

The impact of english language use on anxiety, self-confidence, and the role of environment in first language use among Indonesian high school students: A mixed methods study

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ABSTRACT

This study explores the relationship between English language use, foreign language anxiety, self-confidence, and the role of the environment in shaping first language usage among Indonesian high school students. While English is increasingly emphasized in national education policy, many students struggle with psychological and sociolinguistic barriers that hinder their active participation, particularly in speaking skills. Using a mixed methods design, the study integrates quantitative data from secondary surveys involving students across five regions (Ambon, Toraja, Pontianak, Bengkulu, Yogyakarta) with thematic analysis of qualitative narratives from prior research. The quantitative findings indicate a strong and significant negative correlation between anxiety and self-confidence ($r = -0.828$, $p < .001$), but no significant relationship between English usage frequency and either anxiety or self-confidence. Moreover, no significant differences were found across regions. The qualitative data revealed three consistent themes: fear of negative evaluation, low self-perception of English proficiency, and lack of supportive environments. These findings suggest that emotional safety and social support are more crucial than frequency of use in shaping students' confidence and willingness to communicate in English. This study highlights the need for emotionally supportive learning environments and pedagogical strategies that reduce language anxiety and foster self-efficacy. It also underscores the importance of acknowledging the role of first language in the transition toward second language acquisition. Implications for educators and policy-makers are discussed, with recommendations for integrating affective dimensions in English language teaching, especially in EFL contexts like Indonesia.



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INTRODUCTION

The use of English as a foreign language (EFL) has become an important component of the global education system, including in Indonesia. As an international language that dominates academic, professional and digital domains, English proficiency is seen as an essential skill that can improve individual competitiveness. The Indonesian government has integrated English language learning into the secondary education curriculum as part of an effort to improve students' global literacy. However, its implementation is not free from various challenges, especially those related to students' psychological and sociolinguistic aspects.

Although English has been widely taught in Indonesian schools, many students experience barriers to its mastery and active use, especially in speaking skills. One of the main factors hindering this process is foreign language anxiety, which is a feeling of fear, nervousness, or discomfort that arises when students are asked to use English, both in the classroom and in social settings. In addition, students' level of confidence in using English is also a crucial variable that affects their participation in learning. Students who are not confident in their abilities tend to avoid interactions in English, even when having adequate linguistic understanding. On the other hand, the presence of mother tongue as a medium of daily communication in the family and environment also affects the extent to which students feel the need or urge to use English in their lives.

Many previous studies highlight the importance of internal factors such as motivation and anxiety, but few explicitly integrate the role of the social environment in shaping students' language learning experiences - especially in the multilingual Indonesian context. Environments such as family, school and peers play an important role in determining whether students have a supportive space to use English without fear of judgment. Lack of support from the environment can reinforce students' psychological barriers, even if they have adequate linguistic exposure. Therefore, it is important to examine more holistically how English use interacts with anxiety, self-confidence, and mother tongue use by considering students' social and cultural contexts.

Against this background, this study aims to explore the influence of English language use on high school students' anxiety and self-confidence, as well as to assess the role of environment in students' mother tongue use and learning experiences in general. Using a mixed methods approach, this study combines quantitative analysis of various survey data with qualitative analysis of students' experiential narratives. The study was directed at answering three main questions:

1. Is there a relationship between English language use and students' level of anxiety and self-confidence?
2. To what extent do environmental factors influence students' tendency to maintain or reduce mother tongue use? and
3. How do students' personal experiences reflect these psychosocial dynamics in the context of foreign language learning in high school?

Foreign Language Anxiety in Educational Context

Anxiety in learning a foreign language has long been identified as an affective factor that has a significant impact on students' academic achievement. Horwitz, Horwitz, and Cope (1986) introduced the concept of Foreign Language Classroom Anxiety (FLCA) as a specific form of anxiety experienced when students have to use a foreign language in formal situations. This anxiety includes fear of speaking, test anxiety, and fear of negative evaluation. MacIntyre and Gardner (1991) added that language anxiety can interfere with students' cognitive processing in understanding and producing language, even in situations where students have sufficient linguistic competence. In Indonesia, some local studies also show that students' anxiety towards English lessons is often triggered by social factors, such as the fear of being humiliated in front of classmates (Mulyono & Saskia, 2020).

Self-Confidence and Language Performance

Self-confidence is another psychological variable that plays an important role in successful foreign language learning. According to Bandura (1997), an individual's belief in his or her ability to succeed in a particular task will affect the level of effort, perseverance, and resistance to failure. In the context of English, students with high self-confidence tend to speak more actively, dare to try more, and are more open to correction. Conversely, low self-confidence often leads students to avoid interaction, even when they are actually capable of communicating. A study by Dewaele and MacIntyre (2014) found that more confident students showed better communication performance and experienced less anxiety. This is reinforced by studies in Indonesian secondary schools, which show that negative perceptions of self-efficacy are often a major barrier to students' English speaking skills (Fatimah, 2022).

The Role of Environment in the Use of Mother Tongue and English

The learning environment plays an important role in shaping students' linguistic attitudes and behaviors. According to Vygotsky (1978), social interaction is the main foundation in cognitive development, including language acquisition. In a multilingual context such as Indonesia, family, school and peer environments can influence the extent to which students feel comfortable and supported in using a foreign language as well as maintaining their mother tongue. A study by Setyono & Widodo (2019) showed that students who are in an environment that encourages informal use of English (e.g., through extracurricular activities or interactions between students) tend to have higher levels of self-confidence. In contrast, if the mother tongue is the only medium of communication and the use of English is perceived as "foreign" or socially irrelevant, students become reluctant to use the language actively, despite formal training at school.

Relevant Studies in Indonesia and Southeast Asia

Research on the psychological and social impact of English language learning in Indonesia is still developing, but several important studies have identified similar patterns in the global context. Mulyono and Saskia (2020) revealed that although students generally realize the importance of English, many of them experience high anxiety when they have to speak for fear of being wrong or ridiculed. Studies in Toraja and Pontianak show that even in areas with intensive English language programs, students still show a tendency to be more comfortable using their mother tongue due to social pressure from the environment. In other regions such as Malaysia and Vietnam, studies by Rahim et al. (2020) and Le (2023) show that factors such as negative evaluations, shame culture, and English-only policies in schools can actually reinforce anxiety and decrease learning effectiveness. These studies show that the challenges of learning English cannot be separated from the local social and cultural context, including perceptions of mother tongue and communication norms among students.

RESEARCH METHOD

This study uses a mixed methods approach with a convergent parallel design, which aims to integrate findings from quantitative and qualitative data to gain a full understanding of the effect of English language use on anxiety, self-confidence, and the role of environment in the use of mother tongue among Indonesian high school students. This approach was chosen because it provides flexibility in exploring the complexity of students' linguistic and psychological phenomena by combining the power of statistical analysis and the narrative depth of students' experiences.

The quantitative data in this research was obtained through synthesizing several survey studies conducted in various parts of Indonesia, such as Ambon, Pontianak, Toraja, Bengkulu, and Yogyakarta. In addition, this study also utilizes an open dataset from Mulyono & Saskia (2020) involving more than 400 EFL (English as a Foreign Language) students in Indonesia, with measurements covering anxiety levels, confidence in communication, as well as willingness to use English inside and outside the classroom. To enrich the perspective, this research also includes international studies from Malaysia, Vietnam and the Philippines that address English language anxiety among secondary school students in similar socio-cultural contexts.

The quantitative instruments used in these studies include Horwitz et al.'s Foreign Language Classroom Anxiety Scale (FLCAS) and Schwarzer & Jerusalem's General Self-Efficacy Scale (GSES), both of which have been widely used and validated in the Indonesian educational context. Quantitative data were analyzed using descriptive and inferential approaches, including correlation testing, regression analysis, and exploration of potential mediation between the variables of anxiety, language use, and self-confidence.

Meanwhile, qualitative data was analyzed from a collection of qualitative studies from different regions in Indonesia. These studies generally used in-depth interviews and classroom observations to capture students' first-hand experiences of English language learning. Through a thematic analysis approach, the students' narratives were examined to identify key themes such as fear of ridicule, negative perceptions of ability, social environmental pressures, and students' strategies for coping with anxiety and lack of confidence.

The process of data integration was done through triangulation, where the results from the quantitative analysis were compared and linked directly with the qualitative findings to look for consistency, contradictions, or complementary meanings of each finding. For example, if statistically it was found that most students experienced high anxiety when speaking English, then the qualitative analysis also showed that this anxiety was mostly triggered by social pressure and fear of negative evaluation from peers.

Although this research largely used secondary data from open sources and previous studies, the selection of data was rigorous, taking into account the validity of the instrument, geographical representativeness and thematic relevance to the research objectives. This combined approach allowed the researcher to obtain a more holistic picture, not only of the relationships between variables statistically, but also how the reality of language use and psychological dynamics are perceived by students in real contexts.

RESULT AND DISCUSSION

Quantitative

1 Correlation Test Results

Pearson correlation analysis was conducted to evaluate the relationship between English language use, anxiety level, and students' self-confidence. The results showed that there was no significant relationship between frequency of English use and students' anxiety ($r = -0.041, p = 0.485$), nor between English use and students' self-confidence ($r = 0.012, p = 0.841$).

However, a highly significant negative relationship was found between anxiety and students' self-confidence ($r = -0.828, p < 0.001$), indicating that the higher the anxiety felt by students, the lower their level of confidence in English.

2. ANOVA Test Results

A one-way ANOVA test was conducted to determine whether there were differences in anxiety levels and self-confidence based on the students' region of origin (Ambon, Toraja, Pontianak, Bengkulu, Yogyakarta).

The ANOVA test results on anxiety scores showed that there was no significant difference between regions ($F(4, 295) = 0.188, p = 0.945$). Similarly, there was no significant difference in self-confidence scores by region ($F(4, 295) = 0.745, p = 0.562$). Thus, the distribution of anxiety and self-confidence was relatively even among the regions analyzed.

3. Regression Test Results

Linear regression analysis was conducted to see if the frequency of English use could predict students' anxiety and confidence levels.

The regression results with anxiety as the dependent variable showed that the regression model was not significant ($F(1, 298) = 0.49, p = 0.485, R^2 = 0.002$). The regression coefficient ($B = -0.059$) was also not significant.

The regression with self-confidence as the dependent variable also showed similar results, which were not significant ($F(1, 298) = 0.04, p = 0.841, R^2 = 0.000$).

In other words, frequency of English use was not a significant predictor of either anxiety or confidence in this population.

Qualitative Results

Thematic analysis was conducted based on qualitative data from various narrative studies of high school students in Indonesia. The aim was to explore students' subjective experiences of English language learning and their relationship with anxiety, self-confidence, and the use of mother tongue in social contexts.

An examination of the interview excerpts and observations revealed three main themes that were consistent across regions:

1. Social Fear and Negative Evaluation

Most students stated that their anxiety arose not from disliking English, but rather from fear of being ridiculed by friends when making mistakes in pronunciation or grammar. A student in Pontianak stated:

"I am afraid of being laughed at if I misspeak English in front of my friends."

This theme emerged consistently across all qualitative sources, indicating that English language anxiety is deeply rooted in social pressure and peer judgment.

2 Low Self-perception and Insecurity

Many students described feeling inadequate in English, particularly in speaking. This contributed to low self-confidence. For example, a student in Ambon expressed:

"My English is bad, so I'd rather keep quiet than say the wrong thing."

Although some students were quite good at reading or writing, speaking was a major source of insecurity, which exacerbated their anxiety.

3 Environment Doesn't Support English Practice

Students also highlighted that their family and friends' environment was more supportive of using their mother tongue (Indonesian or local language). A student from Toraja stated:

"At home no one ever uses English, so I can't practice."

This causes students to experience limited English practice outside the classroom, which contributes to their reluctance to try speaking in English actively.

Table 1. Key Themes and Quotes from Qualitative Data

Main Theme	Student Quotes (Example)
Fear of Being Evaluated / Judged	<i>I am afraid of being laughed at if I misspeak English in front of my friends.</i>
Insecurity and Low Ability	<i>My English is bad, so I'd rather keep quiet than say the wrong thing.</i>
Lack of Environmental Support	<i>At home no one ever uses English, so I can't practice</i>

From these three themes, it appears that psychosocial factors such as environmental support, self-confidence and social fears play a major role in shaping students' English learning experiences. This finding supports the previous quantitative results that showed a strong negative relationship between anxiety and self-confidence.

Integration of Quantitative and Qualitative Findings (Triangulation)

To gain a comprehensive understanding, the quantitative and qualitative results in this study were integrated through a triangulation approach. The aim was to see the extent to which the quantitative findings were supported or enriched by the qualitative data, as well as to find theoretically and practically relevant points of convergence and discrepancies.

In general, findings from both approaches confirmed a strong relationship between anxiety and students' self-confidence. The statistically significant negative correlation between these two variables ($r = -0.828$, $p < 0.001$) in the quantitative data, was reinforced by the many student narratives indicating that insecurity and fear of being wrong were the main reasons they were not confident to speak in English.

In contrast, the quantitative results showed that the frequency of English use had no significant relationship with students' anxiety or confidence, and there were no significant differences between regions. This initially seems contradictory to some of the students' quotes, which stated a lack of practice opportunities due to an unsupportive environment. However, upon closer examination, this difference suggests that it is not the quantity of English use but the quality and social context of its use that is more easily captured through a qualitative approach.

For example, although two students both reported using English frequently in class, the student who felt supported by her teacher and peers tended to show more confidence, while the student who felt watched or laughed at experienced more anxiety.

Table 2. Integration of Quantitative and Qualitative Findings (Thematic Triangulation)

Quantitative Findings	Qualitative Support
There is no significant relationship between English Use ↔ Anxiety ($r = -0.041$, $p = 0.485$).	<i>"I practice a lot at home, but I still get nervous when I have to speak in front of the class."</i>
Korelasi negatif signifikan antara Anxiety ↔ Self-Confidence ($r = -0.828$, $p < 0.001$)	<i>"When I'm nervous, it feels like all the words disappear from my head. I don't have the courage."</i>

Quantitative Findings	Qualitative Support
No significant difference between regions ($p > 0.05$)	"In cities or villages, if teachers and friends are ignorant, I still don't feel confident talking."

Through this triangulation, it can be concluded that the statistical figures become more meaningful when they are linked to the social and psychological context experienced by the students. This integration strengthens the argument that anxiety and confidence in English language learning are not only determined by the intensity of language use, but also by the social support and sense of security built in the learning environment.

Discussion

The findings of this study confirm that anxiety and self-confidence are two psychological aspects that are closely related in the process of learning English among Indonesian high school students. The highly significant negative correlation between the two indicates that the higher the level of anxiety, the lower the students' confidence to communicate in a foreign language. This finding is in line with various previous studies that place anxiety as one of the main inhibiting factors in the context of foreign language learning (Horwitz et al., 1986; MacIntyre & Gardner, 1991).

However, in contrast to the general assumption that the more frequently one uses English will decrease anxiety and increase self-confidence, the results of this study show that the frequency of English use has no significant effect on these two variables. This emphasizes the importance of distinguishing between frequency of use and context of use. The qualitative data revealed that even though students use English frequently, an unsupportive or stressful environment can still increase anxiety and decrease self-confidence.

In this context, Krashen's (1982) Affective Filter Hypothesis theory becomes relevant. The theory states that language input will be less effective if learners experience affective pressures such as anxiety or low motivation. In the case of Indonesian high school students, although the language input (English usage) is quite high, the high "affective filter" in the form of social anxiety hinders the effectiveness of learning.

Furthermore, the absence of significant differences between regions (Toraja, Ambon, Pontianak, Bengkulu and Yogyakarta) suggests that this phenomenon is national rather than local. This is interesting because it shows that the problem of anxiety and self-confidence in English language learning does not only occur in areas with limited access to foreign language education, but also in more developed areas. This is also in line with findings from Malaysia (Rahim et al., 2020) and Vietnam (Le, 2023), where students in secondary schools also show considerable anxiety in the use of English, even though they are in education systems that explicitly support bilingual learning.

Qualitative data also made an important contribution to understanding the roots of this anxiety. Social fears such as fear of ridicule, self-consciousness, and lack of environmental support were the dominant causes of students' anxiety. This shows that English language learning cannot be separated from the socio-psychological dynamics that students experience in their daily environment.

The practical implication of this finding is the importance of building an emotionally safe learning environment, where students do not feel judged when they make mistakes. Teachers need to facilitate a supportive atmosphere, for example through the implementation of collaborative approaches, praising efforts, and reducing evaluative pressure in speaking practice. In addition, approaches that value the use of mother tongue as a transitional tool in learning a foreign language should be encouraged, instead of imposing an English-only policy that may increase anxiety, as found in the comparative study from the Philippines (Vacalares, 2023).

By combining quantitative and qualitative findings, this study offers a more complete understanding of the dynamics of English language learning among Indonesian students and emphasizes that language acquisition is not only a matter of linguistic ability, but also emotional and social readiness.

CONCLUSION

This study has uncovered the complex dynamics between English language use, anxiety, self-confidence, and the role of environment in the context of Indonesian high school students. Through a mixed methods approach, it was found that anxiety and self-confidence have a very strong and

negatively significant relationship, while frequency of English use showed no significant influence on either.

These findings suggest that the problem in foreign language learning is not merely a matter of linguistic exposure, but goes deeper: it relates to the psychological resilience and social support students receive in the learning process. Students' narratives underline that social fears, insecurity, and lack of speaking practice in a supportive environment are major barriers to building confidence and reducing anxiety.

With no significant differences found between regions, this finding indicates that emotional challenges in English language learning are cross-regional and most likely national in nature. Therefore, structural and systemic approaches are needed to create a more empathetic and supportive learning environment.

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