

Foreign Language Classroom Anxiety across STEM and Social Science Students: Evidence from Undergraduate EFL Learners

Badriyah Ulfah¹

Corresponding email: badriyahulfah@uigm.ac.id

¹Universitas Indo Global Mandiri

Jl. Jend. Sudirman no. 629, Palembang 30264, South Sumatra, Indonesia

<https://orcid.org/0000-0003-1482-6578>

Received: 10 April 2026

Accepted: 2 June 2026

Published: 16 July 2026

Abstract

Foreign language classroom anxiety (FLCA) remains an important affective issue in English as a foreign language (EFL) learning, particularly in higher education contexts where students are expected to use English for academic and professional purposes. However, limited attention has been given to whether students from different academic disciplines experience different levels of FLCA. This study investigated the overall level of FLCA among Indonesian undergraduate EFL learners and examined whether there was a significant difference between STEM and Social Science students. Using a quantitative descriptive-comparative design, data were collected from 254 undergraduate students through a 20-item FLCA questionnaire. The overall FLCA score was calculated as a single construct, and the data were analyzed using descriptive statistics, anxiety-level categorization, Welch's t-test, and Cohen's d. The findings showed that students experienced a moderate level of FLCA ($M = 3.02$, $SD = 0.74$). Most students were categorized as having moderate anxiety (66.9%), followed by low anxiety (16.9%) and high anxiety (16.1%). The comparison between disciplinary groups revealed that Social Science students reported higher FLCA ($M = 3.20$, $SD = 0.65$) than STEM students ($M = 2.84$, $SD = 0.79$). Welch's t-test confirmed a significant difference between the two groups, $t(240.70) = 4.03$, $p < .001$, with a small-to-moderate effect size ($d = 0.51$). These findings suggest that disciplinary background may shape students' anxiety in English classroom learning and highlight the need for more discipline-sensitive EFL instruction in Indonesian higher education.

Keywords: *Discipline-based comparison, English as a foreign language, foreign language classroom anxiety, Indonesian higher education, undergraduate students*

INTRODUCTION

English has become an important academic resource for undergraduate students because it supports access to global knowledge, digital information, academic mobility, and future professional opportunities. In Indonesian higher education, English is commonly taught as a foreign language and is expected to help students participate in academic and professional communication beyond local contexts. However, students' success in learning English is not determined only by language skills (Mustamir, 2024), it is also shaped by affective factors that influence how they respond to classroom tasks (Li & Cui, 2026), interact with teachers and peers (Huda et al., 2025), and perform in English learning situations (Quvanch et al., 2024). One of the affective factors that remains highly relevant in EFL education is foreign language classroom anxiety (FLCA)

FLCA refers to the anxiety experienced by learners when they are involved in foreign language learning situations. It may appear when students are asked to answer questions, speak in English, perform in front of classmates, complete classroom tasks, or face English-related evaluation. Recent studies have shown that anxiety continues to be a recurring problem in EFL learning. (Mustamir, 2024), for example, found that Indonesian EFL learners' speaking anxiety

is shaped by lack of confidence, fear of making mistakes, classroom environment, cultural influences, and teacher-student interaction. Similarly, Daflizar (2024) reported that Indonesian tertiary EFL students experienced anxiety in different speaking situations and that anxiety was related to students' self-perceived speaking ability and vocabulary proficiency. These studies indicate that English learning anxiety remains an important pedagogical issue in Indonesian EFL contexts.

Recent research has also offered several approaches to understanding and reducing anxiety in EFL learning. Some studies have investigated the level, causes, and coping strategies of speaking anxiety among EFL undergraduates (Quvanch et al., 2024; Rahman et al., 2024). Others have examined students' anxiety in oral presentations, lecturers' questions, or evaluative classroom performance (Abrar et al., 2024; Baharman et al., 2026; Morsi & Zaki, 2024; Muhyidin & Chuquin, 2025). In addition, several studies have emphasized the role of classroom support, teacher strategies, and anxiety-management practices in helping learners participate more confidently in English learning activities (Alamri & Qasem, 2024; Attia & Algazo, 2025; Warna & Uyun, 2024). These studies provide valuable evidence that anxiety can be addressed through supportive classroom interaction, preparation, feedback, coping strategies, and context-sensitive pedagogical practices.

Among recent studies, the most relevant direction for the present research is the growing attention to contextual and comparative perspectives on EFL anxiety. Rather than treating all learners as a homogeneous group, recent scholarship suggests that students' academic background and learning context may influence how they experience and manage English learning anxiety. Warna and Uyun (2024), for instance, examined English language anxiety across different study program contexts and found that anxiety-related coping strategies varied across disciplinary and institutional groups. This comparative perspective is important because university students from different disciplines may not have the same exposure to English, the same academic communication practices, or the same classroom expectations (Alrashidi & Alenezy, 2026; Hamid et al., 2025; Zhang & Zhang, 2025). Therefore, examining FLCA across STEM and Social Science students can provide a more specific understanding of how disciplinary background may shape students' anxiety in English classroom learning.

Nevertheless, several limitations can still be identified in previous research. First, many recent studies have focused specifically on speaking anxiety, oral presentation anxiety, or public speaking anxiety, while fewer studies have examined FLCA as an overall classroom anxiety experience. Second, previous studies have frequently examined anxiety in relation to gender, self-perceived proficiency, coping strategies, or classroom factors, but discipline-based differences remain less explored. Third, in the Indonesian undergraduate EFL context, limited attention has been given to whether students from STEM and Social Science backgrounds experience different levels of FLCA. This limitation is important because English lecturers in higher education often teach students from various study programs, yet classroom support is often designed as if students share similar English learning experiences.

To address this gap, the present study examines FLCA as a single overall construct among Indonesian undergraduate EFL learners and compares students from STEM and Social Science disciplines. STEM students may encounter English through technical terms, scientific texts, digital resources, manuals, and discipline-specific materials. Social Science students, in contrast, may encounter English through discussion, presentation, argumentation, social issues, academic reading, and written interpretation. These different disciplinary practices may shape students' familiarity with English and their anxiety in English classroom learning. Therefore, comparing STEM and Social Science students may provide a more contextual understanding of FLCA in higher education.

The novelty of this study lies in its discipline-based comparison of FLCA among Indonesian undergraduate EFL learners. While previous studies have contributed important

insights into anxiety levels, causes, coping strategies, and classroom support, this study extends the discussion by examining whether students' academic disciplines are associated with different levels of English learning anxiety. This comparison may help clarify whether FLCA is experienced similarly or differently across disciplinary groups. The novelty of the study is therefore situated in its attempt to provide empirical evidence on FLCA across STEM and Social Science students in the Indonesian higher education context.

Based on this background, the objective of this study is to investigate the overall level of foreign language classroom anxiety among Indonesian undergraduate EFL learners and to examine whether there is a significant difference in FLCA between STEM and Social Science students. By doing so, this study aims to provide evidence that can support more responsive English instruction for students from different academic backgrounds. This study is guided by three research questions namely (1) what is the overall level of foreign language classroom anxiety among undergraduate EFL learners? (2) Is there a significant difference in foreign language classroom anxiety between STEM and Social Science students? and (3) Which group reports higher foreign language classroom anxiety in learning English as a foreign language?

This study is expected to provide both theoretical and practical contributions. Theoretically, the study contributes to FLCA research by examining English learning anxiety as an overall classroom anxiety construct and by comparing it across disciplinary backgrounds. This focus may enrich the discussion of FLCA by showing that students' academic fields can be considered as an important contextual factor in understanding anxiety in EFL learning. Practically, the findings of this study may help English lecturers understand whether students from STEM and Social Science backgrounds require different forms of pedagogical support. If one disciplinary group experiences higher anxiety, lecturers can design more responsive classroom activities, provide more supportive feedback, and create less threatening English learning environments. The findings may also help higher education institutions develop English learning support that is more sensitive to students' academic backgrounds rather than applying the same instructional approach to all students. In this way, the study may support more inclusive, responsive, and psychologically supportive EFL instruction in Indonesian higher education.

METHOD

Research Design

This study employed a quantitative descriptive-comparative research design. The descriptive component was used to identify the overall level of foreign language classroom anxiety (FLCA) among Indonesian undergraduate EFL learners. Meanwhile, the comparative component was used to examine whether there was a significant difference in FLCA between students from STEM and Social Science disciplines. This design was considered appropriate because the study did not aim to provide an intervention or manipulate classroom treatment. Instead, it focused on describing students' existing anxiety in learning English and comparing anxiety levels across two disciplinary groups. In this study, FLCA was treated as a single overall construct representing students' anxiety in English classroom learning.

Participants

The participants of this study were 254 Indonesian undergraduate students who learned English as a foreign language in higher education. The participants came from different study programs and were classified into two disciplinary groups: STEM and Social Science. STEM refers to students from science, technology, engineering, computer science, health, and related applied science programs. Social Science refers to students from education, business, management, humanities, communication, law, and other social science-related programs.

After the students' study programs were standardized and coded, 125 students were categorized as STEM students and 129 students were categorized as Social Science students. The distribution of participants is presented in Table 1. The relatively balanced number of participants in both groups allowed a proportional comparison of FLCA between STEM and Social Science students.

Table 1. Distribution of Participants by Disciplinary

Disciplinary Group	Frequency	Percentage
STEM	125	49.2%
Social	129	50.8%
Total	254	100%

Instruments

The data were collected using a Foreign Language Classroom Anxiety questionnaire consisting of 20 statement items. The questionnaire was designed to measure students' anxiety in English classroom learning. Although the items represented different anxiety-related classroom situations, including speaking, classroom participation, peer comparison, teacher evaluation, and English assessment, the present study treated FLCA as one overall construct. Therefore, the analysis focused on students' total FLCA score rather than separate anxiety dimensions. The questionnaire used a five-point Likert scale ranging from 1 to 5. The scale interpretation was as follows:

Table 2. Likert Scale Used in the Questionnaire

Score	Response Option
1	Strongly disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly agree

Higher scores indicated higher levels of foreign language classroom anxiety. The overall FLCA score for each participant was calculated by averaging the responses to all 20 items. This mean score was then used to determine students' anxiety level and to compare FLCA between STEM and Social Science students. Before the main analysis, the internal consistency of the questionnaire was examined using Cronbach's alpha. The reliability result showed that the 20-item FLCA questionnaire had excellent internal consistency, with a Cronbach's alpha value of .941. This indicates that the instrument was reliable for measuring students' overall foreign language classroom anxiety

Data Analysis

The data were analyzed using descriptive and inferential statistics. First, descriptive statistics were used to identify the overall level of students' foreign language classroom anxiety. The mean and standard deviation of the overall FLCA score were calculated based on the 20 questionnaire items. Second, students' FLCA scores were categorized into three anxiety levels: low, moderate, and high. The categorization was based on the following mean score intervals.

Table 3. Interpretation of FLCA Mean Scores

Mean Score Range	Anxiety Level
1.00–2.33	Low
2.34–3.67	Moderate
3.68–5.00	High

This categorization was used to identify the proportion of students who experienced low, moderate, and high levels of FLCA. Third, an independent-samples comparison was conducted to examine whether there was a significant difference in FLCA between STEM and Social Science students. Because the two groups were independent and had slightly different sample sizes, Welch's t-test was used. Welch's t-test was selected because it is more robust when comparing two independent groups, particularly when the assumption of equal variances may not be fully met. Finally, Cohen's d was calculated to determine the effect size of the difference between STEM and Social Science students. The effect size was used to interpret the practical magnitude of the difference, not only its statistical significance. In this study, the comparison focused only on the overall FLCA score because FLCA was treated as a single construct. The following statistical procedures were conducted (1) Calculating the overall FLCA mean score for each participant, (2) Calculating descriptive statistics for the full sample, (3) Categorizing students into low, moderate, and high anxiety levels, (4) Comparing the overall FLCA scores of STEM and Social Science students using Welch's t-test, and (5) Calculating Cohen's d to determine the effect size of the group difference.

FINDINGS AND DISCUSSION

Findings

1. Overall Level of Foreign Language Classroom Anxiety

The first research question examined the overall level of foreign language classroom anxiety among undergraduate EFL learners. The descriptive analysis showed that the students experienced a moderate level of FLCA. The overall mean score was 3.02 with a standard deviation of 0.74.

Table 4. Overall Level of Foreign Language Classroom Anxiety

Variable	N	Mean	SD	Anxiety Level
Foreign Language Classroom Anxiety	254	3.02	0.74	Moderate

As shown in Table 4, the mean score falls within the moderate anxiety range. This indicates that English learning anxiety was present among the students, but it was not generally experienced at a severe level. The finding suggests that most students had some degree of nervousness, discomfort, or worry when learning English in classroom situations. To provide a clearer picture of students' anxiety levels, the overall FLCA scores were categorized into low, moderate, and high levels. The result is presented in Table 5.

Table 5. Distribution of Students' FLCA Levels

Anxiety Level	Frequency	Percentage
Low	43	16.9%
Moderate	170	66.9%
High	41	16.1%
Total	254	100%

The distribution shows that the majority of students were in the moderate anxiety category. A total of 170 students, or 66.9%, experienced moderate FLCA. Meanwhile, 43 students, or 16.9%, were categorized as having low anxiety, and 41 students, or 16.1%, were categorized as having high anxiety. This finding indicates that FLCA was a common experience among the participants, although most students did not report extremely high anxiety.

2. FLCA across STEM and Social Science Students

The second research question examined whether there was a significant difference in FLCA between STEM and Social Science students. The descriptive comparison showed that Social Science students reported a higher mean score than STEM students.

Table 6. Descriptive Comparison of FLCA between STEM and Social Science Students

Disciplinary Group	N	Mean	SD	Anxiety Level
STEM	125	2.84	0.79	Moderate
Social Science	129	3.20	0.65	Moderate

Table 6 shows that both groups were categorized as experiencing moderate FLCA. However, the mean score of Social Science students was higher than that of STEM students. Social Science students had a mean score of 3.20, while STEM students had a mean score of 2.84. This indicates that Social Science students experienced stronger English classroom anxiety than STEM students, although both groups remained within the moderate anxiety category.

Welch's t-test was conducted to examine whether the difference between STEM and Social Science students was statistically significant. The result is presented in Table 7.

Table 7. Welch's t-test Result for FLCA Difference between STEM and Social Science Students

Comparison	Mean Difference	t	df	p	Cohen's d
Social Science – STEM	0.37	4.03	240.70	< .001	0.51

The result of Welch's t-test showed that there was a statistically significant difference in FLCA between STEM and Social Science students, $t(240.70) = 4.03$, $p < .001$. The mean difference was 0.37, indicating that Social Science students reported higher FLCA than STEM students. The effect size, Cohen's $d = 0.51$, suggests that the difference was educationally meaningful, with a small-to-moderate magnitude.

3. Distribution of FLCA Levels by Disciplinary Group

The third research question asked which group reported higher FLCA in learning English as a foreign language. In addition to the mean comparison, the distribution of anxiety levels across the two groups was examined descriptively.

Table 8

Distribution of FLCA Levels by Disciplinary Group

Disciplinary Group	Low	Moderate	High
STEM	33 students / 26.4%	77 students / 61.6%	15 students / 12.0%
Social Science	10 students / 7.8%	93 students / 72.1%	26 students / 20.2%

Table 8 shows that low anxiety was more common among STEM students, while high anxiety was more common among Social Science students. In the STEM group, 26.4% of students were categorized as having low anxiety, compared with only 7.8% in the Social Science group. In contrast, 20.2% of Social Science students were categorized as having high anxiety, compared with 12.0% of STEM students. This pattern supports the previous finding that Social Science students experienced higher FLCA than STEM students.

Overall, the findings show three main points. First, undergraduate EFL learners in this study experienced a moderate level of FLCA. Second, most students were categorized as having moderate anxiety. Third, Social Science students reported significantly higher FLCA than STEM students, although both groups remained within the moderate anxiety level.

Discussion

The findings of this study show that undergraduate EFL learners experienced a moderate level of foreign language classroom anxiety. This result indicates that anxiety was a common part of students' English learning experience, although it was not generally at a severe level (Haque et al., 2026; Norahmi et al., 2025). The finding is consistent with recent studies showing that anxiety remains an important issue in EFL learning contexts. Mustamir (2024) found that Indonesian EFL learners' anxiety is shaped by lack of confidence, fear of making mistakes, classroom environment, cultural influences, and teacher-student interaction. Similarly, Daflizar (2024) reported that Indonesian tertiary EFL students experienced anxiety in different English-speaking situations. The present finding supports these studies by showing that anxiety is not only present in speaking-specific situations, but also appears as an overall classroom anxiety experience in English learning.

The moderate level of FLCA found in this study suggests that students may still be willing to participate in English learning, but their participation may be affected by nervousness, worry, or discomfort. This condition is pedagogically important because moderate anxiety can still influence how students respond to classroom tasks, interact with teachers and peers, and perform in English learning situations. Li & Cui (2026) showed that learners' affective engagement may vary across different classroom tasks, while Huda et al. (2025) emphasized the importance of teacher-learner interaction, peer collaboration, and feedback in shaping students' classroom engagement. Therefore, even when anxiety is not categorized as high, English lecturers still need to consider how classroom tasks and interactions may trigger or reduce students' anxiety.

The most important finding of this study is that Social Science students reported significantly higher FLCA than STEM students. Although both groups were in the moderate anxiety category, the Social Science group showed a higher mean score and a higher proportion of students in the high anxiety category. This finding suggests that students' disciplinary background may be associated with different levels of English learning anxiety. This supports the argument that EFL learners should not always be treated as a homogeneous group (Zhao et al., 2025). Students from different academic fields may have different forms of English exposure, different classroom expectations, and different levels of confidence in English learning.

One possible explanation is that STEM students may encounter English more frequently through technical vocabulary, digital resources, scientific texts, manuals, and discipline-specific materials (Jantassova et al., 2024; Saeedi & Najjarpour, 2025). This exposure may not automatically make them fluent English users, but it may provide some familiarity with English as an academic and technical resource. Social Science students, on the other hand, may encounter English more often through discussion, argumentation, presentation, interpretation, and written explanation (Chang et al., 2025; Sanz-Tejeda et al., 2026). These activities may require more visible language performance and may create greater anxiety when students feel that their English ability is being evaluated by lecturers and peers.

This interpretation is consistent with Warna and Uyun (2024), who showed that English language anxiety and coping strategies may vary across different study program contexts. Their study supports the idea that students' academic background can influence how anxiety is experienced and managed. The present study extends this line of discussion by comparing FLCA between STEM and Social Science students in Indonesian undergraduate EFL learning. The result indicates that disciplinary background may be a useful contextual factor for understanding English learning anxiety.

The finding also confirms the importance of classroom support and anxiety-management strategies. Recent studies have shown that anxiety can be reduced through supportive teaching

practices, preparation, feedback, coping strategies, and less threatening classroom environments. Alamri and Qasem (2024) found that students' speaking anxiety was related to fear of mistakes, lack of preparation, limited practice, and classroom evaluation. Attia and Algazo (2025) also emphasized that teachers play an important role in identifying anxiety-related challenges and applying strategies to reduce foreign language anxiety. Therefore, English lecturers need to design classroom activities that allow students to participate without excessive fear of judgment.

For Social Science students, the higher level of FLCA suggests the need for more confidence-building and low-pressure English learning activities. Lecturers may provide structured preparation before speaking tasks, use small-group discussions before whole-class performance, give constructive feedback, and reduce overly corrective responses during students' initial attempts to communicate (Brandmo & Gamlem, 2025). Since Social Science students may be more involved in discussion-based and presentation-based academic tasks, English instruction for this group may need to emphasize gradual oral practice, supportive peer interaction, and clear task expectations.

For STEM students, although the anxiety level was lower than that of Social Science students, the mean score still indicated moderate anxiety. This means that STEM students also require pedagogical support. Their anxiety may be related to using English beyond technical vocabulary, especially in spontaneous speaking, classroom interaction, or evaluative tasks (Charoenpornsook & Thumvichit, 2025; Rafiq et al., 2024). English lecturers may help STEM students by connecting English activities to discipline-related materials while also giving opportunities to practice communication in meaningful classroom situations.

Overall, the findings show that FLCA should be understood not only as an individual psychological issue, but also as a contextual and disciplinary issue. The difference between STEM and Social Science students suggests that English learning anxiety may be shaped by students' academic background and classroom learning demands. Therefore, English instruction in higher education should be more responsive to students' disciplinary profiles. Rather than applying the same teaching approach to all students, lecturers may need to adjust tasks, feedback, interaction patterns, and assessment practices according to students' learning contexts.

The novelty of this study lies in its focus on discipline-based comparison of FLCA among Indonesian undergraduate EFL learners. While previous studies have mostly examined anxiety levels, speaking anxiety, public speaking anxiety, gender, coping strategies, or classroom factors, this study provides empirical evidence that FLCA may differ between STEM and Social Science students. This finding contributes to a more contextual understanding of EFL anxiety and supports the need for more differentiated English learning support in Indonesian higher education.

CONCLUSION

This study investigated foreign language classroom anxiety among Indonesian undergraduate EFL learners and examined whether there was a significant difference in FLCA between STEM and Social Science students. Based on the findings, the students generally experienced a moderate level of FLCA, with an overall mean score of 3.02. This indicates that anxiety was a common experience in English classroom learning, although most students did not experience it at a severe level.

The comparison between disciplinary groups showed that both STEM and Social Science students were categorized as having moderate anxiety. However, Social Science students reported a higher level of FLCA than STEM students. The mean score of Social Science students was 3.20, while the mean score of STEM students was 2.84. The result of Welch's t-test confirmed that the difference was statistically significant, $t(240.70) = 4.03$, $p <$

.001, with a small-to-moderate effect size, Cohen's $d = 0.51$. This means that disciplinary background may be associated with different levels of anxiety in English classroom learning.

The distribution of anxiety levels also supported this finding. Social Science students had a higher proportion of high anxiety, while STEM students had a higher proportion of low anxiety. Therefore, the findings suggest that FLCA is not experienced uniformly by undergraduate EFL learners. Students' academic backgrounds may shape how they experience anxiety in learning English. This study contributes to FLCA research by showing that discipline-based comparison can provide a more contextual understanding of English learning anxiety in Indonesian higher education

Based on the findings, several suggestions can be offered. First, English lecturers should recognize that undergraduate students may experience different levels of anxiety depending on their disciplinary backgrounds. Since Social Science students reported higher FLCA, lecturers may need to provide more supportive classroom activities for this group. These activities may include structured speaking preparation, small-group discussion, gradual oral practice, low-pressure classroom interaction, and constructive feedback that does not embarrass students.

Second, English instruction in higher education should avoid treating all students as having the same emotional and academic needs. STEM and Social Science students may have different types of English exposure, classroom expectations, and communication demands. Therefore, lecturers should design English learning tasks that are sensitive to students' disciplinary contexts. For STEM students, English learning activities may be connected to technical vocabulary, academic texts, digital resources, and discipline-related communication. For Social Science students, lecturers may provide more guided support for discussion, presentation, argumentation, and written explanation in English.

Third, classroom assessment should be designed in a way that reduces unnecessary anxiety. Clear instructions, transparent assessment criteria, practice opportunities, and supportive feedback may help students feel more prepared and confident. Since FLCA can affect students' participation and performance, lecturers should create classroom environments where students are allowed to make mistakes as part of the learning process.

Fourth, higher education institutions may use the findings of this study to develop more responsive English learning support. English programs should consider students' academic backgrounds when designing general English courses, English for Specific Purposes courses, or academic English support programs. Discipline-sensitive English instruction may help students engage more confidently and reduce anxiety in classroom learning.

Finally, future researchers are encouraged to expand this study by involving a larger and more diverse sample from different universities. Further studies may also include qualitative data, such as interviews or open-ended responses, to explore why Social Science students experience higher FLCA than STEM students. In addition, future research may examine the relationship between FLCA and other variables, such as English proficiency, classroom participation, willingness to communicate, learning motivation, or academic performance. Such studies can provide a deeper understanding of how anxiety influences English learning in Indonesian higher education.

ACKNOWLEDGMENTS

The author would like to express the gratitude to Universitas Indo Global Mandiri for funding this research.

REFERENCES

Abrar, M., Muhammad Muldan Salim, Rd. M. Ali, & M. Rico, F. (2024). (Un)silencing the silence: EFL students' speaking anxiety in answering lecturers' questions. *JEELS*

- (*Journal of English Education and Linguistics Studies*), 11(1), 131–156.
<https://doi.org/10.30762/jeels.v11i1.1888>
- Alamri, W., & Qasem, F. (2024). Foreign language speaking anxiety in relation to gender: students and teachers' perceptions. *Cogent Education*, 11(1), 1-14.
<https://doi.org/10.1080/2331186X.2024.2423440>
- Alrashidi, O., & Alenezy, F. S. (2026). Foreign language anxiety among Saudi university students: sources, gender variation, and perceived proficiency. *Frontiers in Education*, 11, 1-11 <https://doi.org/10.3389/feduc.2026.1797618>
- Attia, S., & Algazo, M. (2025). Foreign language anxiety in EFL classrooms: teachers' perceptions, challenges, and strategies for mitigation. *Frontiers in Education*, 10, 1-13 <https://doi.org/10.3389/feduc.2025.1614353>
- Baharman, Djumingin, S., & Anita Syamsi Safitri, N. (2026). Narratives of speaking anxiety under evaluative pressure in students' classroom presentations: A communication apprehension perspective by DeVito. *LITERA*, 25(1), 14–18.
<https://doi.org/10.21831/ltr.v25i1.96165>
- Brandmo, C., & Gamlem, S. M. (2025). Students' perceptions and outcome of teacher feedback: A systematic review. *Frontiers in Education*, 10, 1-32.
<https://doi.org/10.3389/feduc.2025.1572950>
- Chang, D., Lin, M. P.-C., & Hwang, G.-J. (2025). Charting the field: A review of argument visualization research for writing, learning, and reasoning. *Frontiers in Education*, 10, 1-19. <https://doi.org/10.3389/feduc.2025.1672105>
- Charoenpornsook, V., & Thumvichit, A. (2025). Unveiling engineering students' challenges and coping strategies in English-medium instruction: A Q methodology study. *Asian-Pacific Journal of Second and Foreign Language Education*, 10(1), 1-25.
<https://doi.org/10.1186/s40862-024-00307-8>
- Daflizar, D. (2024). Out-of-Class Speaking Anxiety among Indonesian EFL Students and Its Relationship with Self-Perceived Speaking Skills, Vocabulary Proficiency, and Gender. *Journal of Languages and Language Teaching*, 12(1), 240-253.
<https://doi.org/10.33394/jollt.v12i1.9342>
- Hamid, R. J., Maing, R. A., Rampeng, Muhammad, A. F., & Sahib, N. (2025). Postgraduate EFL instructional models in Indonesia: aligning student perceptions with lecturer rationales. *Cogent Education*, 12(1), 1-19.
<https://doi.org/10.1080/2331186X.2025.2590863>
- Haque, M. N., Dahal, N., Hasan, M. K., Manandhar, N. K., Kapar, H., Zengin, R., & Sharmin, S. (2026). Pedagogical strategies for mitigating foreign language anxiety: A mixed-methods study of first-semester undergraduate students. *Frontiers in Education*, 11, 1-13
<https://doi.org/10.3389/feduc.2026.1718085>
- Huda, B., Yunus, M., & Romadhon, M. G. E. (2025). Teacher-learner interactions in Indonesian EFL classroom: A case study of active learning strategies and proficiency challenges. *Journal on English as a Foreign Language*, 15(2), 600–625.
<https://doi.org/10.23971/jevl.v15i2.9765>
- Jantassova, D., Churchill, D., Tentekbayeva, Z., & Aitbayeva, S. (2024). STEM language literacy learning in engineering education in kazakhstan. *Education Sciences*, 14(12), 1-25. <https://doi.org/10.3390/educsci14121352>
- Li, J., & Cui, Y. (2026). EFL learners' perceptions of and affective engagement with paper-based and mobile-assisted language learning in classroom interactions. *International Journal of Applied Linguistics*, 36(2), 1758–1770.
<https://doi.org/https://doi.org/10.1111/ijal.70024>

- Morsi, W. K., & Zaki, M. M. (2024). Oral presentations' anxiety among egyptian undergraduates: causes and remedies. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 9(2), 425–439. <http://dx.doi.org/10.210>
- Muhyidin, M., & Chuquin, E. G. P. (2025). Assessing the levels and prevalence of public speaking anxiety among Indonesian EFL university students. *Journal on English as a Foreign Language*, 15(2), 785–805. <https://doi.org/10.23971/jefl.v15i2.9982>
- Mustamir, M. (2024). Indonesian EFL learners and speaking anxiety: Insights from a meta-synthetic analysis. *English Review: Journal of English Education*, 12(2), 509–518. <https://doi.org/10.25134/erjee.v12i2.9950>
- Norahmi, M., Aristia, C. F., & Mairing, J. P. (2025). Student speaking anxiety, causal factors, and recommendations: A mixed-methods research. *JEELS (Journal of English Education and Linguistics Studies)*, 12(2), 843–875. <https://doi.org/10.30762/jeels.v12i2.5754>
- Quvanch, Z., Qasemi, A. S., & Na, K. S. (2024). Analyzing levels, factors and coping strategies of speaking anxiety among EFL undergraduates in Afghanistan. *Cogent Education*, 11(1), 1-19. <https://doi.org/10.1080/2331186X.2024.2413225>
- Rafiq, K. R. M., Hashim, H., & Yunus, M. M. (2024). Roles of english for specific purposes (esp) in stem education to leverage sustainable education. *Asian Journal of University Education*, 20(3), 741–751. <https://doi.org/10.24191/ajue.v20i3.27857>
- Rahman, H., Mohammad, S., & Swarna, S. T. (2024). Voices in peril: Understanding English public speaking anxiety among university students in Bangladesh. *Cogent Education*, 11(1), 1-17. <https://doi.org/10.1080/2331186X.2024.2355381>
- Saeedi, Z., & Najjarpour, M. (2025). Enhancing technical vocabulary acquisition in ESP context through virtual content development with Articulate Storyline. *Social Sciences & Humanities Open*, 11, 1-13. <https://doi.org/10.1016/j.ssaho.2025.101539>
- Sanz-Tejeda, A., Domínguez-Oller, J. C., Baldaquí-Escandell, J. M., Gómez-Díaz, R., & García-Rodríguez, A. (2026). The impact of generative AI on academic reading and writing: a synthesis of recent evidence (2023–2025). *Frontiers in Education*, 10, 1-14. <https://doi.org/10.3389/feduc.2025.1711718>
- Warna, D., & Uyun, M. (2024). Coping strategies for english language anxiety: A comparative study of lecturers and students across disciplines. *AL-ISHLAH: Jurnal Pendidikan*, 16(2), 1082–1096. <https://doi.org/10.35445/alishlah.v16i2.4979>
- Zhang, M., & Zhang, J. (2025). Disciplinary variation of metadiscourse: A comparison of human-written and ChatGPT-generated English research article abstracts. *Journal of English for Academic Purposes*, 76. <https://doi.org/10.1016/j.jeap.2025.101540>
- Zhao, H., Dang, T. N. Y., & Finlayson, N. (2025). Education lecturers' expectations about writing proficiency: Insights from corpus analysis of teacher feedback on academic writing. *Journal of Second Language Writing*, 67. <https://doi.org/10.1016/j.jslw.2024.101173>