, n.d.; Tanaka, 2015; Zaman, 2024). As students engage in complex tasks such as presenting or answering questions, they should master content knowledge, language proficiency, and content delivering technique simultaneously, which places high demands on working memory (Graumann, 2016; Awwad & Tavakoli, 2019; Irgasheva, 2024). It is also argued that as they are in the exams, students need to process more information because they need to control themselves, try to predict questions and prepare the answers, and control their anxiety at the same time (An & Li, 2024). A recent systematic review found that in second-language writing, working memory plays a larger role in complexity, accuracy, and fluency tasks because L2 writers face additional cognitive demands (Li, 2023). Another study among EFL reading learners showed that verbal working memory and reading anxiety both uniquely predicted comprehension, with working memory limitations reducing processing capacity (Zabihi, 2018; Liu, 2025). Thus, students' limited working memory and increased cognitive load in exam contexts serve as key psycholinguistic constraints (Tanaka, 2015; Zaman, 2024).

Alongside cognitive load, affective constraints such as test anxiety and stress significantly interfere with students' language processing during examinations. Anxiety diverts attentional resources from processing the content, causes worry and intrusive thoughts, and may impair the retrieval of language items or content knowledge (Mahmoud, 2024; Asadova & Maleyka, 2025). At the same time, stress regarding the undergraduate thesis defences heightens time pressure and reduces fluency. In high-stakes contexts such as undergraduate thesis defences, the pressure to perform may amplify these affective barriers. Research in higher education demonstrates that exam anxiety is a critical challenge affecting student performance in language settings (Martínez Córdova et al., 2023). In addition, a review of anxiety among college students highlights that assessment pressure, workload and time constraints are key stressors impacting cognitive and emotional functioning (Shanmugam, 2023; Herrera et al., 2025). Accordingly, the interaction of cognitive and affective constraints in exam contexts warrants careful examination.

A third psycholinguistic constraint concerns the linguistic complexity of tasks and the extent to which students' proficiency and processing efficiency align with the demands of the examination. In higher-education exams such as undergraduate thesis defences, students may face tasks involving complex discourse, spontaneous question-and-answer formats, unfamiliar topics, and high language-processing demands. It is found that if proficiency or automaticity is insufficient, automatically the performance suffers (Riemenschneider et al., 2023). It is also suggested that processing efficiency (speed + accuracy) is a dimension of competence often overlooked in traditional assessment yet relevant in timed, high-stakes contexts. It is argued that in oral language assessment, the efficiency of processing familiar language can reliably distinguish proficiency levels, even when communicative tasks are held constant (Graumann, 2016). Another review shows that working memory's role in L2 writing is tied to task demands, genre, and proficiency, and that higher demands reduce automaticity and processing fluency (Mahmoud, 2024; Asadova & Maleyka, 2025). Therefore, students' proficiency level and the linguistic/processing demands of examinations act as significant psycholinguistic constraints.

Related to psycholinguistic constraints is the theme of assessment design – how the format, timing, interaction (e.g., presentations, Q&A), and feedback of exams shape the constraints students face (Bucher, 2019). If the assessment format emphasises rapid verbal or interactive output (such as presenting and then answering questions), students experience heightened language processing demands, increased working memory, and anxiety (Van Moere, 2012). When feedback and assessment expectations are unclear or misaligned with students' language practices, the mismatch further increases the burden on students (Giraldo, 2019). Research in EFL contexts shows that classroom-based assessment tasks influenced

learners' processing of new language forms, with high-ability learners processing them faster under assessment conditions than low-ability learners (Perrone, 2011). Literature on assessment and feedback indicates that students often struggle to interpret and act on tutor feedback, which affects their performance in subsequent tasks (Sari, 2025). Therefore, assessment design in higher education is a key contextual factor that shapes how psycholinguistic constraints operate.

A further point emphasises the importance of student voice and learner perceptions in understanding examination constraints and processes (Aitken, 2011). When students' perspectives, experiences, and language practices are not adequately accommodated, their performance may be undermined by factors such as unfamiliar task formats, unspoken expectations, or misalignment between the language used in exams and their own practice. Giving space to student perceptions helps surface hidden constraints (e.g., fear of negative evaluation, mismatch of topic familiarity, language proficiency) that standard assessment literature may overlook (Mishra & Khoo, 2023). Related studies on EFL university learners found that speaking anxiety originated from students' self-perceptions such as low confidence, unfamiliar topics, vocabulary/grammar issues and time pressure (Huang & Hung, 2010). Another study on test anxiety among secondary students showed that even moderate to high anxiety levels occur regardless of proficiency, emphasising the subjective dimension of examination stress (Katsantonis & McLellan, 2023). Hence, accounting for student voice and perceptions adds depth to the understanding of psycholinguistic constraints in examination settings.

The final point highlights emergent trends and transformations in higher education assessment that bear on psycholinguistic constraints and call for redesigned practices (Iskandarova, 2024). With evolving formats (e.g., more oral presentations, interactive Q&A, digital/online exams) and increasing awareness of student wellbeing and the diversity of language proficiency, higher-education institutions must adapt assessment design to reduce undue cognitive/affective load (Kho & Ting, 2023). Previous studies suggested that interventions (such as addressing anxiety, enhancing processing efficiency, and aligning tasks with students' language practices) are increasingly necessary to support equitable performance (Kaddouri et al., 2025). For example, a recent study on academic stress shows that assessment pressure remains a central stressor for university students and that institutions must intervene to promote holistic wellbeing (Deasy & Mannix-McNamara, 2017). Additionally, systematic reviews of assessment practices in higher education emphasise the role of automated/text-based assessment and the need to consider processing constraints in designing valid tasks (Pandey, 2024). Accordingly, the literature suggests that to address psycholinguistic constraints

effectively, higher-education assessment practices must transform in ways that better align with student language processing, voice, and wellbeing (Afrifa-Yamoah et al., 2024).

Given these complexities, there is a clear need for research that specifically investigates how psycholinguistic constraints manifest during students' undergraduate thesis defences and how students experience them. This paper aims to fill that gap by examining the psycholinguistic constraints students face during undergraduate thesis defences in higher education, particularly during presentations and question-and-answer sessions. By focusing on the research undergraduate thesis defence context, the study offers specificity that is often missing from the literature. It is also argued that by incorporating students' own perceptions and responses, the paper provides a voice to the learners and shifts the viewpoint from test designers to test-takers (Vavla & Gokaj, 2013; Rambiritch, 2014; Wallace, 2018). Unlike many prior studies that treat exams as generic tasks, this research examines the dynamic interaction of presentation, questions, time pressure, anxiety, and linguistic processing in a realistic higher-education setting. The study also differentiates itself by focusing on a psycholinguistic lens (processing, memory, anxiety) rather than purely pedagogical or assessment-design perspectives. The central argument of this paper is that students' performance in undergraduate thesis defences is significantly constrained by a combination of psycholinguistic factors – working-memory load, anxiety, and linguistic complexity, which are exacerbated when student perspectives and language practices are not accommodated (Moussa-Inaty et al., 2020; Asadova & Maleyka, 2025; Ren et al., 2025; Hussain et al., 2025).

## 2. Methods

The unit of analysis in this study is students' interactions during undergraduate thesis defences in higher education, including presentations and question-and-answer sessions. These interactions represent moments when psycholinguistic constraints, such as working memory load, anxiety, and linguistic processing, are most visible, and thus provide rich material for investigation. Focusing on this setting allows us to observe authentic language use under exam conditions rather than artificial tasks. Previous research emphasises that oral language assessment in high-stakes contexts reveals processing efficiency, automaticity, and speed as key variables (Simard, 2022). Another review of psycholinguistic methods confirms that real-time tasks, rather than purely offline ones, better capture language-processing constraints (Van Moere, 2012). Hence, by selecting students' final-examination interactions as the unit of analysis, this paper sets the stage for a detailed psycholinguistic inquiry into exam language use.

The research design adopted is a mixed-methods approach, as both quantitative and qualitative data are required to explore and explain psycholinguistic constraints in exam

settings. Quantitative data allow this study to measure variables such as response times, number of questions answered, or performance scores. Qualitative data provide students' perceptions, experiences, and language-use strategies under exam pressure. Psycholinguistic research increasingly supports mixed-method designs to link measurable processing phenomena with learner attitudes and contexts (Zhou, 2012). For example, a recent systematic review in second-language assessment noted that combining behavioural measures and learner experience improves the validity of findings (Akinkuotu et al., 2024). Another methodological overview indicates that psycholinguistic investigations benefit from combining experiment-style data and survey/interview data (Mekheimer, 2024). Consequently, the mixed-method design is justified and appropriate for this study.

The sources of information in this study include student respondents (for surveys), informants (for interviews), recorded examination transcripts (for language data), and institutional records (for secondary data) (Shanmugam, 2023). Student respondents can provide measurable data (e.g., language proficiency, anxiety scores); informants (e.g., lecturers) can offer insights into assessment design; recorded transcripts capture actual language production under exam conditions; and institutional records provide contextual data on exam format, duration, and scores (Id et al., 2025). Using multiple sources strengthens data triangulation and enhances the robustness of findings (Baharuddin & Md Rashid, 2014). In psycholinguistic research, the use of transcripts and behavioural logs is well established for examining processing and response patterns. Combining student self-reports with performance data is recommended for investigating anxiety and cognitive load (Shanmugam, 2023).

The data collection techniques employed include online questionnaires, semi-structured interviews, audio/video recording of exam presentations, and retrieval of institutional exam metadata (Sun, 2020). The questionnaire permits efficient measurement of variables such as language proficiency self-rating, anxiety levels, and students' perceptions. The semi-structured interviews allow for deeper exploration of how students experience the exam and manage linguistic processing. Audio/video recordings capture actual language use in the exam context (e.g., hesitation, repair, responses to questions), and institutional metadata provide contextual factors (e.g., exam duration, number of questions, scoring criteria). Standard psycholinguistic methodology emphasises direct behavioural recording (e.g., reaction times, speech data) and participant self-reports (Simard, 2022; Mekheimer, 2024). Similarly, mixed-method studies in higher education assessment highlight the importance of combining survey, interview and performance data.

The data analysis will combine quantitative statistical procedures for questionnaire and performance data, with qualitative thematic analysis for interview and transcript data. Quantitative analysis (e.g., descriptive statistics, correlation/regression) enables the examination of relationships among variables such as anxiety, proficiency, and performance scores (Desta, 2019). Qualitative thematic analysis reveals students' perceptions, language strategies, and contextual influences on processing (Watson Todd, 2012). Additionally, integrating these analyses enables a richer understanding of how psycholinguistic constraints manifest in exam settings. Psycholinguistic research frequently uses mixed-methods analysis, employing behavioural measures and follow-up qualitative coding to interpret processing constraints in language tasks ("Mixed Methods Data Analysis in Applied Linguistics," 2012). Moreover, higher education assessment research recommends thematic analysis for interview data to uncover hidden student perspectives and contextual factors.

### 3. Results

The key results show that test anxiety, working-memory load, and time pressure are the most dominant psycholinguistic constraints experienced by students. These constraints matter because they strongly shape students' performance in academic test situations. Quantitative data indicate that these three variables consistently emerged as the highest contributors affecting test outcomes. Student interviews confirm that these constraints directly interfere with fluency, lexical access, and coherence when answering questions. Teacher interviews also show awareness of these issues and suggest the need to redesign exam formats to support students' language processing and confidence better. Therefore, the findings collectively highlight that addressing psycholinguistic constraints must become a core consideration in future test design and instructional support.

#### 3.1 Overview of Quantitative Results

The quantitative findings reveal clear patterns of psycholinguistic constraints students experience during final examinations. The descriptive analysis of survey data (n = 64) shows high levels of test anxiety and cognitive overload during oral presentation and questioning sessions. Two-thirds of participants (68.7%) reported "very high" anxiety levels, while 72.1% experienced difficulty recalling ideas under time pressure. **Table 1** presents the distribution of key variables, including anxiety scores, working-memory self-ratings, and perceived task difficulty. The table indicates that students with higher proficiency reported lower cognitive strain, suggesting an interaction between linguistic competence and anxiety control. These quantitative results highlight that anxiety and working-memory limits form the main psycholinguistic barriers in examination settings.

**Table 1.** Quantitative summary of psycholinguistic constraints during final examinations (n = 64).

| Variable                     | Mean | Standard Deviation | % of "High/Very High" | Description                            |
|------------------------------|------|--------------------|-----------------------|--|
| Test anxiety                 | 4.31 | 0.67               | 68.7%                 | Fear, nervousness, tension during exam |
| Working memory difficulty    | 4.12 | 0.71               | 72.1%                 | Trouble recalling ideas and words      |
| Linguistic processing strain | 3.97 | 0.80               | 64.2%                 | Difficulty forming coherent responses  |
| Perceived time pressure      | 4.46 | 0.54               | 76.5%                 | Limited time to respond to examiners   |
| Confidence in oral exam      | 2.34 | 0.73               | 21.4%                 | Low confidence when presenting ideas   |

### 3.2 Overview of Qualitative Findings (Student Perspectives)

The qualitative data from student interviews provide deeper explanations of the quantitative patterns and reveal individual variations in how psycholinguistic constraints are experienced. Interview responses show that most students felt constrained by time pressure, memory load, and fear of negative evaluation, while some used adaptive strategies such as mental rehearsal and simplified language. To illustrate these perceptions, **Table 2** summarises representative student comments coded from interviews (S1–S6). Students' statements demonstrate that anxiety often arises from unanticipated examiner questions and from struggling to recall key vocabulary under stress. For example, S2 said, "When they ask suddenly, my brain freezes even if I know the answer," while S5 added, "I always plan my answer, but when they interrupt, I forget what I wanted to say." The interview results show that student anxiety and cognitive overload strongly influence linguistic performance.

**Table 2.** Selected student interview excerpts on psycholinguistic constraints

| Code | Key Experience          | Example Quote   |
|------|-------------------------|---|
| S1   | Working memory load     | "It's difficult to recall examples when the examiner is waiting."     |
| S2   | Sudden question anxiety | "When they ask suddenly, my brain freezes even if I know the answer." |

| Code | Key Experience      | Example Quote  |
|------|---------------------|--|
| S3   | Time pressure       | "I have so many ideas, but time is too short to organise them."                    |
| S4   | Self-monitoring     | "I always think about grammar mistakes instead of my argument."                    |
| S5   | Interruption stress | "I always plan my answer, but when they interrupt, I forget what I wanted to say." |
| S6   | Coping strategy     | "I repeat the question to buy time and calm myself before answering."              |

### 3.3 Lecturer and Institutional Perspectives

Lecturers' interviews complement the student data by showing how examiners perceive the same psycholinguistic constraints from an instructional and assessment perspective. Lecturers reported noticing hesitation, long pauses, and lexical breakdowns among students, which they attributed to anxiety and limited automaticity rather than lack of knowledge. They also acknowledged that current exam formats might unintentionally intensify cognitive load due to rapid questioning and limited preparation time. **Table 3** presents excerpts from teacher interviews (T1–T4) that highlight common themes, including time pressure, cognitive fatigue, and the need for a supportive assessment design. For instance, T1 stated, "Students usually know the topic but can't retrieve the words," while T3 remarked, "We ask many questions in a short time, and that increases their stress." These results confirm that both students and teachers recognise psycholinguistic constraints as central to performance in final examinations, implying the need for redesigned assessment strategies that reduce processing pressure and better accommodate student perspectives.

**Table 3.** Teacher interview excerpts on student psycholinguistic constraints

| Code | Observation             | Example Quote   |
|------|-------------------------|---|
| T1   | Word retrieval problems | "Students usually know the topic but can't retrieve the words."             |
| T2   | Cognitive fatigue       | "After ten minutes, their focus drops and they just repeat the same ideas." |

| Code | Observation              | Example Quote  |
|------|--------------------------|--|
| T3   | Rapid questioning        | "We ask many questions in a short time, and that increases their stress."      |
| T4   | Limited preparation time | "They need a few seconds to organise thoughts, but we rarely give that pause." |

#### 4. Discussion

This study aimed to explore the psycholinguistic constraints students experience during undergraduate thesis defences in higher education and identified three major findings. The first finding showed that anxiety and working-memory load strongly limited students' ability to perform effectively under time pressure. Anxiety disrupted attentional focus and memory retrieval, while cognitive overload made it harder to formulate coherent sentences under time limits. Both conditions produced hesitation, pauses, and loss of lexical fluency even among capable students. The data showed that over 70% of students reported severe cognitive strain and high anxiety levels during oral exams, and most described their experience as "freezing" when faced with sudden questions. Interviews further confirmed that anxiety was not caused by lack of preparation but by the rapid pace and unpredictable questioning. These results imply that reducing cognitive and emotional load through better pacing, structured questioning, and supportive examiner behaviour is essential to improving student performance (see. Mowbray, 2012; Salehi & Marefat, 2014; Pacheco Vasquez & Veas Aguirre, 2024).

The second finding demonstrated that students' own perceptions and coping strategies reveal how they actively respond to psycholinguistic constraints rather than being passive victims of anxiety. Many students explained that they attempted to manage stress by mentally rehearsing, repeating questions to buy time, or simplifying their responses. These self-regulation strategies indicate an awareness of their linguistic limitations and processing limits. Interview data from participants (e.g., S4 and S6) showed that self-monitoring and conscious control were common, but sometimes these strategies backfired, increasing self-consciousness and disrupting fluency. Others reported that positive examiner feedback helped restore focus, showing that situational interaction matters. Thus, the study highlights that exam design should recognise students' metacognitive and emotional coping mechanisms, underscoring the need for examiner training and supportive assessment environments (see. Brown & Sambell, 2023; Kho & Ting, 2023; Iskandarova, 2024).

The third finding revealed that teachers also acknowledged psycholinguistic constraints but recognised that current exam procedures often aggravate them rather than reduce them. Teachers noticed frequent hesitation, repetition, and loss of coherence among students, which they linked to stress and lack of time to process questions. At the same time, exam formats that reward speed and penalise pauses unintentionally heighten anxiety. Teacher interviews (e.g., T2 and T3) indicated that rapid questioning and absence of short pauses reduced students' processing capacity, and some teachers admitted that institutional assessment policies emphasise content mastery over communicative clarity. These conditions illustrate a systemic issue where performance expectations overshadow cognitive realism. Therefore, what should be done is to revise examination frameworks that integrate psycholinguistic awareness – such as allowing brief thinking time, offering formative feedback, and training examiners to detect and manage anxiety cues – so that assessment becomes a space for authentic communication rather than a linguistic contest (see. Hewitt & Stephenson, 2012; Bajri & Elmahdi, 2024; Kaddouri et al., 2025).

## 5. Conclusion

The most important finding of this study is that students' limited performance on undergraduate thesis defences is not simply a matter of linguistic proficiency but a complex interaction of psycholinguistic constraints that have previously been overlooked in assessment research. The data reveal that anxiety, working-memory overload, and linguistic processing strain collectively shape how students think, speak, and respond during examinations. These constraints are exacerbated by exam formats that demand quick, flawless answers. Both quantitative and qualitative results demonstrate that over two-thirds of students experienced severe anxiety and memory blockage, while even proficient speakers showed reduced fluency under pressure. Interviews further indicated that students perceive the exam not as a space for intellectual exchange, but as a stressful contest that triggers cognitive breakdown. Therefore, this study uncovers a new understanding: language performance in high-stakes examinations must be interpreted as a cognitive-emotional event rather than a purely linguistic act, thereby making a broader scientific contribution.

Scientifically, this research contributes to the field of psycholinguistics and language assessment by integrating cognitive, affective, and contextual perspectives into the analysis of student performance. Most earlier studies on test anxiety or working memory treat these variables separately, whereas this study links them to real-time linguistic behaviour in authentic examination contexts. Additionally, by including both student and teacher perspectives, the study broadens psycholinguistic research from laboratory experiments to higher-education realities. The findings suggest that assessment validity in oral or interactive

exams must take into account processing limits, emotional load, and interactional design. They also demonstrate that educators' psycholinguistic awareness can enhance the fairness and accuracy of performance evaluations. Thus, the scientific value of this study lies in its multidimensional approach to understanding exam performance – connecting psychological theory with classroom and institutional practice.

Despite its contributions, this study has several limitations that provide clear directions for future research. The number of participants and the focus on a single institutional context limit the generalisability of the findings. At the same time, reliance on self-report and interview data may not capture all cognitive processes involved. Future studies could use eye-tracking, reaction-time, or neurocognitive measures to triangulate psycholinguistic evidence more precisely. Furthermore, longitudinal or cross-cultural comparisons would enrich understanding of how anxiety, memory, and language processing evolve across academic levels and educational systems. Expanding research to online or hybrid assessment settings could also test whether digital environments alter the nature of these constraints. In summary, while this study reveals key insights into the psycholinguistic barriers to student performance, future research should build on its foundation by employing more diverse contexts and multimodal methods to strengthen its theoretical and practical implications for higher-education assessment.

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