A STUDY ON THE CORRELATION BETWEEN ENGLISH LEARNING SELF-EFFICACY AND CLASSROOM ANXIETY AMONG STUDENTS AT UNIVERSITY A IN SHANDONG PROVINCE

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Abstract: This study aims to explore the correlation between English learning self-efficacy and classroom anxiety among students at University A in Shandong. A questionnaire survey was conducted using the "College Students' English Learning Self-Efficacy Scale" and the "College Students' English Classroom Anxiety Scale" with 385 participants. Data were analyzed through descriptive statistics, independent t-tests, one-way ANOVA, and Pearson correlation analysis. The results indicate that students' English learning self-efficacy and classroom anxiety are both at moderate levels. Significant differences in self-efficacy were observed across gender, grade level, and student leadership status (but not household registration), whereas classroom anxiety showed significant differences in all these demographic variables, including household registration. The analysis revealed a significant negative correlation between self-efficacy and classroom anxiety. This study sheds light on the psychological characteristics of college students in English learning and their interrelationships. It is recommended that the university implement differentiated teaching strategies tailored to diverse student groups and enhance self-efficacy to mitigate classroom anxiety, which holds significant practical implications for improving English teaching effectiveness.

Keywords: English Learning Self-Efficacy, English Classroom Anxiety, Students from University A in Shandong Province

Introduction

In recent years, as education becomes increasingly internationalized, English has grown more prominent as a global lingua franca. Research in educational psychology and applied linguistics has focused on the relationship between English learning self-efficacy and classroom anxiety. Studies show that self-efficacy significantly impacts foreign language learning: Mikolajczak (2011) linked it to students' self-regulation and academic performance; Giladi et al. (2021) found it positively

influences reading comprehension through effort mediation; and Truong & Wang (2019) highlighted its role in motivation and learning strategies.

Meanwhile, research on English classroom anxiety has also advanced: Ali et al. (2023) observed significant anxiety in IELTS test-takers during writing tasks; Botes et al. (2022) explored how anxiety and enjoyment jointly affect self-perceived competence; and Elouise et al. (2022) developed a short-form anxiety scale for reliable measurement. These findings provide a foundation for examining the correlation between self-efficacy and classroom anxiety.

In China's evolving education landscape, enhancing students' English proficiency remains a priority. Research highlights the role of self-efficacy in improving learning outcomes: Li (2024) showed its impact in vocational schools, while Lü (2023) confirmed its influence on college listening skills. Concurrently, classroom anxiety is a widespread issue. Cai (2019) analyzed speaking anxiety in high schoolers, and Zhang & Guo (2018) validated assessment tools like FLCAS. Hu et al. (2024) further examined anxiety in medical students' remote learning. Studies reveal connections between self-efficacy and anxiety. Cao (2022) linked self-perception to oral anxiety, and Li & Li (2022) explored how positive emotions mitigate anxiety. Despite China's shift toward student-centered learning (Ye, 2019), gaps persist—students rely heavily on teachers, lacking Western peers' autonomy (Gu & Li, 2018).

At Shandong University A, addressing English-learning anxiety and self-efficacy is critical to optimizing pedagogy. This research aims to inform strategies for improving student outcomes, offering insights for broader higher education reform.

Research Objectives

Based on the aforementioned research questions, this study primarily aims to:

(1)Examine the current status of English learning self-efficacy among students at Shandong University A.

(2)Investigate the current status of English classroom anxiety among students at Shandong University A.

(3)Explore differences in English learning self-efficacy across demographic variables (gender, grade level, household registration, and student leadership status) among Shandong University A students.

(4)Identify variations in English classroom anxiety across demographic variables (gender, grade level, household registration, and student leadership status) among Shandong University A students.

(5)Analyze the correlation between English learning self-efficacy and classroom anxiety among students at Shandong University A.

Literature Review

Research on English Learning Self-Efficacy

The concept of English Learning Self-Efficacy (ELSE) originates from Bandura's (1977) self-efficacy theory, which posits that individuals' beliefs in their capabilities significantly influence their motivation, behavior, and achievement. In the context of language learning, ELSE specifically refers to learners' judgments about their ability to successfully perform English-related tasks and achieve learning objectives (Pajares, 2003). This construct has evolved through multiple theoretical refinements, including Bandura (1986) distinction between outcome expectations and efficacy expectations, as well as contemporary perspectives that emphasize the dynamic nature of self-beliefs in learning processes (Schmader, 2015; Ueki & Takeuchi, 2012). Research has identified ELSE as a multidimensional construct encompassing various components: linguistic competence in core skills (listening, speaking, reading, and writing), strategic application of learning methods, and active classroom participation (Yan, 2018). The conceptualization of ELSE has further expanded to address emerging learning environments, incorporating dimensions like technological proficiency in digital contexts (Feng, 2024) and adaptive capabilities in AI-assisted learning scenarios (Zhang et al., 2025), reflecting the evolving landscape of English language education.

The measurement of ELSE has progressed from general self-efficacy scales (Schwarzer, 1981) to sophisticated, context-specific instruments that capture the complexity of language learning beliefs. Contemporary methodologies combine traditional self-report measures (Pintrich & De Groot, 1990) with innovative approaches such as behavioral observations (Guan, 2021), learning analytics from digital platforms (Qin & Zhong, 2021), and longitudinal tracking (Dai, 2023). Empirical studies consistently demonstrate that ELSE significantly influences various aspects of language learning, including task engagement (Williams, 2018), strategy selection (Luan et al., 2020), and academic achievement (Lv, 2023). Context-specific research reveals important variations, such as the particular challenges faced by medical students in professional English contexts (Zhao et al., 2024) or the enhanced outcomes observed in innovative instructional environments like flipped classrooms (Ma, 2024). These findings highlight the importance of developing tailored instructional approaches that address domain-specific efficacy beliefs, particularly as English language education becomes increasingly mediated by technology and shaped by globalized learning contexts. Current research continues to explore new frontiers in ELSE investigation, including its neural correlates, cross-cultural manifestations, and applications in emerging educational technologies.

Research on Foreign Language Classroom Anxiety

Foreign language classroom anxiety (FLCA) has been extensively studied as a multifaceted psychological construct that significantly impacts language learning processes. Grounded in Horwitz et al. (1986) foundational work, contemporary research has expanded the conceptualization of FLCA to encompass cognitive, affective, and behavioral dimensions. Liu (2021) characterized FLCA as

learners' persistent tension stemming from language proficiency gaps, academic pressures, and social comparisons, while Shirvan & Talebzadeh (2020) emphasized its dynamic nature through their identification of cyclical anxiety patterns in classroom interactions. The theoretical landscape has evolved to include discipline-specific frameworks, such as Zhang (2020) "creative cognitive dissonance" model for art students and Wu & Liu (2021) "dual-track cognitive load" theory for medical students. Recent advancements have introduced innovative perspectives including the "three-dimensional anxiety transmission" model (Chang, 2021), "digital cultural suspension" (Sheng, 2023), and "cognitive ecosystem feedback" theory (Wang, 2023), collectively enriching our understanding of FLCA's complex mechanisms across diverse learning contexts.

Research consistently demonstrates that FLCA operates as a dynamic system interacting with various psychological and environmental factors. Dewaele et al. (2019) established its inverse relationship with foreign language enjoyment (FLE), particularly in culturally unfamiliar contexts where learners fear sociopragmatic failures. The socio-cognitive perspective (Jin & Dewaele, 2018) reveals how perceived competence-expectation gaps generate "cognitive-affective conflict," while Wei (2017) psychobehavioral approach identifies context-specific manifestations like physiological arousal and avoidance behaviors. Cross-cultural studies highlight the delicate balance in L1 use (Inada, 2017), where both prohibition and overreliance can exacerbate anxiety. The emergence of technology-mediated learning environments has introduced new dimensions, including "digital visibility pressure" (Wang et al., 2024) and "digital identity fragmentation anxiety" (Zhan & Xu, 2023), reflecting how virtual spaces transform traditional anxiety patterns. These findings collectively underscore FLCA's context-dependent nature, varying across instructional methods, cultural backgrounds, and learning modalities.

The evolution of FLCA measurement reflects the construct's increasing complexity, moving beyond traditional self-report scales to incorporate multimodal assessment approaches. While culturally adapted versions of the FLCAS remain valuable (Yuan et al., 2019), contemporary research employs innovative methodologies such as dynamic journaling (Ozer & Akayolu, 2021), eye-tracking technology (Liao & Wang, 2018), and longitudinal monitoring (Wang et al., 2024). The integration of positive psychology frameworks, particularly the PERMA model (Zhang & Chen, 2023), has provided new insights into anxiety's relationship with evaluative sensitivity and emotional regulation. Structural equation modeling (Li, 2019) has revealed anxiety's dual role as both facilitator and inhibitor of learning, depending on intensity levels. These methodological advancements have identified critical intervention points, including transitional periods showing peak anxiety (freshman adaptation, exam preparation) and the importance of strategy training for anxiety mitigation. The growing emphasis on physiological indicators and real-time data collection promises to further refine our understanding of FLCA's nuanced manifestations and inform more targeted pedagogical interventions.

Research on the Relationship Between English Learning Self-Efficacy and Classroom Anxiety

Research reveals a complex, dynamic relationship between self-efficacy and foreign language anxiety, characterized by context-dependent interactions rather than simple negative correlation. Thao et al. (2023) found that while self-efficacy can reduce speaking anxiety in familiar tasks, unexpected challenges may trigger sudden anxiety spikes, indicating a nonlinear relationship. This dynamic is further mediated by strategy use—high self-efficacy learners employ cognitive strategies (e.g., skimming, predicting) to manage anxiety, whereas low self-efficacy learners often exceed anxiety thresholds due to ineffective approaches like word-for-word translation (Liao & Wang, 2018). Longitudinal studies show that self-efficacy's anxiety-buffering effect strengthens over time, requiring sustained intervention (Ozer & Akayolu, 2021). Meta-analyses confirm that skill-specific efficacy-building (e.g., micro-goal training) outperforms general relaxation techniques in anxiety reduction (Xiong et al., 2024).

The interplay between self-efficacy and anxiety operates through multiple pathways: direct effects, academic engagement, cognitive reappraisal, and even cross-domain "efficacy transfer" (e.g., art students applying artistic confidence to English learning) (Dong & Zhang, 2023; Zhang, 2023). A critical threshold exists—self-efficacy below 2.8 (on a 5-point scale) leads to sharp anxiety increases, while levels above 3.5 stabilize fluctuations (Sun, 2021). Moderating factors include disciplinary background (e.g., music/dance students leverage resilience better), cultural context (collectivist learners show weaker anxiety buffering), and instructional methods (guided questioning benefits high-efficacy learners more) (Li, 2020; Yang, 2018). These findings highlight the need for tailored interventions that account for learners' efficacy levels, cultural backgrounds, and domain-specific strengths.

Methodology

This study employed an electronic questionnaire survey targeting students at Shandong A University in China, covering diverse demographic characteristics including gender, academic year, residential origin, and class leadership status. With a total student population of 10,521, the sample size was determined using Krejcie & Morgan (1970) sample size determination formula for finite populations. Through convenience sampling, 390 students were selected from the total population for questionnaire distribution. Ultimately, 385 valid questionnaires were collected and systematically processed, yielding an effective response rate of 98%.

The questionnaire on English learning self-efficacy and classroom anxiety for students at Shandong University A consisted of two parts. The first part was the basic personal information, which included the students' gender, grade, household registration, and whether they were class cadres. The second part was the survey questionnaire, which contained the specific contents of the

college students' English learning self-efficacy and English classroom anxiety questionnaire.

Results

Demographic Analysis of Questionnaire Participants

During the research process, a total of 385 valid questionnaires were collected through online surveys. The data from the first part of the questionnaire were used to understand the background information of students at University A in Jinan, Shandong, addressing the first research question: What are the background characteristics of students at University A in Shandong, including their gender, grade level, household registration location, and whether they hold student cadre positions?

According to the questionnaire data, among the student respondents, there were 189 males (49.01%) and 196 females (50.09%). The study showed a relatively balanced gender distribution among participants. The grade level distribution was also fairly even: 137 freshmen (35.62%), 121 sophomores (31.37%), 70 juniors (18.30%), and 57 seniors (14.71%). Regarding household registration status, 244 students held urban registration (33.33%), while 141 had rural registration (36.67%). In terms of student leadership positions, 80 participants served as class cadres (20.91%), with 305 not holding such positions (79.09%).

English Learning Self-Efficacy Levels of Students at University A in Shandong

(1) Descriptive Statistical Analysis of the Survey Results on English Learning Self-Efficacy Among Students from University A in Shandong

The surveyed student population's English learning self-efficacy was generally at a moderate level (M=2.73). Among the dimensions of English learning self-efficacy, the scores ranked as follows: sense of ability to face setbacks (M=2.83), sense of ability to overcome difficulties (M=2.72), sense of ability to complete tasks (M=2.71), and sense of confidence in achieving goals (M=2.68). The standard deviations of the total scale and the dimensional scores did not show significant fluctuations, indicating that the students held relatively consistent views on English learning self-efficacy. Detailed data are presented in Table 1.

Table 1: Descriptive Statistics Summary Table of English Learning Self-Efficacy (N=385)

Dimensions	N	M	SD	Analysis
Sense of task completion capability	385	2.71	0.701	Moderate
Sense of goal achievement confidence	385	2.68	0.636	Moderate
Sense of adversity coping competence	385	2.83	0.521	Moderate
Sense of difficulty overcoming ability	385	2.72	0.490	Moderate
Overall English Learning Self-Efficacy	385	2.73	0.367	Moderate

(2) Descriptive Statistical Analysis of the Survey Results on English Classroom Anxiety Among Students at University A in Shandong Province

The overall English classroom anxiety and its dimensions in this test were at a moderate level (M=3.42). Among them, the career development dimension scored relatively high (M=2.73), while the personal competence dimension scored relatively low (M=2.19). The standard deviations of the total scale and each dimension ranged between 0.899 and 0.921, with no significant fluctuations in the scores, indicating that the respondents' perceptions of English classroom anxiety were relatively consistent. Detailed data are presented in Table 2.

Table 1: Descriptive Statistics Summary of English Classroom Anxiety (N=385)

Dimensions	N	M	SD	Analysis
Communication Apprehension	385	3.39	0.869	Moderate
Academic Anxiety	385	3.19	0.560	Moderate
Classroom Anxiety	385	3.56	0.803	High
Overall English Classroom Anxiety	385	3.38	0.726	Moderate

Analysis of Differences in English Learning Self-Efficacy and English Classroom Anxiety Among Students at University A in Shandong, China

The study reveals significant group differences in students' English learning self-efficacy, showing a notable decline across academic years, with freshmen demonstrating the highest levels (Xu et al., 2023; Zhang & Chen, 2023). Practical experience, particularly in organizational roles, enhances confidence in language learning, suggesting that expanding student engagement opportunities may improve overall self-efficacy (Wang et al., 2024). Additionally, self-efficacy formation is influenced by individual traits, sustained effort, and instructional quality, highlighting the need for personalized teaching approaches (Li, 2019).

Regarding classroom anxiety, freshmen exhibit higher levels due to transitional challenges (Yang, 2018; Lin, 2019), though systematic pre-university English training mitigates initial anxiety (Shi & Fan, 2022; Tsui, 2024). Active participation in campus activities further enhances anxiety regulation by fostering resilience (Wang, 2021). These findings underscore the importance of (1) transitional support for freshmen, (2) differentiated instruction accounting for diverse backgrounds, and (3) experiential learning to reduce anxiety and boost language competence.

Correlational Analysis of English Learning Self-Efficacy and English Classroom Anxiety Among Students at University A in Shandong

To explore the relationship between English learning self-efficacy and English classroom anxiety among students at University A in Shandong, this study employed Pearson correlation analysis for examination. The larger the absolute value of the correlation coefficient, the stronger the

linear association between the variables. The analysis results revealed a significant negative correlation between the total score of English learning self-efficacy and the total score of English classroom anxiety (r = -0.618), supporting the research hypothesis. Specifically:

All dimensions of self-efficacy showed significant negative correlations with anxiety: confidence in achieving goals exhibited the strongest association (r = -0.527), followed by the sense of ability to overcome difficulties (r = -0.448), the sense of ability to complete tasks (r = -0.412), and the sense of ability to cope with setbacks (r = -0.401). Among the dimensions of English classroom anxiety, classroom anxiety demonstrated the most significant negative correlation with self-efficacy (r = -0.563), followed by communication anxiety (r = -0.572) and academic anxiety (r = -0.534).

This result aligns with the perspective of social cognitive theory: when students have stronger confidence in their ability to complete English learning tasks, their experienced anxiety in the classroom environment significantly decreases. For details, refer to Table 3.

Table 3: Correlation Matrix of English Learning Self-Efficacy and Classroom Anxiety among Students at Shandong University A

Dimensions	Communication Apprehension	Academic Anxiety	Classroom Anxiety	Overall English Classroom Anxiety
Sense of task completion capability	-0.423*	-0.387*	-0.356*	-0.412*
Sense of goal achievement confidence	-0.518*	-0.462*	-0.493*	-0.527*
Sense of adversity coping competence	-0.382 *	-0.345*	-0.367*	-0.401*
Sense of difficulty overcoming ability	-0.437*	-0.403*	-0.418*	-0.448*
Overall English Learning Self-Efficacy	-0.572*	-0.534*	-0.563*	-0.618*

Note: *$p < .05$

Discussion

The current status of English learning self-efficacy among students at University A in Shandong

Through in-depth statistical analysis, it was revealed that students from Shandong University A demonstrated moderate levels of English learning self-efficacy and its sub dimensions in this investigation. The overall self-efficacy level of students remained at a moderate range. Regarding data

distribution, the dimensions of "sense of task completion capability" and "confidence in goal achievement" exhibited relatively large standard deviations, indicating significant individual differences among students in these aspects. In contrast, the "sense of overcoming difficulties capability" and overall self-efficacy showed smaller standard deviations, suggesting more concentrated performance patterns in these areas, which aligned with the perspective proposed by Zhang et al. (2022). The findings generally supported the research conclusions of Regmi et al. (2024), demonstrating that while the students' English learning self-efficacy reached moderate levels, their confidence in overcoming difficulties and completing specific tasks still required enhancement. This provided clear directions for subsequent targeted pedagogical interventions.

The current status of English classroom anxiety among students at University A in Shandong

Statistical analysis revealed that students from Shandong University A exhibited moderate overall English classroom anxiety in this investigation, with communication anxiety and academic anxiety at moderate levels, while classroom anxiety reached a high level, indicating considerable room for improvement. From specific dimensions, students' classroom anxiety was most prominent, reaching a relatively high level, whereas communication anxiety and academic anxiety both remained moderate. These findings aligned with the English classroom anxiety theory proposed by Truong et al. (2019), confirming that Chinese university students indeed experience significant anxiety during foreign language learning. Notably, the high scores in the classroom anxiety dimension reflected substantial psychological pressure on students during classroom activities requiring immediate language output, a phenomenon supporting Li & Li (2022) theoretical perspective on foreign language "performance anxiety." Additionally, the large standard deviation in the communication anxiety dimension indicated significant individual differences in students' oral communication anxiety levels, while the relatively concentrated distribution of academic anxiety corroborated Shao (2019) research conclusions regarding Chinese students' foreign language learning pressures primarily stemming from academic evaluation. These findings provided critical empirical evidence for understanding the affective factors in foreign language learning among Chinese normal university students and offered clear directions for subsequent targeted pedagogical interventions.

Discussion on the Overall Results and Variable-Based Differences in English Learning Self-Efficacy Among Students at Shandong University A

The study reveals distinct patterns in students' English learning self-efficacy across demographic variables. Most notably, a consistent downward trend emerges across academic years, with first-year students displaying the highest self-efficacy levels (Xu et al., 2023; Zhang & Chen, 2023). Practical experience proves particularly influential - students engaged in organizational or managerial activities demonstrate markedly stronger confidence, suggesting hands-on involvement builds competence beliefs (Wang et al., 2024). Interestingly, while traditional predictors show limited

effects, three factors emerge as particularly significant in modern educational contexts: (1) individual learning characteristics, (2) sustained effort investment, and (3) institutional teaching quality (Li, 2019). These findings collectively highlight the importance of creating experiential learning opportunities while adopting differentiated approaches that account for students' developmental trajectories and personal attributes.

Discussion on the Correlation Between English Learning Self-efficacy and Classroom Anxiety Among Students at Shandong A University

The data analysis revealed a significant negative correlation between English learning self-efficacy and classroom anxiety among students at Shandong A University, with this inverse relationship being consistently observed across all dimensions of both constructs. The results demonstrated that students with higher levels of self-efficacy experienced lower anxiety in foreign language classrooms. Specifically, in the "sense of ability to complete tasks" dimension, students' confidence showed moderate negative correlations with communication anxiety. The "confidence in achieving goals" dimension exhibited the most pronounced negative correlation with academic anxiety, while the "ability to cope with setbacks" dimension displayed significant negative associations with classroom anxiety.

These findings not only corroborated the core proposition of Bandura (1997) self-efficacy theory - that individuals' self-assessment of capabilities significantly influences their emotional responses in challenging situations - but also quantitatively revealed differentiated correlation patterns across various dimensions. Notably, the analysis indicated that self-efficacy could predict English classroom anxiety, providing crucial pedagogical implications: systematically enhancing students' English learning self-efficacy through approaches like creating success experiences and providing vicarious modeling might serve as effective interventions for alleviating foreign language learning anxiety.

Conclusion

Based on the hypotheses proposed in this study, after conducting questionnaire surveys and sample analysis with students from Shandong A University as participants, the following conclusions were drawn:

Conclusion 1: The data results indicated that the participants' English learning self-efficacy was at a moderate level, and their English classroom anxiety was also at a moderate level.

Conclusion 2: Significant differences were found in English learning self-efficacy among participants with different demographic backgrounds: the variable of English learning self-efficacy showed significant differences in terms of gender, grade level, and whether the participant held a student leadership position, but no significant difference was found regarding household registration status.

Conclusion 3: Significant differences were observed in English classroom anxiety among participants with different demographic backgrounds: the variable of English classroom anxiety showed significant differences in terms of gender, grade level, household registration status, and whether the participant held a student leadership position.

Conclusion 4: The analysis revealed a significant negative correlation between students' English learning self-efficacy and English classroom anxiety, meaning that higher levels of English learning self-efficacy were associated with lower levels of English classroom anxiety.

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