The Mediating Role of Autonomous Learning and Academic Resilience in the Relationship Between English Language Anxiety and Students' Performance

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DECLARATION

I hereby declare that the work presented in this thesis was conducted in full compliance with the regulations of Universiti Malaysia Sarawak (UNIMAS). Except where proper acknowledgment is given, this work is solely the effort of the author. This thesis has not been accepted for the award of any other degree and is not being **concurrently** submitted for any other academic qualification.

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ABSTRACT

With increasing academic competition in higher education, the relationship between learning anxiety and academic performance in students' learning process has attracted much attention. This study examines the relationship between learning anxiety and academic performance, focusing on the mediating roles of autonomous learning and academic resilience, using data from university students in Jinan, Shandong Province, China. A quantitative research approach was adopted, utilizing a stratified random sampling method to ensure a representative sample. Data from 384 university students in Jinan, Shandong Province, China, were analyzed using SPSS version 27. The findings indicate that learning anxiety has a significant negative impact on academic performance, while autonomous learning and academic resilience exert positive effects. Moreover, both autonomous learning and academic resilience serve as mediating factors, helping to mitigate the negative influence of anxiety on students' academic outcomes. These results highlight the importance of fostering self-directed learning habits and psychological resilience to mitigate anxiety-related challenges. The study offers insights for educators and policymakers to develop more effective strategies for enhancing students' academic success in English language learning.

Keywords: Learning anxiety, academic performance, autonomous learning, academic resilience

Peranan Pembelajaran Autonomi dan Ketahanan Akademik sebagai Mediator dalam Hubungan antara Kebimbangan Bahasa Inggeris dan Prestasi Pelajar

ABSTRAK

Dalam konteks pengajian tinggi, dengan persaingan akademik yang semakin sengit, peranan hubungan antara kebimbangan pembelajaran dan prestasi akademik dalam proses pembelajaran pelajar telah menarik perhatian ramai. Kajian ini mengkaji hubungan antara kebimbangan pembelajaran dan prestasi akademik, memfokuskan pada peranan pengantara pembelajaran autonomi dan daya tahan akademik, menggunakan data daripada pelajar universiti di Jinan, Wilayah Shandong, China. Pendekatan penyelidikan kuantitatif telah diguna pakai, menggunakan kaedah persampelan rawak berstrata untuk memastikan sampel yang representatif. Data daripada 384 pelajar universiti di Jinan, Wilayah Shandong, China, dianalisis menggunakan SPSS versi 27. Dapatan menunjukkan bahawa kebimbangan pembelajaran mempunyai kesan negatif yang signifikan terhadap prestasi akademik, manakala pembelajaran autonomi dan ketahanan akademik memberi kesan positif. Selain itu, kedua-dua pembelajaran autonomi dan ketahanan akademik berfungsi sebagai faktor pengantara, mengurangkan sebahagiannya pengaruh kebimbangan yang memudaratkan ke atas hasil akademik pelajar. Keputusan ini menyerlahkan kepentingan memupuk tabiat pembelajaran terarah kendiri dan daya tahan psikologi untuk mengurangkan cabaran berkaitan kebimbangan. Kajian ini menawarkan pandangan untuk pendidik dan penggubal dasar untuk membangunkan strategi yang lebih berkesan untuk meningkatkan kejayaan akademik pelajar dalam pembelajaran bahasa Inggeris.

Kata kunci: *Kebimbangan pembelajaran, prestasi akademik, pembelajaran autonomi, ketahanan akademik*

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LIST OF ABBREVIATIONS

CGS	Centre for Graduate Studies
UNIMAS	Universiti Malaysia Sarawak
SDGs	Sustainable Development Goals
SDT	Self-Determination Theory
ELLA	English Language Learning Anxiety
FLCAS	Foreign Language Classroom Anxiety Scale
SDLRS	Self-Directed Learning Readiness Scale
FLA	Foreign Language Anxiety Theory

CHAPTER 1:

INTRODUCTION

1.1 Introduction

This chapter introduces the basic content and framework of the research from multiple aspects. Firstly, extending from the research background to the statement of the problem, the aim is to demonstrate the necessity of this study. Next, propose the research objectives, questions, and hypotheses to lay the foundation for further research. The definition of research scope helps to facilitate smoother research. The definition of key terms makes this study clearer and more precise. Through the exposition of these contents, this chapter clearly introduces the motivation and purpose of the research, including the positioning of the research problem and a clear understanding of the overall structure of the paper.

1.2 Background of the Study

English language proficiency is increasingly essential in a globalized world, particularly within educational, professional, and social contexts. However, many learners continue to struggle with acquiring English as a second or foreign language due to various psychological and academic challenges. One of the most significant barriers is English Language Learning Anxiety (ELLA), a well-documented emotional response that disrupts learners' ability to process information, communicate effectively, and perform academically (Horwitz, Horwitz, & Cope, 1986).

1.2.1 Language Learning Anxiety as a Persistent Challenge

Language learning anxiety may manifest through communication apprehension, fear of making mistakes, test anxiety, and social anxiety (MacIntyre & Gardner, 1994). These emotional reactions negatively influence classroom participation, confidence, and academic achievement. Numerous studies have found that high levels of anxiety lead to avoidance of speaking tasks, reduced motivation, and lower assessment performance (Ma,

2020; Su, 2021; Yi et al., 2022). Despite ongoing research and pedagogical improvements, ELLA remains a significant obstacle for many learners, indicating the need to identify additional psychological factors that may help students cope more effectively.

1.2.2 Mixed Evidence on the Effects of Anxiety

Although a large body of literature highlights the detrimental effects of anxiety, research findings are **not entirely consistent**. Some studies show weak or non-significant relationships between anxiety and achievement, suggesting that anxiety does not always directly or uniformly impair students' performance. For instance, certain learners continue to perform well academically despite experiencing high levels of anxiety, possibly due to compensatory skills, coping resources, or contextual factors such as supportive learning environments. In some cases, moderate anxiety has even been associated with improved performance, indicating that the relationship may be more complex than previously assumed.

These mixed results imply that anxiety alone cannot fully explain variations in English performance, and that other internal resources may help buffer, compensate, or moderate its impact. This inconsistency in prior findings underscores the need to examine the mechanisms and conditions under which anxiety influences academic outcomes.

1.2.3 The Potential Mitigating Role of Autonomous Learning

One psychological resource that may help reduce the negative influence of anxiety is **autonomous learning**. Autonomous learners take responsibility for their learning through goal setting, self-monitoring, and strategic planning (Holec, 1981). These learners often demonstrate greater self-regulation and confidence—attributes that may counteract feelings of anxiety and enhance performance (Little, 1995; Trigueros et al., 2020). While prior research supports the role of autonomy in improving engagement and academic outcomes (Al-Kuwari et al., 2021), little is known about its role in alleviating the effects of anxiety specifically within English language learning.

1.2.4 Resilience as a Psychological Resource in Language Learning

Resilience defined as the ability to adapt positively despite stress, setbacks, or challenges may also play a protective role (Masten, 2001). In the context of language learning, resilient students are more likely to recover from mistakes, persist with challenging tasks, and maintain motivation even when anxious (Dewaele, 2013; Qian & Yu, 2023).

However, despite increasing interest in resilience within education, limited research examines how resilience interacts with language learning anxiety to predict academic performance.

1.2.5 Gap in Current Research

Existing research has predominantly focused on the direct impact of ELLA on performance, often overlooking why some anxious learners perform poorly while others manage to succeed. Given the inconsistent findings across studies, it is likely that additional psychological factors shape how anxiety influences academic outcomes. Yet, few studies have examined the potential mediating roles of autonomous learning and resilience, and even fewer have explored these constructs together within a single model.

Understanding these mediating effects is essential to explain the variability in students' performance and to identify which learners may be more vulnerable to anxiety-related difficulties.

1.2.6 Purpose of the Current Study

To address this gap, this study investigates:

- The effect of English Language Learning Anxiety on students' academic performance.
- The role of autonomous learning in enhancing language learning outcomes.
- The influence of resilience in mitigating the negative effects of anxiety.

By examining these relationships simultaneously, this study provides a more comprehensive understanding of how psychological and behavioural factors shape language learning outcomes. The findings aim to inform educators, curriculum developers, and policymakers in designing targeted interventions that support students in overcoming the emotional and cognitive barriers associated with learning English.

1.3 Problem Statements

English language proficiency is essential for academic success and future career opportunities. Yet, many students continue to struggle with English Language Learning Anxiety (ELLA), a psychological barrier that reduces learners' willingness to communicate, restricts practice opportunities, and negatively affects academic performance (Ahmad Al-

Khotaba et al., 2020; Aydin et al., 2020). Anxiety also contributes to cognitive overload, self-doubt, and avoidance behaviours, all of which hinder the acquisition and retention of linguistic skills (Trigueros et al., 2020). Despite persistent efforts to enhance English language instruction, anxiety remains a significant obstacle in language classrooms.

Research consistently shows that higher levels of language learning anxiety are associated with poorer academic outcomes (Awadalla et al., 2020; Fitri et al., 2021; Tai et al., 2022; Von der Embse et al., 2018). However, findings across studies are not entirely consistent. Some research reports weak or non-significant associations (Liew et al., 2021; Vitasari et al., 2010), while others indicate that students experiencing anxiety may still achieve academically under certain conditions, such as adequate sleep or coping resources (Zhang et al., 2021). These inconsistencies highlight the possibility that other psychological or behavioral factors may influence buffer, mediate, or modify the relationship between anxiety and academic performance.

Two such factors are autonomous learning and resilience. Autonomous learning, characterized by self-directed learning strategies, goal setting, and independent study habits (Little, 1995), has been shown to enhance engagement and academic achievement. Likewise, resilience enables learners to cope with setbacks, manage stress, and sustain motivation (Dewaele, 2013). Prior studies have demonstrated mediating effects of autonomous learning (Liu et al., 2021; Chen, 2023; Paumier & Chanal, 2023) and resilience (Qian & Yu, 2023; Liu et al., 2023; Seçer & Ulaş, 2020) in various academic contexts, but their roles specifically within English language learning anxiety have been underexplored.

The existing literature largely focuses on the direct impact of language anxiety on performance, with insufficient attention given to the underlying mechanisms or indirect pathways through which performance may be enhanced or protected. Few studies have examined whether autonomous learning and resilience mediate the relationship between ELLA and academic performance, and even fewer have investigated these mediators together within a single framework.

Therefore, the core problem is two-fold:

1. The relationship between English language learning anxiety and academic performance remains inconclusive due to inconsistent empirical findings.

2. There is limited research examining whether autonomous learning and resilience explain (mediate) how anxiety influences academic performance among English language learners.

Addressing this gap is crucial for identifying effective psychological and instructional interventions. Thus, this study seeks to examine not only the direct effects of English language learning anxiety on students' performance but also the mediating roles of autonomous learning and resilience in this relationship.

1.4 Objectives of Study

The main objective of this study is to examine the relationships among English Language Learning Anxiety (ELLA), autonomous learning, resilience, and academic performance, and to determine whether autonomous learning and resilience mediate the relationship between ELLA and academic performance. The specific objectives are:

i. To examine the relationship between English language learning anxiety and students' academic performance.
ii. To examine the relationship between autonomous learning and students' academic performance in English language learning.
iii. To examine the relationship between academic resilience and English language learning anxiety.
v. To determine whether autonomous learning mediates the relationship between English language learning anxiety and students' academic performance.
v. To determine whether academic resilience mediates the relationship between English language learning anxiety and students' academic performance.

1.5 Research Questions

i. What is the relationship between English language learning anxiety and students' academic performance?
ii. What is the relationship between autonomous learning and students' academic performance in English language learning?
iii. What is the relationship between academic resilience and English language learning anxiety?
iv. Does autonomous learning mediate the relationship between English language learning anxiety and students' academic performance?

v. Does academic resilience mediate the relationship between English language learning anxiety and students' academic performance?

1.6 Research Hypotheses

H1: There is a significant relationship between English language learning anxiety and students' academic performance.

H2: There is a significant relationship between autonomous learning and students' academic performance in English language learning.

H3: Autonomous learning mediates the relationship between English language learning anxiety and students' academic performance.

H4: There is a significant relationship between academic resilience and English language learning anxiety.

H5: Academic resilience mediates the relationship between English language learning anxiety and students' academic performance.

1.7 Significance of Study

This study holds significant academic and practical value by exploring the intricate relationships between English language learning anxiety, autonomous learning, resilience, and academic performance. By examining these relationships, the study not only advances theoretical frameworks in second language acquisition but also provides practical recommendations for educators, policymakers, and students. The findings can contribute to reducing the negative effects of language anxiety and promoting more effective language learning strategies.

1.7.1 Theoretical Contribution

This study expands the Foreign Language Anxiety Theory (Horwitz, Horwitz, & Cope, 1986) by integrating autonomous learning and resilience as key mediating factors, offering a more comprehensive understanding of how students navigate language learning anxiety. While previous research has primarily focused on the direct impact of anxiety on language performance, this study provides a nuanced perspective by examining how students' ability to regulate their own learning and adapt to challenges influences their

academic outcomes. By identifying these mediating roles, the research contributes to the theoretical framework of language learning anxiety and broadens its applicability in diverse educational contexts.

Furthermore, this study provides empirical evidence to inform targeted interventions aimed at reducing language learning anxiety and improving student performance. By highlighting the significance of autonomous learning and resilience, the findings can guide educators in designing instructional strategies that foster self-regulated learning and emotional adaptability (Khan, Ali & Alourani, 2022; Liu & Han, 2022). This research not only validates existing theories but also offers practical recommendations for curriculum development, teacher training, and student support programs, ultimately enhancing the effectiveness of language education.

1.7.2 Practical Implications

This study offers valuable insights for educators in designing language-learning environments that foster autonomous learning and emotional resilience. By demonstrating the mediating roles of autonomous learning and resilience in mitigating language learning anxiety, the findings can guide teachers in implementing instructional strategies that encourage goal-setting, self-monitoring, and adaptive coping mechanisms (Liu et al., 2021). This can lead to the development of more student-centered classrooms where learners feel empowered to take control of their language acquisition process, ultimately improving their academic performance and overall language proficiency (Nesaratnam et al., 2020).

Additionally, the study has implications for language education policy by emphasizing the critical role of psychological well-being in academic success. Policymakers can use these findings to advocate for curriculum reforms that integrate psychological support, such as stress management training and resilience-building activities, into language programs. By addressing both cognitive and emotional aspects of learning, institutions can create a more supportive educational framework that enhances student engagement and long-term achievement in foreign language acquisition.

1.7.3 Student Benefits

This study empowers students by promoting self-regulated learning, helping them become more independent in their language acquisition process. By understanding the role of autonomous learning, students can develop effective goal-setting, progress-monitoring, and strategy-application skills, reducing their reliance on teachers for guidance (Paumier &

Chanal, 2023). This fosters a sense of ownership over their learning journey, making them more proactive and confident in improving their English language performance.

Moreover, the research equips students with practical coping strategies to manage language learning anxiety, enhancing their emotional resilience. By recognizing the impact of anxiety on their academic performance and learning how to regulate their emotions, students can develop a more positive attitude toward language learning (Qian & Yu, 2023). These skills not only improve their ability to handle language-related challenges but also contribute to their overall academic success and personal growth in other learning contexts.

1.8 Scope and Limitations

This study focuses on undergraduate students learning English as a second language (ESL) within higher education institutions. The scope is limited to learners enrolled in English language courses, and the investigation is centered on three core variables: English Language Learning Anxiety, Autonomous Learning, and Resilience. The study aims to examine how these factors interact to influence students' academic performance in English.

Despite its contributions, several limitations should be acknowledged. First, the study relies on self-reported data gathered through questionnaires, which may be influenced by response bias or social desirability. Participants may not always accurately reflect their true levels of anxiety, autonomy, or resilience.

Second, the study is conducted within a specific ESL context involving higher education learners, which may limit the generalizability of the findings. Results may differ in primary or secondary school settings, in non-academic learning environments, or among learners from different cultural or linguistic backgrounds.

Third, the study focuses primarily on academic performance as the learning outcome, rather than on long-term language proficiency or real-world communicative competence. This narrower focus may not capture all aspects of successful English language acquisition.

These limitations are acknowledged here to clarify the boundaries of the current investigation. A more detailed discussion of the study's limitations—including their implications and recommendations for future research—will be provided in Chapter 5 of this thesis.

1.9 Definition of Key Terms

1.9.1 English Language Learning Anxiety

Conceptual Definition: English language learning anxiety (ELLA) refers to the feelings of tension, apprehension, and nervousness experienced by learners when engaging in English language-related tasks, particularly in classroom settings (Horwitz, 2001). It is a form of situation-specific anxiety distinct from general anxiety and can negatively affect language acquisition, performance, and self-efficacy (MacIntyre & Gardner, 1994).

Operational Definition: In this study, English Language Learning Anxiety (ELLA) is assessed using the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz, Horwitz and Cope (1986), along with adaptations based on Ali (2017). The measurement encompasses students' anxiety levels across four language skills: listening, speaking, reading and writing, considering key dimensions such as communication apprehension, fear of negative evaluation and test anxiety in English learning contexts.

1.9.2 Students' Performance in English Language Learning

Conceptual Definition: Students' performance in English language learning refers to their proficiency and achievement levels in reading, writing, listening, and speaking skills. Performance is often influenced by cognitive, affective, and motivational factors, including anxiety and self-efficacy (Dörnyei, 2005).

Operational Definition: For this study, students' English learning performance is assessed based on listening, speaking, reading and writing skills, using questionnaire developed by Eslit and Michael (2023), along with self-reported measures of language proficiency and fluency.

1.9.3 Autonomous Learning

Conceptual Definition: Autonomous learning refers to a learner's ability to take responsibility for their own learning, including setting goals, selecting learning strategies, and evaluating progress without excessive reliance on instructors (Holec, 1981). It is closely linked to self-regulated learning and metacognitive awareness (Little, 1995).

Operational Definition: In this study, autonomous learning is assessed using the Self-Directed Learning Readiness Scale (SDLRS) (Fisher, King and Tague, 2001) and the questionnaire by Macaskill and Taylor (2010), which measures students' ability to self-direct their learning, utilize independent learning strategies, and manage their learning experiences outside the classroom.

1.9.4 Academic Resilience

Conceptual Definition: Resilience is defined as an individual's ability to adapt positively to adversity, challenges, and stressors, maintaining psychological well-being and continuing to strive toward personal and academic goals (Masten, 2001). In educational contexts, resilience enables students to cope with academic pressures and overcome learning difficulties, including anxiety-related barriers (Dewaele, 2013).

Operational Definition: For this study, resilience is measured using the Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003) and Martin & Marsh (2006), which evaluates students' ability to recover from setbacks, stay motivated despite challenges, and persist in language learning despite experiencing anxiety.

1.10 Organization of Thesis

This study is structured into five chapters, each designed to address specific aspects of the research process and contribute to the overall understanding of the research problem.

Chapter 1 serves as the foundation of the thesis, introducing the research problem, its background, and its significance. It outlines the research objectives, questions, and hypotheses derived from the identified problem statement. Additionally, this chapter establishes the conceptual framework and provides clear definitions of the key variables language learning anxiety, autonomous learning, and resilience thereby setting the stage for the subsequent investigation.

Chapter 2 presents a comprehensive literature review, synthesizing existing research on the three core variables: language anxiety, autonomous learning, and resilience. By critically analyzing prior studies, this chapter identifies gaps in the literature and establishes the theoretical basis for the research. It also elaborates on the conceptual framework, highlighting the relationships between the variables and their relevance to the study's objectives.

Chapter 3 details the research methodology, offering a thorough explanation of the research design, data collection methods, and analytical procedures. It describes the study population, sampling techniques, and the instruments used to measure the variables. This chapter ensures transparency and reproducibility by providing a clear roadmap of how the research was conducted.

Chapter 4 presents and discusses the findings of the study. It includes a detailed analysis of the collected data, focusing on the characteristics of the study population and the validation of the research hypotheses. This chapter also interprets the results, highlighting their implications for theory and practice, and situates the findings within the broader context of existing literature.

Chapter 5 concludes the thesis by summarizing the key findings and their contributions to both theoretical understanding and practical applications in the field of English language learning. It also addresses the limitations of the study and provides recommendations for future research directions, offering insights into how the findings can be expanded or refined in subsequent investigations.

CHAPTER 2:

LITERATURE REVIEWS

2.1 Introduction

This chapter provides a comprehensive review of the existing literature on ELLA, its impact on students' academic performance, and the roles of autonomous learning and resilience in mitigating its effects. It begins by establishing the theoretical foundations relevant to the key constructs of language learning anxiety, autonomous learning, and resilience, drawing on established psychological and educational theories. The chapter then synthesizes empirical research that explores the relationship between ELLA and academic performance, highlighting consistent findings and areas of divergence. Furthermore, it examines the potential of autonomous learning and resilience as mitigating factors in language learning, emphasizing their roles in reducing the negative effects of anxiety. A conceptual framework is presented to elucidate the mechanisms through which anxiety influences performance and how resilience and autonomy serve as moderating variables. Finally, the chapter identifies critical research gaps in the literature, which justify the need for the current study and provide a foundation for its objectives and hypotheses.

2.2 Theoretical Framework

This study is grounded in several key theories that explain the impact of anxiety on language learning and how autonomous learning and resilience help in overcoming it.

2.2.1 Foreign Language Anxiety Theory

The most relevant theoretical framework for this study is Foreign Language Anxiety Theory (FLA) proposed by Horwitz et al. (1986). This theory offers a comprehensive explanation of how language learning anxiety impacts students' performance and aligns closely with the study's focus on autonomous learning and resilience as moderating factors. Horwitz et al. (1986) define FLA as a distinct and situation-specific form of anxiety related to the process of acquiring and using a second language (L2). Unlike general anxiety, FLA

is uniquely tied to the challenges of language learning and manifests in three primary components: communication apprehension, fear of negative evaluation, and test anxiety (Akaraphattanawong, Hongsiriwat & Methakunavudhi, 2024). Communication apprehension refers to the fear of speaking and engaging in conversations in the target language, while fear of negative evaluation involves anxiety about being judged by peers or instructors for making mistakes (Mitchell, 2024). Test anxiety, on the other hand, is characterized by worry about language assessments and performance in exams (Akaraphattanawong et al., 2024). These components collectively contribute to a debilitating effect on students' ability to perform well in language learning, often leading to avoidance behaviors, reduced participation, and diminished confidence.

Horwitz et al. (1986) further elaborate on how FLA negatively affects students' performance. Language learners experiencing anxiety are more likely to avoid participating in speaking activities, which limits their opportunities to practice and improve their language skills. Additionally, anxiety can impair cognitive functions, making it difficult for students to process and retrieve language information effectively (Qian & Yu, 2023). This cognitive overload reduces their ability to learn efficiently and retain new knowledge. Moreover, FLA often leads to low self-efficacy and confidence, creating a self-reinforcing cycle of poor performance and heightened anxiety (Su, 2021).

By integrating Foreign Language Anxiety Theory with theories of autonomous learning and resilience, this study aims to provide a holistic understanding of the interplay between anxiety, self-regulation, and academic success in language learning contexts. This theoretical framework not only highlights the challenges posed by FLA but also offers insights into potential strategies for mitigating its effects, thereby contributing to both theoretical and practical advancements in the field of second language acquisition.

2.2.2 Self-Determination Theory

The theoretical framework of this study is further enriched by Self-Determination Theory (SDT), a psychological theory developed by Deci and Ryan (2022) that explains how motivation influences behavior and performance. SDT states that fulfilling three basic psychological needs, autonomy, relevance, and competence, enhances intrinsic motivation and mental health (Vasconcellos et al., 2020). The theory originated in the 1980s, with foundational work by Miller et al. (1988), and has since evolved to encompass a broader understanding of how these psychological needs interact to shape human behavior (Dunn & Zimmer, 2020). In the context of this study, SDT provides a valuable lens for examining

the relationship between language learning anxiety and English language performance, particularly in terms of how intrinsic motivation and psychological needs influence students' responses to anxiety and their academic outcomes.

From an SDT perspective, autonomy, the sense of control over one's actions, mitigates FLA's negative effects. When students perceive themselves as autonomous learners, they are more likely to engage in self-regulated learning behaviors, such as setting goals, employing effective strategies, and practicing independently (Little, 1995; Holec, 1981). This sense of autonomy not only reduces dependence on external validation but also fosters greater confidence and intrinsic motivation, which can buffer the impact of anxiety. For example, students who feel autonomous are less likely to experience the fear of negative evaluation, a key component of FLA, as they are more focused on their personal learning goals rather than external judgments.

Additionally, SDT's emphasis on competence, the need to feel effective in one's actions, aligns with the study's focus on resilience. When students perceive themselves as competent, they are better equipped to employ problem-focused coping strategies, such as seeking resources or practicing specific skills, to address language learning challenges (Masten, 2001). This sense of competence enhances their ability to persist despite setbacks, thereby reducing the effects of anxiety on performance.

Furthermore, SDT's concept of relevance, the need to find meaning and purpose in one's actions, offers insight into how students cope with language learning anxiety. When students perceive their language learning as relevant to their personal goals or interests, they are more likely to remain motivated and engaged, even in the face of anxiety (Fang & Tang, 2021). This intrinsic motivation, driven by the fulfillment of psychological needs, helps students manage stress and maintain focus on their learning objectives. Emotion-focused coping strategies, such as reframing negative thoughts or practicing mindfulness, can be more effective when students feel a strong sense of relevance in their language learning journey.

In summary, Self-Determination Theory offers a robust framework for exploring the interplay between language learning anxiety, autonomous learning, and resilience. This study examines how fulfilling psychological needs such as autonomy, competence, and relevance enhances intrinsic motivation and reduces anxiety, providing theoretical and practical insights to improve language learners' academic performance. This integration of SDT with Foreign Language Anxiety Theory and resilience theory not only deepens the

understanding of the factors influencing language learning but also highlights potential strategies for fostering motivation and resilience in educational contexts.

2.2.3 Cognitive Theory of Stress and Coping

The Cognitive Theory of Stress and Coping provides a foundational framework for understanding how individuals manage stress, including academic anxiety. This theory identifies two primary coping strategies: problem-focused coping, which involves addressing the root cause of stress through active measures such as adopting effective learning strategies, and emotion-focused coping, which focuses on managing emotional responses to stress, such as building resilience to handle anxiety (Lazarus & Folkman, 1984). These strategies are particularly relevant in the context of language learning, where students often face significant anxiety related to communication, evaluation, and performance (Pakmehr, Yazdanpanah & Baradaran, 2021). By employing problem-focused coping, students can tackle language learning challenges directly, while emotion-focused coping helps them regulate their emotional responses, thereby reducing the effects of anxiety.

In the context of this study, the Cognitive Theory of Stress and Coping is highly relevant as it helps explain how resilient students manage language learning anxiety through adaptive coping mechanisms. Resilient students are more likely to use problem-focused coping strategies, such as seeking additional resources or practicing specific language skills, to address the root causes of their anxiety (Ramadianto et al., 2022). Simultaneously, they employ emotion-focused coping strategies, such as mindfulness or reframing negative thoughts, to manage their emotional reactions to stress (Sharma & Gupta, 2023). This dual approach not only mitigates the immediate effects of anxiety but also enhances students' ability to persist in their language learning efforts (Lazarus & Folkman, 1984). By integrating this theory into the study's framework, the research aims to provide a deeper understanding of how resilience and coping strategies can buffer the negative impact of language learning anxiety, ultimately contributing to improved academic performance.

2.2.4 Krashen's Affective Filter Hypothesis

Krashen (1982) proposed the Affective Filter Hypothesis, stating that emotional factors (e.g., anxiety, motivation, and confidence) influence language acquisition. A high affective filter blocks language learning, while a low affective filter enhances it. Conversely,

a low affective filter, facilitated by positive emotional states, enhances language acquisition by making learners more receptive to input. This theory underscores the importance of creating a supportive learning environment that minimizes anxiety and fosters motivation and confidence, thereby lowering the affective filter and promoting successful language learning.

In the context of this study, Krashen's Affective Filter Hypothesis is highly relevant as it supports the idea that resilience can lower the affective filter, reducing anxiety and enhancing students' receptiveness to language learning. Resilient students are better equipped to manage stress and maintain a positive emotional state, which helps lower their affective filter (Permatasari, Ashari & Ismail, 2021). This, in turn, enables them to process and retain language input more effectively. By integrating this hypothesis into the study's framework, the research highlights the role of resilience in creating optimal conditions for language acquisition, thereby contributing to a deeper understanding of how emotional factors influence academic performance in language learning contexts.

2.3 English Language Learning Anxiety

2.3.1 Definition and Types of Language Anxiety

English Language Learning Anxiety (ELLA) is a situation-specific form of anxiety that involves negative emotional reactions, such as fear, worry, and tension, that interfere with language comprehension, communication, and learning performance (Horwitz et al., 1986). These reactions typically emerge when learners must use English in public or evaluative situations, such as speaking in class, answering questions, or completing writing tasks (Ramadianto et al., 2022).

Unlike general anxiety, ELLA is closely tied to the unique cognitive and social demands of learning a foreign or second language (Fang & Tang, 2021). This distinction is supported by the Affective Filter Hypothesis (Krashen, 1985), which explains that anxiety can "raise the affective filter," preventing learners from absorbing and producing language effectively. This theory directly supports the study's first research question by clarifying why anxiety reduces academic performance.

ELLA includes several types (Horwitz et al., 1986):

- Trait Anxiety – A stable tendency to experience anxiety across situations. Students with high trait anxiety are more vulnerable to ELLA regardless of context.

- State Anxiety – A temporary emotional reaction triggered by specific tasks, such as oral presentations or tests (Mitchell, 2024). This often aligns with academic assessments.

- Situational Anxiety – Anxiety tied to recurring contexts, such as classroom interactions or group activities (MacIntyre & Gardner, 1991).

Understanding these distinctions allows educators to tailor interventions based on whether anxiety stems from personality, specific activities, or repeated classroom contexts.

2.3.2 Causes of English Language Learning Anxiety

Several interrelated factors contribute to ELLA. Importantly, many of these causes *interact* with students' levels of autonomy and resilience.

2.3.2.1 Fear of Mistakes and Negative Evaluation

Students often fear being judged by peers or instructors, especially during speaking tasks (Horwitz et al., 1986). This fear leads to avoidance and reluctance to participate (Alami, 2025).

Interaction with other constructs:

- Students with higher autonomy are more willing to take risks, reducing fear.
- Students with higher resilience recover more quickly from mistakes.

2.3.2.2 Rigid Classroom Environments

Highly structured or teacher-dominated classrooms increase anxiety by limiting experimentation (MacIntyre & Gardner, 1991). Environments emphasizing grammatical accuracy over communication can intensify stress (Humphreys, 2023).

Interaction:

- Autonomy-supportive classrooms lower anxiety (Cao & Yu, 2023).
- Resilient students cope better in restrictive environments but still benefit from supportive pedagogy.

2.3.2.3 Low Self-Confidence and Self-Efficacy

Low language self-efficacy strongly predicts anxiety (Wang & Sun, 2022). According to Social Cognitive Theory (Bandura, 1997), students with high self-efficacy manage stress more effectively.

Interaction:

- Autonomy enhances self-efficacy through mastery experiences.
- Resilience strengthens emotional regulation, protecting performance.

2.3.2.4 High Academic Pressure

External expectations (grades, parental pressure) heighten anxiety (Leo, 2023).

Interaction:

- Autonomously motivated students use intrinsic goals, reducing pressure.
- Resilient students maintain well-being under academic stress.

These causes show that anxiety does not operate alone; its impact depends on learners' psychological resources, precisely what this study examines.

2.3.3 Effects of Anxiety on Academic Performance

ELLA affects performance through emotional, cognitive, and behavioural pathways. These effects align with the Cognitive Stress Theory, which explains how stress impairs working memory and mental processing.

2.3.3.1 Reduced Participation and Avoidance

Anxious learners often avoid speaking or participating, limiting practice (Dewaele & Dewaele.2020).

Interaction:

- Autonomous learners participate more because they regulate their learning goals.
- Resilient learners tolerate discomfort and remain engaged.

2.3.3.2 Poor Oral and Written Assessment Performance

Anxiety disrupts attention, memory, and language retrieval (Humphreys, 2023). Theoretical link: This supports the first research question by explaining why high anxiety may predict lower academic performance.

2.3.3.3 Long-Term Skill Stagnation

Avoidance behaviors restrict language exposure (Alami, 2025).

Interaction:

- Autonomy encourages practice beyond the classroom.
- Resilience maintains motivation despite setbacks.

Taken together, these effects highlight that anxiety has both immediate and cumulative consequences, but these can be mitigated by other psychological strengths.

2.3.4 Measuring Language Learning Anxiety

This study adapts the Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz et al., 1986) with improvements guided by Ali (2017). Items were refined for clarity, reduced for redundancy, and distributed evenly across the four major skill domains.

This measurement aligns with the study's first research question by enabling a reliable assessment of anxiety levels and their relationship to academic performance.

2.4 Autonomous Learning in Language Acquisition

2.4.1 Definition and Characteristics of Autonomous Learning

Autonomous learning refers to learners' ability to manage and regulate their own learning (Holec, 1981). This concept aligns with Self-Determination Theory (SDT), which states that autonomy, competence, and relatedness increase intrinsic motivation—critical for language learning.

Key characteristics include:

- Self-regulation (Arefian, 2022)

- Goal setting and planning
- Strategy use (Oxford, 1990)
- Independent learning habits

In English learning, autonomy enables students to personalize study methods, enhancing engagement and proficiency (Padmadew et al., 2020). Autonomous learning is a potential mediator that explains *how* anxiety affects performance, for example: An anxious student may perform poorly unless they possess autonomous strategies that help them regulate stress and continue practicing.

2.4.2 How Autonomous Learning Reduces Anxiety

Autonomy fosters self-efficacy and confidence (Bandura & Wessels, 1997). When learners set goals, choose methods, and monitor progress, they feel more in control reducing emotional distress. Autonomy also promotes:

- Personalized strategies, reducing frustration
- Independence, lowering reliance on teacher approval
- Mastery experiences, which reduce fear of mistakes (All contributing to lower anxiety)
- Autonomy and resilience often work together
- Autonomy provides strategies
- Resilience provides emotional stability

This dual relationship justifies the inclusion of both constructs in the mediation model of this study.

2.5 Resilience and Coping Strategies in Language Learning

2.5.1 Definition of Resilience

Resilience is the capacity to adapt and thrive despite challenges (Masten, 2001). It is dynamic, shaped by internal and external factors (Zhang, 2019). Resilience aligns with Cognitive Stress Theory and Growth Mindset Theory:

- It buffers the cognitive effects of anxiety.
- It promotes persistence despite repeated errors, a common feature in language learning.

2.5.2 How Resilience Helps in Language Learning

Resilience supports language learning in two major ways:

- **Persistence and Motivation**

Resilient learners remain committed even when progress is slow or mistakes occur (Ataii et al., 2021). For example: A student who performs poorly in a speaking test continues practicing instead of withdrawing.

- **Emotional Regulation**

Resilient learners manage anxiety more effectively, preventing emotional overload (Chan et al., 2021). They also perceive mistakes as part of learning (growth mindset), reducing avoidance. This provides strong justification for resilience as a mediator in the relationship between anxiety and performance.

2.6 Theoretical Framework

This study is grounded in three complementary theoretical perspectives that explain how psychological factors influence language learning outcomes: Foreign Language Anxiety Theory, Self-Determination Theory, and Resilience Theory. Together, these theories inform the study's hypothesised relationships and the mediating role of autonomous learning and academic resilience.

2.6.1 Foreign Language Anxiety Theory (Horwitz et al., 1986)

Foreign Language Anxiety Theory posits that anxiety specific to language learning situations interferes with learners' cognitive processing, reducing working memory efficiency, impairing participation, and limiting performance. According to this theory:

- Higher anxiety leads to lower academic performance because anxious learners avoid participation, fear negative evaluation, and perform poorly in high-pressure situations.
- In the context of this study, ELLA is theorised to directly reduce English academic performance, forming the basis for the study's first hypothesis.

This theory supports the pathway:

ELLA → Academic Performance (negative relationship)

2.6.2 Self-Determination Theory (Deci & Ryan, 1985)

Self-Determination Theory explains how autonomy, competence, and intrinsic motivation drive effective learning.

- Autonomous learners set goals, regulate their progress, and employ metacognitive strategies that improve performance.
- SDT posits that autonomy helps individuals manage stress and anxiety because they have better control over their learning processes.

Thus, SDT supports the idea that:

- Autonomous learning improves academic performance.
- Autonomous learning reduces the negative effect of anxiety by strengthening motivation, self-efficacy, and emotional regulation.

This theory supports the mediating pathway:

ELLA → Autonomous Learning → Academic Performance

2.6.3 Resilience Theory (Masten, 2001)

Resilience Theory describes resilience as the ability to adapt positively despite stress or adversity.

- Learners with high resilience respond to anxiety with adaptive coping, perseverance, and emotional regulation.
- Such learners maintain engagement and performance even when faced with anxiety-provoking language tasks.

Thus, resilience is theorized to:

- Improve academic performance, regardless of stress.
- Mitigate (mediate) the negative effect of anxiety by enabling coping mechanisms.

This theory supports the mediating pathway:

ELLA → Academic Resilience → Academic Performance

2.7 Conceptual Framework

The conceptual framework integrates the above theories and demonstrates how ELLA influences Academic Performance both directly and indirectly through two mediators: Autonomous Learning and Academic Resilience.

2.7.1 Core Relationships in the Framework

This study proposes a conceptual framework that examines both the direct and indirect pathways through which ELLA influences students' academic performance. The framework draws upon Foreign Language Anxiety Theory, Self-Determination Theory (SDT), and Resilience Theory to explain the complex mechanisms that operate between anxiety, autonomous learning, and academic resilience.

2.7.2 Direct Effect: ELLA → Academic Performance

Foreign Language Anxiety Theory (Horwitz et al., 1986) posits that anxiety in language learning situations typically interferes with cognitive processing, attention span, and working memory. When learners experience heightened anxiety, they are more prone to fear of negative evaluation, self-doubt, and emotional discomfort, which subsequently impairs their ability to comprehend, process, and use the target language effectively.

Thus, consistent with past empirical evidence, the framework proposes a direct negative effect of ELLA on academic performance. Higher anxiety levels are expected to result in:

- Lower participation in language tasks,
- Hesitation to speak or write in English, and
- Difficulty retaining language content due to cognitive overload.

Therefore, ELLA is hypothesized to have an immediate detrimental impact on students' English academic achievement.

2.7.3 Indirect Effects (Mediating Pathways)

To better understand the mechanisms underlying this relationship, the study incorporates two mediators, autonomous learning and academic resilience, which are theoretically grounded in SDT and Resilience Theory respectively. These mediators help explain *how* and *why* anxiety affects performance.

Path 1: Mediation by Autonomous Learning (SDT-Based)

Pathway: ELLA → Autonomous Learning → Academic Performance

Self-Determination Theory asserts that learners require autonomy, manifested through self-confidence, self-regulation, and intrinsic motivation, to sustain effective learning behaviours. However, ELLA tends to undermine these components.

Mechanism of Influence

- **Impact on Confidence and Self-Regulation**

- High anxiety reduces learners' self-confidence, making them doubt their ability to perform English tasks. This psychological threat interrupts self-regulatory processes, including goal setting, planning, and monitoring.

- **Reduced Sense of Autonomy**

- Learners experiencing anxiety often rely on external prompts or passive strategies because they feel incapable of taking control of their learning. This results in:
  - Lower intrinsic motivation,

- Avoidance of practice opportunities,
- Minimal risk-taking in language use.

- **Consequences for Strategy Use and Engagement**

- Without autonomy, students struggle to use effective learning strategies such as self-practice, metacognitive monitoring, or independent reading. Their overall engagement declines, which directly affects performance outcomes.

Mediating Role

Because autonomous learning is essential for sustained academic success, its reduction becomes a key explanatory factor for why anxious learners perform poorly. Thus, autonomous learning is hypothesized to partially mediate the relationship between ELLA and academic performance—meaning anxiety lowers autonomy, which in turn weakens performance.

Path 2: Mediation by Academic Resilience (Resilience Theory-Based)

Pathway: ELLA → Academic Resilience → Academic Performance

Resilience Theory describes academic resilience as a learner's capacity to adapt positively in the face of academic challenges, setbacks, or stressors. ELLA, being an emotional stressor, can interfere with such adaptive processes.

Mechanism of Influence

- **Emotional Responses Triggered by Anxiety**

- When anxiety levels rise, students often experience fear, frustration, and a sense of helplessness. These emotions reduce persistence, lower frustration tolerance, and weaken their ability to rebound from mistakes.

- **Disruption of Coping and Adaptation Processes**

- Anxious learners may:

  - Avoid difficult tasks instead of confronting them,
  - Give up quickly when encountering language difficulties,
  - Interpret minor challenges as major threats.

This emotional vulnerability diminishes their academic resilience.

- **Impact on Academic Achievement**

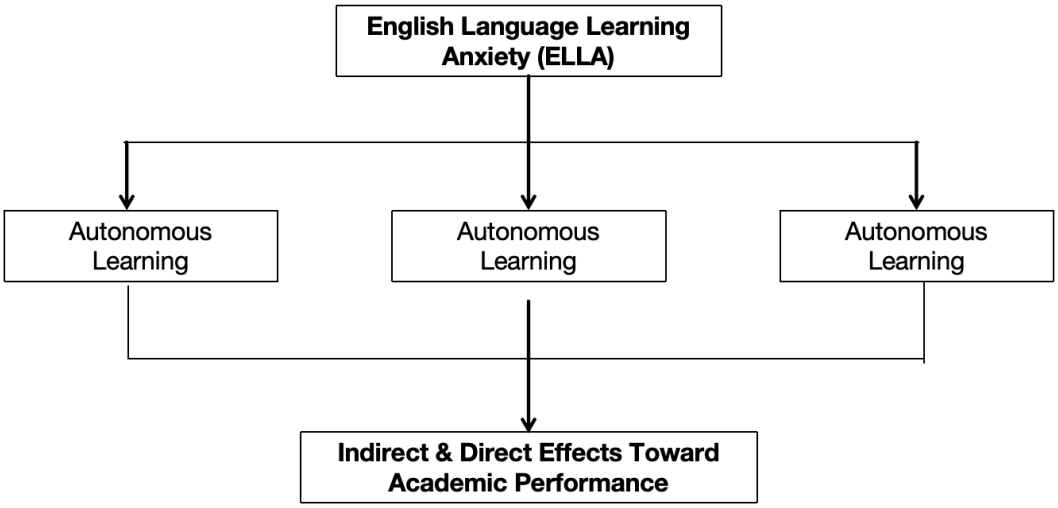
  - Students with low resilience struggle to:
    - Maintain consistent effort when tasks become complex,
    - Recover from poor test performance,
    - Sustain motivation over time.

  Consequently, their academic performance suffers.

Mediating Role

Academic resilience is proposed as another mediator explaining how ELLA affects performance. Anxiety weakens resilience, and reduced resilience leads to poorer learning outcomes. Thus, resilience **mediates** the emotional and motivational pathway between anxiety and achievement.

Figure 2-1:
Conceptual Framework of the Study



2.7.4 How the Conceptual Framework Works

The conceptual framework illustrates how ELLA influences academic performance, and how **autonomous learning** and **resilience** serve as moderating variables that can weaken or buffer this negative effect. The underlying assumption is that anxiety impairs performance, but certain psychological resources can help students manage or overcome these barriers.

2.7.4.1 Core Relationship: ELLA → Academic Performance

ELLA negatively affects students' academic performance through emotional, cognitive, and behavioral mechanisms. Anxious learners may:

- avoid speaking or participating in class (avoidance behavior)
- struggle to process new information due to cognitive overload
- experience fear of mistakes, which reduces willingness to practice
- lose confidence, which reduces motivation and participation

For example, a student who becomes anxious before oral presentations may avoid speaking opportunities, limiting practice and ultimately lowering fluency and assessment performance (Horwitz et al., 1986; MacIntyre & Gardner, 1994). Thus, ELLA is expected to correlate negatively with academic performance.

2.7.4.2 Moderating Role of Autonomous Learning

Autonomous learning helps reduce the negative impact of anxiety by providing self-regulatory tools that give students greater control over their learning process. This reduces feelings of helplessness, one of the primary triggers of anxiety. Autonomous learners regulate their emotions and actions through:

- **Goal Setting**
  - Breaking large tasks into smaller goals replaces anxiety with a sense of direction.
  - Example: A student anxious about speaking in class sets a goal to answer one simple question per week. The small achievement reduces fear over time.
- **Self-Regulated Learning Strategies**
  - Planning, monitoring, and evaluating learning progress builds control and reduces uncertainty, two major sources of anxiety.
  - Example: An anxious learner uses online pronunciation tools to practise privately before speaking in class.
  -

- **Self-Pacing and Flexible Learning**
    - Students learn at their own pace, reducing pressure from time-constrained, teacher-centered tasks.
    - Example: Using apps like Duolingo or online videos allows repeated practice without fear of embarrassment.
- **Strategic Use of Resources**
    - Independent learners seek help when needed (peers, apps, videos, forums), reducing confusion that often leads to anxiety.

When anxious students have autonomous skills:

- They remain engaged even when anxious
- They take proactive steps to overcome weaknesses
- They transform anxiety into manageable tasks

Thus, autonomous learning weakens the negative effect of ELLA on performance by providing behavioral strategies that counteract emotional interference.

2.7.4.3 Moderating Role of Resilience

Resilience strengthens students' ability to emotionally cope, adapt to difficulty, and persist despite setbacks, providing the emotional foundation needed to manage anxiety's effects. Below are the key resilience skills relevant to the framework:

- **Emotional Regulation**
    - Resilient learners control emotional responses, preventing anxiety from escalating.
    - Example: A student practices deep breathing before oral presentations, reducing panic.
- **Adaptive Coping Strategies**
    - Using problem-focused and emotion-focused coping reduces stress.
    - Example: A student who fails a quiz reviews errors instead of giving up.
- **Persistence and Grit**
    - Resilient learners continue practising even when progress is slow.
    - Example: A learner keeps practising pronunciation despite embarrassment.

- **Cognitive Reframing (Growth Mindset)**
    - Seeing mistakes as learning opportunities instead of personal flaws reduces fear of failure.
    - Example: Viewing incorrect grammar as part of learning rather than a "shameful mistake."
- **Seeking Social Support**
    - Resilient students ask for help rather than withdrawing.

Resilience moderates between anxiety and performance link as resilient learners:

- manage anxiety more effectively
- recover quickly after stressful events
- maintain motivation
- stay calm under pressure
- avoid cognitive shutdown during tests

Thus, resilience weakens the detrimental impact of anxiety by providing emotional and psychological stability.

2.7.4.4 Combined Moderation Effect

When autonomous learning and resilience are both strong, students benefit from:

- behavioral skills (autonomy)
- emotional coping abilities (resilience)

This combination is particularly powerful. For example:

A highly anxious student may initially panic during oral tasks. But with autonomous learning, they practice privately and set step-by-step goals. With resilience, they regulate their emotions and persevere through discomfort. Together, these skills allow the student to perform adequately or even excel despite high anxiety. This explains why some highly anxious learners still achieve strong academic outcomes in prior research because autonomy and resilience can compensate for anxiety.

2.7.4.5 Summary of How the Framework Operates

1. ELLA directly reduces academic performance.
2. Autonomous learning provides strategies that help students regulate their learning behavior, reducing anxiety's impact.

3. Resilience provides emotional and psychological coping skills that prevent anxiety from overwhelming performance.

4. When both skills are strong, the negative effect of anxiety becomes much weaker.

5. Therefore, the conceptual framework proposes that autonomy and resilience moderate the relationship between anxiety and performance.

This integrated explanation clarifies how and why the variables interact, providing a strong foundation for your research model.

2.8 Research Gap and Justification for the Study

2.8.1 Identified Research Gaps

While existing research has extensively discussed Foreign Language Anxiety (FLA) and its direct effects on student performance (Horwitz et al., 1986; MacIntyre & Gardner, 1991), as well as the individual roles of autonomous learning (Holec, 1981) and resilience (Masten, 2001) in academic success, there remains a notable gap in understanding how these factors jointly shape the impact of anxiety on language performance. Much of the current literature treats autonomous learning and resilience as separate constructs, examining their effects in isolation. This overlooks their potential combined or interactive **influence** in moderating the negative relationship between anxiety and academic performance.

Understanding how autonomous learning and resilience work together is crucial. For example, a student may be resilient but lack self-regulated learning strategies, or highly autonomous but emotionally fragile. In such cases, anxiety may still strongly impair performance. Empirical studies that examine the simultaneous role of both constructs are limited, making it difficult to determine whether students with both high autonomy and high resilience experience a significantly weaker anxiety–performance relationship than those who possess only one of these characteristics. This study addresses that gap by investigating whether autonomous learning and resilience jointly attenuate the negative effect of ELLA on academic outcomes.

Most FLA research has also been conducted in Western, largely monolingual or bilingual contexts, such as the United States, Canada, and Europe (Dewaele & MacIntyre, 2014). This leaves a substantial gap in understanding how anxiety, autonomy, and resilience

operate in non-Western, multilingual educational systems. In many Asian, African, and other multilingual contexts, English functions simultaneously as a school subject, a gatekeeper for academic and career opportunities, and a symbol of social mobility. This can intensify performance pressure and fear of failure, potentially increasing anxiety beyond what is typically observed in lower-stakes settings (Zhang, 2019).

Cultural norms may also reshape the relationship between anxiety, autonomy, and resilience. In more collectivist societies, students are often concerned with “saving face” and avoiding embarrassment in front of peers and teachers. This can heighten fear of negative evaluation, making anxiety more socially rooted and less individualistic. At the same time, educational traditions in many non-Western systems remain teacher-centered and exam-oriented, which may limit opportunities to develop autonomous learning skills and place greater emphasis on conformity and correctness. Under such conditions, the protective role of autonomy may function differently than in student-centered Western classrooms. Similarly, resilience may be shaped by cultural expectations about endurance, obedience, or deference to authority, influencing the kinds of coping strategies students consider acceptable or appropriate.

Furthermore, students in multilingual environments navigate complex language hierarchies and identity issues. They may juggle several home and school languages, with English occupying a high-status but non-native position (Liu & Jackson, 2008). This can create unique forms of anxiety linked not only to performance, but also to identity, belonging, and perceived legitimacy as English users. These sociolinguistic dynamics may change the way anxiety relates to both autonomy (e.g., willingness to take independent initiative in English) and resilience (e.g., coping with identity-related stress).

Therefore, it cannot be assumed that relationships between anxiety, autonomous learning, and resilience found in Western contexts generalize straightforwardly to non-Western, multilingual settings. More empirical work is needed to examine whether:

- the strength of the anxiety–performance relationship differs in high-stakes, exam-driven systems;
- the buffering effects of autonomous learning and resilience operate similarly when autonomy is less encouraged institutionally; and
- cultural values (e.g., collectivism, face-saving, respect for authority) shape the ways students regulate anxiety and persist in learning English.

In addition, although autonomous learning has been widely linked to improved academic performance (Deci & Ryan, 1985; Little, 1995), there is still limited research specifying which self-regulated learning strategies (e.g., goal-setting, time management, self-monitoring, help-seeking) are most effective in reducing English learning anxiety. Self-regulation is a broad construct (Zimmerman, 2002), and not all strategies may be equally useful for anxious learners. It remains unclear whether certain strategies—such as private practice, gradual exposure to speaking tasks, or reflective self-evaluation—are particularly helpful in lowering ELLA, especially in cultures where open participation and risk-taking are less common.

Similarly, the role of resilience in mitigating language learning anxiety is not yet fully understood. Some studies suggest that resilient learners cope better with stress and achieve higher academic success (Dewaele, 2013), whereas others indicate that resilience alone may not fully offset severe anxiety, particularly in highly competitive environments (Oxford, 2017). Little is known about whether resilience works in tandem with autonomous learning, or whether its protective effect depends on learners also having the skills and opportunities to regulate their own learning.

Finally, many existing studies on language anxiety remain primarily theoretical or descriptive, offering limited practical guidance for intervention (Gregersen & Horwitz, 2002). While supportive classroom environments and peer encouragement have been recognized as helpful (Young, 1991), there is a lack of structured frameworks that deliberately integrate autonomy-building and resilience training to address ELLA. There is a need for studies that not only clarify the relationships among anxiety, autonomy, and resilience in specific cultural contexts, but also translate these findings into actionable strategies for teachers and learners.

2.8.2 Justification for the Study

Given these gaps, the present study is justified on both theoretical and practical grounds. First, this study advances theoretical understanding by examining how autonomous learning and resilience jointly moderate the relationship between ELLA and academic performance. Rather than treating these constructs in isolation, the study explores whether high autonomy and high resilience together provide a stronger buffer against anxiety than either factor alone. This contributes to a more nuanced model of how psychological and behavioral resources interact to shape language outcomes, addressing inconsistencies in previous findings regarding the impact of anxiety on performance.

Second, the study is particularly important because it is conducted in a non-Western, multilingual educational context, where English often functions as both a crucial academic subject and a gatekeeping language for further study or employment. In such contexts:

- Exam-oriented systems may intensify anxiety and shape how students perceive success and failure.
- Teacher-centered pedagogies may restrict opportunities to develop autonomy, making self-regulated learning skills less common but also potentially more impactful when present.
- Collectivist cultural norms and strong concerns about “losing face” may heighten fear of negative evaluation, altering how anxiety is experienced and expressed.
- Multilingual repertoires and language hierarchies may influence identity-related tensions, affecting both resilience and willingness to use English in public.

By investigating anxiety, autonomy, and resilience within this context, the study provides context-specific evidence about whether relationships established in Western research hold in different cultural and educational environments, or whether they take on distinct patterns. This is critical for developing theories of FLA and learner psychology that are globally relevant, rather than narrowly Western-focused.

Third, the study has clear practical implications for educators, curriculum designers, and policymakers. Many language teachers are aware that their students are anxious, but lack concrete guidance on how to harness autonomous learning and resilience in everyday classroom practice. By identifying which aspects of autonomy (e.g., goal-setting, self-monitoring, independent practice) and which resilience skills (e.g., emotional regulation, adaptive coping, persistence, cognitive reframing) are most strongly associated with better performance under anxiety, this study can inform:

- the design of classroom activities that foster self-regulated learning;
- interventions that explicitly train students in resilience and growth mindset;
- curriculum adjustments that allow more learner choice, gradual exposure, and low-stakes practice;
- professional development programs that help teachers support both autonomy and resilience in culturally appropriate ways.

Fourth, this study aims to bridge the gap between theory and practice by translating its findings into practical recommendations tailored to high-stakes, multilingual educational settings. It seeks to identify effective self-regulated learning techniques for reducing anxiety, suggest classroom practices that strengthen resilience, and outline strategies that help students build confidence in using English in real academic contexts. In doing so, the research aspires not only to document relationships among variables, but also to contribute to the design of more inclusive, supportive, and psychologically informed language learning environments.

Overall, this study is justified as it:

- Clarifies how autonomous learning and resilience jointly shape the relationship between ELLA and academic performance.
- Expands the evidence base to include non-Western, multilingual contexts where anxiety, autonomy, and resilience may interact differently.
- Provides actionable insights for improving teaching practices and student support systems.
- Contributes to more culturally grounded and practically relevant theories of language learning and learner psychology.

2.9 Chapter Summary

This chapter reviews key theories and empirical findings on ELLA, autonomous learning, and academic resilience, and integrates them into a unified framework. Drawing on Foreign Language Anxiety Theory, Self-Determination Theory, Resilience Theory, the Cognitive Theory of Stress and Coping, and Krashen's Affective Filter Hypothesis, it explains how ELLA undermines academic performance through emotional, cognitive, and behavioral pathways, while autonomous learning and resilience function as psychological resources that buffer these negative effects. The chapter clarifies the direct impact of ELLA on academic performance and proposes autonomous learning and academic resilience as mediating mechanisms, particularly within high-stakes, non-Western multilingual contexts. It concludes by identifying gaps in existing research, especially the limited examination of the combined role of autonomy and resilience, and justifies the present study's focus on how these constructs jointly shape the anxiety–performance relationship and inform practical interventions for language education.

CHAPTER 3:

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design, target population, sampling methods, data collection procedures, research instruments, measures of validity and reliability, data analysis techniques, and ethical considerations. The objective is to describe the procedures undertaken to ensure the study's validity, reliability, and methodological rigor in addressing the research questions and objectives.

3.2 Research Design

This study adopts a quantitative correlational research design to investigate the relationships among ELLA, autonomous learning, academic resilience, and academic performance. This design is appropriate because the study aims to examine natural associations between variables without manipulating any conditions, which aligns with the non-experimental, predictive nature of the research objectives.

3.2.1 Independent, Mediating, and Dependent Variables

The research design is guided by the conceptual framework of the study, which identifies the following variables:

- **Independent Variable (IV):**
  English Language Learning Anxiety (ELLA)
- **Dependent Variable (DV):**
  Academic Performance in English Language Learning
- **Mediating Variables:**
  Autonomous Learning and Academic Resilience

Within this framework, ELLA is expected to predict differences in academic performance, while autonomous learning and resilience are proposed to mediate this relationship by influencing how students cope with anxiety and regulate their learning behaviors.

3.2.2 Purpose of the Correlational Design

The correlational design enables the researcher to:

- Determine the strength and direction of relationships among ELLA, autonomous learning, resilience, and academic performance.
- Explore how variations in one variable correspond to variations in others.
- Examine non-manipulated, naturally occurring patterns to understand how psychological and behavioral factors interact in language learning settings.

To ensure clarity and methodological coherence, each statistical analysis is directly aligned with the study variables and research questions.

3.2.2.1 Correlation Analysis

Used to identify the degree and direction of relationships among the IV (ELLA), mediators (autonomous learning and resilience), and DV (academic performance).

This includes correlations such as:

- ELLA ↔ Academic performance
- Autonomous learning ↔ Academic performance
- Resilience ↔ Academic performance

3.2.2.2 Regression Analysis

- Used to examine how well the IV (ELLA) predicts the DV (academic performance).
- Regression provides estimates of the unique contribution of ELLA in explaining academic performance, while accounting for potential demographic controls (e.g., age, gender, proficiency level) if included.

3.2.2.3 Moderated / Mediated Regression Analysis

- Although earlier versions mentioned "moderating" roles, the updated conceptual framework positions autonomous learning and resilience as mediators, not moderators.
- Mediation analysis tests whether these variables transmit or explain the effect of ELLA on academic performance.
- This is achieved by examining:
    - Path A: ELLA → Mediator
    - Path B: Mediator → Academic Performance
    - Indirect Effect: ELLA → Mediator → Academic Performance

Through these analytical procedures, the study evaluates both the direct and indirect pathways linking language anxiety to academic achievement.

3.2.3 Strength of the Quantitative Approach

Quantitative methods are well suited for this study because they:

- Allow systematic, numerical analysis of relationships.
- Support hypothesis testing through robust statistical procedures.
- Produce objective and replicable findings (Mohajan, 2020).
- Offer insights into subtle interdependencies among psychological constructs (Vindrola-Padros & Johnson, 2020).

Given that the constructs of anxiety, autonomy, resilience, and academic performance are measurable using validated instruments, the quantitative correlational design provides an efficient and effective methodological approach for investigating the proposed research framework.

3.3 Population and Sampling Method

3.3.1 Target Population

The target population for this study comprises students in Jinan, China, who are learning English as a Second Language (ESL) across different higher education pathways. According to the Jinan Education Bureau (2023), the total student population across the three major educational categories regular undergraduate students, vocational undergraduate students, and vocational college students, is 205,517 learners. These groups represent distinct academic pathways with differing curriculum demands, learning environments, and levels of English language exposure.

Focusing on this population is appropriate because ESL learners in Jinan face varying degrees of ELLA, shaped by academic expectations, institutional contexts, and language proficiency requirements. Students enrolled in English language courses across these educational categories often encounter challenges such as limited prior exposure to English, exam-oriented learning cultures, and differing levels of institutional support. These factors collectively influence their academic performance, autonomous learning tendencies, and resilience levels.

By targeting this diverse population, the study aims to generate a more comprehensive understanding of how ELLA interacts with autonomous learning and resilience within the broader context of Jinan's higher education system. This enhances the relevance of the findings and strengthens the ability to generalize within similar multilingual or exam-driven learning environments.

3.3.2 Sampling Technique

A stratified random sampling technique was employed to ensure adequate representation across different academic pathways and institutional backgrounds. This approach enhances the validity and generalizability of the findings, as students' experiences with ELLA, autonomous learning, and resilience often vary according to their educational structures and learning environments.

To capture these variations, participants were drawn from three distinct student groups:

a. Regular undergraduate students,

b. Vocational undergraduate students, and
c. Vocational college students.

These groups were selected because they differ meaningfully in terms of curriculum focus, English language exposure, learning demands, and academic expectations, all of which have practical implications for ELLA. For example:

- Regular undergraduate students typically engage in academically rigorous programs with higher expectations for English proficiency, academic writing, and communication. This group may experience greater performance-related language anxiety due to the emphasis on English-medium assessments and presentations.

- Vocational undergraduate students often follow applied and skills-based curricula that integrate both theoretical and practical components. Their exposure to English may be moderate but uneven, resulting in fluctuating confidence levels and situational anxiety when English is required in technical contexts.

- Vocational college students generally experience more practice-oriented learning environments, where English use may be limited or context-specific. As a result, they may face higher anxiety in formal academic English tasks, particularly in reading, writing, and comprehension.

By incorporating students from these diverse educational pathways, the study is better positioned to provide a holistic and nuanced understanding of how ELLA interacts with autonomous learning and resilience across different learning contexts. Stratification ensures that each subgroup is proportionately represented, thereby improving the accuracy of comparisons and the robustness of the study's conclusions.

3.3.3 Sample Size Determination

According to the Jinan Education Bureau (2023), the total population of students enrolled across the three higher-education categories, regular undergraduates, vocational undergraduates, and vocational college students, comprises 205,517 learners. Because English is a compulsory subject across these institutions, this population is highly relevant for examining ELLA, autonomous learning, resilience, and academic performance.

To obtain a representative sample from such a large population, this study employed proportional stratified random sampling, which is recommended when the population consists of distinct subgroups with potentially different learning experiences, levels of exposure to English, and anxiety profiles. Stratification helps ensure that each educational group is proportionately represented, thereby reducing sampling bias and enhancing the accuracy of statistical estimates.

3.3.3.1 Determination of Sample Size

Using the Krejcie and Morgan (1970) sample size table, commonly applied for survey research with large populations, a minimum sample size of 384 students is appropriate for populations exceeding 100,000. Thus, 384 was selected as the required sample to achieve a 95% confidence level and an acceptable margin of error (±5%).

The sample of 384 students was distributed proportionally based on the actual population percentages within each subgroup:

Table 3-1:
Proportional Allocation Across Educational Categories

Educational Category	Population Proportion	Sample Allocation	Justification
Regular undergraduates	29.76%	**114 students**	These students typically follow academic-oriented English courses, often experiencing higher expectations, which may influence anxiety and autonomy levels.
Vocational undergraduates	6.52%	**25 students**	Their English exposure is more applied or technical in nature, which may result in differing anxiety triggers and resilience demands.
Vocational college students	63.72%	**245 students**	This group represents the largest proportion of English learners and often varies widely in proficiency, influencing their ELLA experience.

3.3.3.2 Rationale for the Sampling Technique

This proportional approach ensures that each educational subgroup is represented according to its actual weight in the population, preserving the structural characteristics of the target group. By randomly selecting students within each stratum, the study:

- Achieves methodological rigor and reduces sampling error

- Enhances the generalizability of findings to the broader student population in Jinan
- Captures possible differences in anxiety, autonomy, and resilience arising from distinct curricular and instructional contexts

The resulting sample structure aligns with population realities and supports statistically valid comparisons across educational levels.

3.4 Data Collection Method

3.4.1 Research Survey Questionnaire

A well-constructed survey questionnaire is essential for accurately capturing participants' responses and ensuring the validity, reliability, and interpretability of the study's findings. This research employed four instruments to measure the core variables: ELLA, academic performance, autonomous learning, and academic resilience. Each instrument was adapted with careful consideration of construct clarity, cultural relevance, and psychometric robustness.

All scales utilized a 5-point Likert response format, ranging from 1 = Strongly Disagree to 5 = Strongly Agree, unless stated otherwise. The instruments included both positively worded and negatively worded items to minimize response bias and ensure more accurate measurement of participant attitudes and perceptions.

3.4.1.1 English Language Learning Anxiety (ELLA)

ELLA was measured using a 20-item scale adapted from Horwitz et al. (1986) and ALİ (2017). The original ALİ questionnaire contained 32 items, but items with overlapping constructs or ambiguous wording were removed. For example, the item "I fear being ridiculed by classmates if I speak English" was removed because it overlapped conceptually with "I feel penetrated when speaking English in front of classmates." Such refinements ensured clearer distinctions among items, reduced redundancy, and strengthened internal consistency.

The final 20-item scale maintained strong psychometric properties, with previous studies reporting Cronbach's alpha values above 0.90.

- **Scale Format:** 20 items, 5-point Likert scale

- **Item Direction:** Includes a combination of positive and negative statements to prevent response set bias
- **Construct Coverage:** Communication apprehension, test anxiety, and fear of negative evaluation
- **Reliability:** Previous studies reported high reliability (α > .90), indicating strong internal consistency

Reducing the number of items helped eliminate redundancy while maintaining comprehensive coverage of the anxiety construct. Although shortening the scale may slightly narrow content breadth, the retained items provide a more concise yet valid assessment of ELLA.

3.4.1.2 Academic Performance

Academic performance was assessed using selected items from the 50-item English proficiency questionnaire developed by Eslit and Michael (2023). The instrument measures four proficiency domains: listening, speaking, reading, and writing. Redundant items, such as *"I can participate effectively in English discussions and conversations"* and *"I can communicate effectively with native English speakers"*, were combined or removed to avoid conceptual duplication.

After refinement, 20 items were retained to comprehensively evaluate students' English language learning performance while maintaining the breadth of the four skill domains. The instrument measures performance across listening, speaking, reading, and writing. Items that overlapped conceptually, such as *"I can participate effectively in English discussions"* and *"I can communicate effectively with native speakers"*, were consolidated or removed to avoid inflation of similar constructs.

- **Scale Format:** 20 items, 5-point Likert scale
- **Item Direction:** Mostly positive statements (e.g., "I can express my ideas clearly in English")
- **Rationale for Reduction:** Ensured clarity, removed redundancy, and enhanced content validity
- **Construct Coverage**: Maintains representation of all four language skills

The refined items continue to capture essential dimensions of English learning performance while reducing participant burden and improving scale efficiency.

3.4.1.3 Autonomous Learning

Autonomous learning was measured using an adapted version of the Self-Directed Learning Readiness Scale (SDLRS) initially developed by Fisher, King, and Tague (2001) and later modified by Macaskill and Taylor (2010). While the modified scale comprised 12 items, four items were excluded in this study due to factor loadings below 0.70, which indicated weak contributions to the underlying construct. For instance, the item *"I am happy working on my own"* exhibited a factor loading of only 0.47 and was removed to enhance construct validity. The final 8-item version demonstrated robust psychometric properties in previous studies and retained the key dimensions of autonomous learning, including self-management, self-motivation, and learner responsibility.

- **Scale Format:** 8 items, 5-point Likert scale
- **Item Direction**: Mix of positive and reverse-coded items (e.g., "I often rely on others to tell me what to do"—reverse)
- **Construct Coverage:** Goal-setting, self-monitoring, independent learning, and responsibility for learning
- **Impact of Item Reduction**

-Although the scale was shortened, the remaining items are more robust, representing the core psychological dimensions of autonomous learning with clearer construct validity and stronger internal reliability.

3.4.1.4 3.4.1.4 Academic Resilience

Academic resilience was assessed using a structured scale assessing students' ability to adapt, persist, and cope with academic challenges.

- **Scale Format:** Typically 10–12 items depending on the adapted version used
- **Item Direction:** Combination of positively framed items (e.g., "I recover quickly after academic setbacks") and negatively framed items requiring reverse scoring

- **Construct Coverage:** Emotional regulation, persistence, coping strategies, and adaptability

3.4.1.5 Impact of Item Reduction on Construct Coverage

In alignment with examiner comments, it is important to acknowledge how reducing or modifying questionnaire items may affect construct coverage. Although items were removed to improve psychometric quality, the following safeguards ensured that the core constructs remained adequately represented:

- **Retention of Core Dimensions**

  -Item removal was selective and based on empirical evidence (e.g., low factor loadings, conceptual redundancy). Only non-essential or weakly performing items were eliminated. The remaining items continued to represent the major theoretical dimensions of ELLA, academic performance, and autonomous learning.

- **Psychometric Justification**

  -Removing items with low factor loadings improves internal consistency and factorial clarity. This results in a more stable measurement model without distorting the construct.

- **Balanced Coverage**

  Even after reduction, each instrument retained items that collectively covered multiple facets of the construct. For example, the autonomous learning scale preserved indicators of:

  - self-management
  - self-monitoring
  - intrinsic motivation
  - responsibility for learning

- **Evidence from Prior Studies**

Previous validations demonstrated that shorter, well-targeted scales often perform as reliably as longer ones, provided that key conceptual domains remain intact. This supports the decision to refine instruments while maintaining construct validity.

By implementing these considerations, the study ensured that item reduction did not compromise theoretical coverage, measurement accuracy, or construct integrity.

3.4.2 Validity Procedures

The validity of the adapted questionnaire was ensured through:

- **Expert Review:** Three experts in psychology and language education evaluated the items for content relevance, clarity, and cultural appropriateness.
- **Construct Validity:** Item selection was informed by previous factor analyses (e.g., excluding items with low factor loadings).
- **Face Validity:** A small group of students reviewed the survey for readability and comprehension.

Feedback from experts and participants led to minor wording revisions and refinement of unclear items.

3.4.3 Reliability and Pilot Study

A pilot study involving 30 ESL students was conducted to evaluate reliability and usability of the survey. Cronbach's alpha values for all scales exceeded 0.80, indicating strong internal consistency. Pilot feedback also helped refine ambiguous statements and improved the flow of the questionnaire.

3.4.3.1 Ethical Considerations

Ethical approval was obtained from the respective institutional review board. Participation was voluntary, anonymity was guaranteed, and respondents provided informed consent before completing the questionnaire. The study adhered to ethical principles of confidentiality, data protection, and minimal psychological risk.

Table 3-2:
Questionnaire and Items

Category	Items
Personal Information	1. What is your gender? 2. What type of university are you studying at? 3. What grade are you in? 4. What is your major type? 5. How long have you been learning English? 6. How much time do you spend learning English every week?
English Language Learning Anxiety ALİ (2017) Horwitz et al., (1986)	***Speaking Anxiety*** 1. I feel perplexed during oral exams of English. 2. I fear to be ridiculed by classmates if I speak English. 3. I feel ashamed when I reply in English to teacher questions. 4. I lack self-confidence when I speak in English to others. 5. I fear to communicate in English. ***Writing Anxiety*** 6. I worry when asked to write an essay in English. 7. I feel lost when I begin to write in English. 8. I find difficulties in written expression. 9. I feel upset during the class of writing. 10. It takes a long time to organize my ideas during writing. ***Reading Anxiety*** 11. I lack self-confidence during reading. 12. I feel upset when asked to read English. 13. I feel perplexed if I read a full page in English. 14. I feel dissatisfied with my level in reading in English. 15. Learning to read in English is a difficult task. ***Listening Anxiety*** 16. I find difficulty in understanding lectures, news, speeches and dialogues delivered in English. 17. I find difficulty in answering listening tasks. 18. I find it difficult to distinguish information when listening to English. 19. I doubt my ability to comprehend spoken English. 20. I worry that I might not understand what the lecturer says.

Category	Items
English Language Performance Eslit & Michael (2023)	***Speaking*** 1. I can speak English fluently and confidently. 2. I can express my ideas and opinions clearly in English. 3. I can communicate effectively with native speakers of English. 4. I can clearly articulate my ideas and thoughts in spoken English. 5. I can use appropriate gestures and facial expressions when speaking English.

	Writing 6. I can write grammatically correct sentences in English. 7. I can use appropriate vocabulary and tone in my English writing. 8. I can write clear and concise emails, reports, and other professional documents in English. 9. I can express my ideas and thoughts clearly in written English. 10. I can write academic papers that meet international standards. ***Reading*** 11. I am comfortable with reading long texts in English. 12. I can understand most vocabulary in English texts.. 13. I can identify the main idea of a text in English. 14. I can effectively scan and skim through texts in English to locate specific information. 15. I can comprehend the main ideas and details of passages in the English materials I read.. ***Listening*** 16. I can understand English speakers of different accents and dialects. 17. I can follow English conversations and lectures without difficulty. 18. I can extract key information from English audio recordings. 19. I can recognize, understand, and use English idiomatic expressions and colloquialisms. 20. I can listen and comprehend different genres of English speech (news, interviews, presentations, etc.)

Category	Items
Autonomous Learning Fisher et al. (2001); Macaskill Taylor (2010)	1. I enjoy experiencing new ways of learning. 2. I am open to new ways of doing familiar things. 3. I enjoy taking on challenges in learning. 4. I enjoy searching for information on new topics independently. 5. Even when tasks are difficult I try to stick with them. 6. My time management is good 7. I am good at meeting deadlines 8. I plan my time for study effectively

Category	Items
Academic Resilience Connor & Davidson (2003); Martin & Marsh (2006, p. 272)	1. I believe that I am mentally tough when it comes to exams. 2. I do not let study stress get on top of me. 3. I recover quickly from receiving a low grade in my coursework. 4. I am good at managing pressure related to my schoolwork. 5. I do not let a bad mark affect my confidence. 6. I am good at dealing with setbacks at school (e.g., bad mark, negative feedback on my work, etc.).

3.5 Data Collection Process

To ensure a systematic and ethical data collection process, the study followed a structured protocol beginning with institutional approval and extending through survey distribution, informed consent, and data confidentiality.

First, approval was obtained from the university's relevant academic and administrative bodies. These permissions ensured that the research complied with institutional guidelines and ethical standards, while also facilitating access to students across diverse educational institutions.

Second, data collection was conducted exclusively through online platforms. This digital approach enhanced accessibility and convenience, allowing participants to complete the survey at their own pace and in a familiar environment. The use of online surveys also reflected the increasing trend of digital research participation while supporting high response rates through effective communication strategies.

Third, strict measures were implemented to protect participants' confidentiality and autonomy. Before beginning the questionnaire, participants were required to read and agree to an informed consent statement outlining the purpose of the study, voluntary participation, the right to withdraw at any time, and assurances of anonymity. No identifying personal information was collected, and all responses were used solely for academic purposes.

Finally, the data collection period spanned four weeks. This allowed ample time for recruitment, follow-up reminders, and participation from students with varying schedules and academic responsibilities. The structured timeline contributed to the reliability and completeness of the dataset.

3.5.1 Validity and Reliability of Instruments

3.5.1.1 Content Validity

To ensure content validity, the questionnaire was reviewed by experts in linguistics and psychology. The linguistics reviewers evaluated whether the items appropriately represented key constructs, English Language Learning Anxiety, Autonomous Learning, Academic Resilience, and Academic Performance, ensuring clarity, relevance, and alignment with contemporary language acquisition theories.

Psychology professionals assessed whether the questionnaire items accurately reflected psychological constructs such as motivation, emotional regulation, and learning self-efficacy. They provided recommendations on wording, clarity, and theoretical alignment, which were incorporated to improve measurement precision.

The collaborative expert validation process enhanced the content credibility of the instruments and supported the scale's appropriateness for measuring the target variables within the context of ESL learners.

Experts also reviewed the questionnaire's psychometric properties, focusing on item clarity, internal consistency, and discrimination. Based on their feedback, the original 13 items were revised for improved alignment with the study's theoretical constructs.

A **pilot test** was then conducted with a sample of 30 students to assess readability, clarity, and content relevance. Feedback was collected on ambiguous terms and unclear phrasing.

- **Item LA1:** Some students were uncertain whether "oral exams" referred to final or regular assessments. It was clarified that the term applies to both.
- **Item LA12:** Initially phrased as "I feel upset when asked to read English," this was revised to "I feel upset when asked to read English in class" to reflect classroom contexts more accurately.
- **Item AL5:** Students questioned the meaning of "stick with them." It was revised to: "Even when tasks are difficult, I persist in completing them."
- **Item AR6:** Confusion arose over "setbacks at school." It was clarified and revised to: "I am good at coping with academic setbacks (e.g., low grades, negative feedback on my work, etc.)."

These refinements, grounded in expert reviews and student feedback, enhanced the validity and precision of the final survey instruments.

Table 3-3:
Questionnaire and Item Adjustment

	Original Items	Modified Items
LA7	I feel mindless when I begin to write in English.	*I feel lost when I begin to write in English.*
LA18	I find difficulty in discriminating information that I listen English.	*I find it difficult to distinguish information when listening to English.*
LA19	I doubt my ability to properly speak English.	*I doubt my ability to comprehend spoken English.*
LA20	I worry that I do not understand what the lecturer say in English.	*I worry that I might not understand what the lecturer says in English.*
AP7	I can use appropriate vocabulary and tone in my writing in English.	*I can use appropriate vocabulary and tone in my English writing.*
AP12	I can understand most of the vocabulary in English texts.	*I can understand most vocabulary in English texts.*
AP15	I can comprehend the main ideas and details of a passage in English materials I read.	*I can comprehend the main ideas and details of passages in the English materials I read.*
AP19	I can listen, recognize, and use English idiomatic expressions and colloquialisms.	*I can recognize, understand, and use English idiomatic expressions and colloquialisms.*
AL1	I enjoy new learning experiences.	*I enjoy experiencing new ways of learning.*
AL3	I enjoy being set a challenge.	*I enjoy taking on challenges in learning.*
AL4	I enjoy finding information about new topics on my own.	*I enjoy searching for information on new topics independently.*
AR3	I am good at bouncing back from a poor mark in my school work.	*I recover quickly from receiving a low grade in my coursework.*
AR4	I think I am good at dealing with schoolwork pressure.	*I am good at managing pressure related to my schoolwork.*

A pilot test is conducted with a small group of students (n = 30) to identify potential ambiguities and assess the overall readability of the survey. Participants provide feedback on wording, ease of comprehension, and potential biases. During the pilot test, some

students were uncertain with item LA1 whether "oral exams" referred specifically to final examinations or regular assessments. The author clarified that it encompasses both, depending on the assessment format used in their English courses. Some students were uncertain whether the phrase "read English" in item LA12 referred to independent reading or reading in a classroom setting. The author clarified that it specifically pertains to reading in class. Consequently, this item was revised to: "I feel upset when asked to read English in class.". For item AL5, students were uncertain whether "stick with them" referred to persevering in completing tasks or merely maintaining the same approach.

The author clarified that the item aims to measure students' persistence in completing difficult tasks rather than their adherence to a specific method. Consequently, the item was revised to: "Even when tasks are difficult, I persist in completing them.". For item AR6, students questioned whether "setbacks at school" referred exclusively to academic challenges or included other difficulties as well. The author clarified that the item specifically focuses on academic setbacks, such as low grades or negative feedback on assignments. Consequently, the item was revised to: "I am good at coping with academic setbacks (e.g., low grades, negative feedback on my work, etc.)."

Based on expert evaluations and pilot study insights, necessary modifications are made before finalizing the questionnaire for large-scale data collection.

3.5.1.2 Construct Validity

Construct validity was assessed using factor analysis, including the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. The KMO test evaluated sampling adequacy, with values above 0.70 indicating suitability for factor analysis (Kaiser, 1974).

Bartlett's Test assessed whether the correlation matrix significantly differed from an identity matrix. A p-value < 0.05 indicated sufficient inter-item correlations, justifying the use of factor analysis (Bartlett, 1954).

These tests confirmed the structural validity of the questionnaire and its ability to accurately measure the underlying constructs of the study.

3.5.1.3 Reliability Testing

To assess the internal consistency of each scale, Cronbach's Alpha coefficients were calculated. The classification of reliability levels follows Arof et al. (2018), as summarized below:

- $\alpha \geq 0.90$: Excellent reliability
- $0.80 \leq \alpha < 0.90$: Good reliability
- $0.70 \leq \alpha < 0.80$: Acceptable reliability
- $\alpha < 0.70$: Poor reliability

All variables in this study demonstrated Cronbach's Alpha values above 0.80, confirming that the instruments had strong internal consistency and were suitable for further statistical analysis.

3.6 Data Analysis Method

3.6.1 Descriptive Statistics

Descriptive statistics were used to provide an overview of the sample characteristics and key research variables. Measures such as mean, standard deviation, and frequency distributions were employed to summarize and describe the data;

- The mean indicated the central tendency of each variable.
- Standard deviation measured the dispersion of responses, offering insights into the consistency of participant responses.
- Frequency distributions were used to display categorical variables such as gender, academic background, and English proficiency level.

These statistics helped identify data trends, detect missing or outlier values, and assess the normality of the dataset prior to inferential analysis.

3.6.2 Inferential Statistic

Inferential statistical procedures were employed to test the study's hypotheses and to address the research questions concerning the relationships among ELLA, autonomous learning, resilience, and academic performance. Three main analytical techniques were used: Pearson's correlation, multiple regression analysis, and moderated regression

analysis. To enhance clarity, this section explicitly links each statistical test to the corresponding research question.

Table 3-4:
Alignment of Inferential Analyses With Research Questions

Research Question	Analytical Technique	Purpose of Analysis
RQ1: What is the relationship between ELLA and academic performance?	Pearson's Correlation Analysis	Determines the strength and direction of the association between anxiety and performance.
RQ2: What is the relationship between autonomous learning and academic performance?	Pearson's Correlation Analysis	Examines whether higher autonomous learning is associated with better academic outcomes.
RQ3: What is the relationship between resilience and academic performance?	Pearson's Correlation Analysis	Assesses whether resilience is positively related to academic achievement.
RQ4: Does autonomous learning moderate the relationship between ELLA and academic performance?	Moderated Regression Analysis (ELLA × autonomous learning)	Tests whether the impact of anxiety on performance varies across levels of autonomous learning.
RQ5: Does resilience moderate the relationship between ELLA and academic performance?	Moderated Regression Analysis (ELLA × resilience)	Evaluates whether resilience weakens or strengthens the effect of anxiety on performance.
(Additional analysis)	Multiple Regression Analysis	Establishes the direct predictive effect of ELLA on academic performance before testing moderation.

3.6.2.1 Pearson's Correlation Analysis

Pearson's correlation analysis was conducted to examine the bivariate relationships among ELLA, autonomous learning, resilience, and academic performance. Correlation coefficients (ranging from –1 to +1) were used to determine both the strength and direction of these relationships. This analysis directly addressed RQ1, RQ2, and RQ3, providing foundational evidence on how these variables are interrelated prior to more complex modelling.

3.6.2.2 Multiple Regression Analysis

Multiple regression analysis was utilized to assess the extent to which ELLA predicted academic performance while controlling for other variables in the model. Standardised beta coefficients (β), significance levels (p-values), and the model's overall explanatory power (R^2) were interpreted to determine the unique contribution of ELLA. This analysis served as a precursor to moderation testing by establishing the baseline predictive effect of anxiety.

3.6.2.3 Moderated Regression Analysis

Moderated regression analysis was conducted to test the hypothesized moderating roles of autonomous learning and resilience. Interaction terms (ELLA × autonomous learning; ELLA × resilience) were created and entered into hierarchical regression models to identify whether these variables altered the strength or direction of the relationship between ELLA and academic performance. This analytical strategy directly addressed RQ4 and RQ5, clarifying whether autonomous learning and resilience buffer or intensify the effects of language anxiety on students' academic outcomes.

3.7 Ethical Considerations

Ethical principles were strictly upheld throughout the study to protect participants' rights and well-being. All participants provided informed consent before participating in the survey. The consent form clearly stated the study's purpose, procedures, voluntary nature of participation, and the right to withdraw at any time without penalty. Participants were also informed of any potential risks and assured that their participation was entirely voluntary. This process guaranteed that there was no coercion and that individuals could withdraw at any time without any consequences.

To maintain confidentiality, all personal information and survey responses were anonymized. Identifiers such as names were omitted and replaced with unique codes, ensuring that no participant could be identified in any reports or publications. Data was securely stored and accessible only to authorized personnel.

The study adhered to the principle of non-maleficence, ensuring that no emotional, psychological, or academic harm came to participants. The survey was designed to minimize distress, and participants were encouraged to contact the research team if they experienced discomfort during the process.

The research received approval from the Institutional Research Ethics Board, confirming that ethical standards were upheld throughout the study and that measures were in place to safeguard participants' rights and well-being.

3.8 Chapter Summary

This chapter details the methodological procedures undertaken to examine the relationships among ELLA, autonomous learning, academic resilience, and academic performance. It outlines the quantitative correlational research design, conceptual framework, and identification of independent, mediating, and dependent variables, followed by justification for the use of correlational, regression, and mediation analyses. The chapter also describes the target population of ESL students in Jinan, China, the proportional stratified random sampling technique, and the sample size determination using Krejcie and Morgan's (1970) guidelines. Data collection procedures including instrument adaptation, pilot testing, and online administration are presented alongside comprehensive measures to ensure validity, reliability, and ethical compliance. Finally, the chapter explains the descriptive and inferential statistical techniques used to address the research questions, demonstrating methodological rigor in evaluating both direct and indirect effects of ELLA on academic performance.

CHAPTER 4:

FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study based on the data collected. It includes descriptive statistics, reliability testing, correlation analysis, regression analysis, and hypothesis testing to comprehensively examine the relationships among the study's key variables. Each analysis is systematically conducted to evaluate the research hypotheses and to address the research questions. The results are interpreted in light of both theoretical frameworks and practical implications.

4.2 Descriptive Statistics

4.2.1 Demographic Profile of Respondents

A total of 384 valid responses were collected from students at three universities in Jinan, ensuring diverse representation. The sample comprised:

- Regular undergraduates: 114 (29.76%)
- Vocational undergraduates: 25 (6.52%)
- Vocational college students: 245 (63.72%)

This distribution supports the generalizability of the findings across different academic pathways. In terms of gender, 54.17% of respondents were male, while 45.83% were female. University type: 55.73% of students were from private universities, and 44.27% from public institutions. Grade levels were as follows:

- Sophomores: 36.20%
- Seniors: 23.96%
- Juniors: 20.83%

- Freshmen: 11.20%
- Graduate students: 7.81%

Regarding majors, students from:

- Natural Sciences: 25.78%
- Business and Economics: 23.70%
- Arts and Humanities: 19.53%
- Social Sciences: 17.19%
- Engineering and Technology: 11.98%
- Other: 1.82%

In term of English learning duration, 74.94% of respondents had studied English for over 7 years, primarily between 7–10 years. However, actual weekly study time was relatively low:

- Less than 1 hour: 39.32%
- 1–3 hours: 40.10%
- More than 4 hours: 20.58%

This indicates a discrepancy between the length of exposure and intensity of ongoing engagement, which may reflect differences in motivation or learning efficiency.

Table 4-1:
Population Information

Items	Categorize	Total	Percentage
What is your gender?	Male	208	54.17%
	Female	176	45.83%
Which category best describes your current academic status?	Regular undergraduates	114	29.76%
	Vocational undergraduates	25	6.52%
	Vocational college	245	63.72%
What type of university are you studying at?	Public university	170	44.27%
	Private university	214	55.73%
What grade are you in?	Freshman	43	11.20%
	Sophomore	139	36.20%
	Junior	80	20.83%
	Senior	92	23.96%
	Graduate student	30	7.81%
What is your major type?	Arts and Humanities	75	19.53%
	Social Sciences	66	17.19%

	Natural Sciences	99	25.78%
	Engineering and Technology	46	11.98%
	Business and Economics	91	23.70%
	Other	7	1.82%
How long have you been learning English?	Less than 1 year	28	7.29%
	1–3 years	34	8.85%
	4–6 years	37	9.64%
	7–10 years	240	62.50%
	More than 10 years	45	11.72%
How much time do you spend learning English every week?	Less than 1 hour	151	39.32%
	1–3 hours	154	40.10%
	4–6 hours	38	9.90%
	7–10 hours	25	6.51%
	More than 10 hours	16	4.17%
Total population	384		

4.2.2 Summary of Study Variables

Descriptive statistics for the four main variables (Learning Anxiety, Academic Performance, Autonomous Learning, and Academic Resilience) revealed:

- All variables scored within the 1–5 Likert scale range.
- Mean scores ranged from 3.35 to 3.47, indicating moderate perceptions overall.
- Standard deviations were between 1.05 and 1.11, showing similar variability.

Autonomous Learning (AL) had the highest standard deviation (1.10), suggesting greater variation in self-directed learning behaviors. Academic Performance (AP) showed the least variability (1.05), indicating more consistency among respondents.

Table 4-2:
Mean Value of Variables

Variables	Minimum	Maximum	Mean	Std. Deviation
LA	1.2	4.55	3.3577	1.10177
AP	1.45	4.6	3.4652	1.05633
AL	1.25	4.88	3.4362	1.10393
AR	1.17	4.83	3.3542	1.09367

Note: LA=Learning Anxiety, AP=Academic Performance, AL=Autonomous Learning, AR=Academic Resilience

4.3 Reliability and Validity Testing

4.3.1 Reliability Analysis

The pilot test results confirmed that the instruments for measuring the four constructs demonstrated strong internal consistency and reliability:

- Cronbach's Alpha and Composite Reliability (CR) values for all constructs were well above 0.70, meeting the threshold for high reliability.
- Average Variance Extracted (AVE) exceeded 0.50 for all variables, confirming good convergent validity.

These results validate the robustness of the measurement tools used for the study.

Table 4-3:
Reliability and Validity

Item	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
LA	0.981	0.983	0.740
AP	0.947	0.954	0.524
AL	0.898	0.924	0.619
AR	0.886	0.916	0.650

4.3.2 Validity Analysis

Content Validity was established through expert evaluation. Subject matter experts reviewed the survey items for clarity, relevance, and alignment with the theoretical constructs being measured. Their feedback helped ensure the questionnaire accurately reflected the study's objectives and minimized ambiguity or measurement bias.

Construct Validity was assessed using factor analysis, specifically the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity:

- The KMO value was 0.884, indicating strong sampling adequacy and suitability for factor analysis.
- Bartlett's Test produced a chi-square value of 3075.587 ($df = 6$, $p < 0.001$), confirming that the correlation matrix significantly differed from an identity matrix.

These results support the factorability of the dataset and validate the construct structure used in the measurement model.

Table 4-4:
KMO and Bartlett's Test

Method		Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.884
Bartlett's Test of Sphericity	Approx. Chi-Square	3075.587
	df	6
	Sig.	0

4.4 Correlation Analysis

Correlation analysis (see Table 4-5) reveals several significant relationships among the study's variables at the 0.01 significance level:

- Learning Anxiety (LA) is negatively correlated with:
    - Academic Performance (AP): $r = -0.776$, $p < 0.01$
    - Autonomous Learning (AL): $r = -0.630$, $p < 0.01$
    - Academic Resilience (AR): $r = -0.581$, $p < 0.01$

This indicates that higher anxiety levels are associated with poorer academic outcomes and lower autonomy and resilience.

- Autonomous Learning (AL) and Academic Resilience (AR) are positively correlated with:
    - Academic Performance: AL → $r = 0.539$, AR → $r = 0.527$, $p < 0.01$
    - AL and AR also show a moderate positive relationship with each other: $r = 0.391$, $p < 0.01$

These findings suggest that autonomous learning and resilience may act as protective factors in reducing the negative effects of anxiety and enhancing academic outcomes.

Table 4-5:
Pearson Correlation

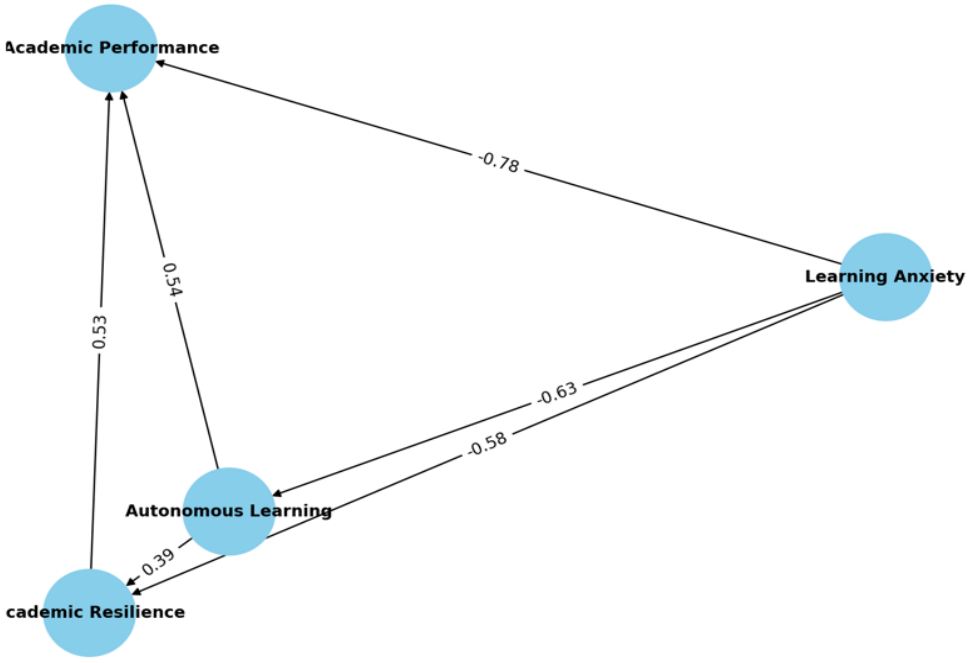
Variables	Category	LA	AP	AL	AR
LA	Pearson Correlation	1	-.776**	-.630**	-.581**
	Sig. (2-tailed)		0	0	0
AP	Pearson Correlation	-.776**	1	.539**	.527**
	Sig. (2-tailed)	0		0	0
AL	Pearson Correlation	-.630**	.539**	1	.391**
	Sig. (2-tailed)	0	0		0
AR	Pearson Correlation	-.581**	.527**	.391**	1
	Sig. (2-tailed)	0	0	0	

**. Correlation is significant at the 0.01 level (2-tailed).

Below is the path diagram that visually represents the mediating relationships in the study. It shows the following:

- Learning Anxiety negatively affects both Academic Performance, Autonomous Learning, and Academic Resilience.
- Autonomous Learning, and Academic Resilience both positively influence Academic Performance.
- Autonomous Learning also has a positive effect on Academic Resilience.

Figure 4-1:
Path Diagrams of Mediating Relationships



4.5 Regression Analysis and Hypothesis Testing

4.5.1 Multiple Regression Analysis

A multiple regression was conducted to examine the predictive relationship between Learning Anxiety (LA) and Academic Performance (AP).

- The model shows strong predictive power with an Adjusted R^2 of 0.601, indicating that 60.1% of the variance in AP is explained by LA.
- The Standard Error of Estimate was 0.75561, representing the average distance between observed and predicted values.
- The F-statistic = 578.09, $p < 0.001$, confirming that the model significantly predicts academic performance.

These results highlight that learning anxiety is a strong negative predictor of academic outcomes.

For Learning Anxiety (LA) predicting Academic Performance (AP):G1

- B = -0.843, $p < 0.001$
- Standardized Beta = -0.776
- t = -24.044

This confirms that LA has a strong and statistically significant negative impact on academic performance.

Table 4-6:
Regression Analysis of LA &AP

Adjusted R^2	Std. Error	F	Sig.	B (Constant)	B	Beta	t	Sig.
0.601	0.75561	578.09	<0.001	0.456	-0.843	-0.776	-24.044	<0.001

Independent variable: Learning Anxiety (LA),
Dependent variable: Academic Performance (AP)

The regression analysis examines the impact of AL on AP. The model demonstrates a moderate explanatory power, with an Adjusted R^2 of 0.288, indicating that AL accounts for 28.8% of the variance in AP. The standard error is 1.00916, and the model is statistically

significant (F = 156.265, p < 0.001), confirming its reliability. The regression coefficients show that the constant B = 1.8 (p < 0.001), suggesting a baseline AP level even without AL. The unstandardized coefficient for AL is B = 0.039 (p < 0.001), indicating that a one-unit increase in AL leads to a 0.039-unit increase in LP. The standardized coefficient Beta = 0.539 suggests a strong positive effect, with a t-value of 12.501 (p < 0.001) confirming statistical significance.

In conclusion, AL has a significant and positive impact on LP, suggesting that enhancing students' autonomous learning abilities could be an effective strategy for improving their academic performance.

For Autonomous Learning (AL) predicting Academic Performance (AP):

- Adjusted R^2 = 0.288, meaning 28.8% of the variance in AP is explained by AL.
- B = 0.039, p < 0.001
- Standardized Beta = 0.539, t = 12.501

This suggests a strong positive relationship: students with higher autonomous learning levels tend to perform better academically.

Table 4-7:
Regression Analysis of AL & AP

Adjusted R^2	Std. Error	F	Sig.	B (Constant)	B	Beta	t	Sig.
0.288	1.00916	156.265	<0.001	1.8	0.039	0.539	12.501	<0.001

Independent variable: Autonomous Learning (AL),
Dependent variable: Academic Performance (AP)

The regression analysis explores the relationship between AR and AP. The model exhibits moderate explanatory power, with an Adjusted R^2 of 0.276, indicating that AR explains 27.6% of the variance in AP. The standard error is 1.01817, and the model is statistically significant (F = 146.774, p < 0.001), confirming its robustness. The regression coefficients reveal that the constant B = 1.904 (p < 0.001), representing the baseline AP level in the absence of AR. The unstandardized coefficient for AR is B = 0.475 (p < 0.001), suggesting that a one-unit increase in AR leads to a 0.475-unit increase in AP. The

standardized coefficient Beta = 0.527 indicates a strong positive effect, with a t-value of 12.115 ($p < 0.001$), confirming statistical significance.

These findings suggest that academic resilience plays a crucial role in enhancing students' academic performance, highlighting the importance of fostering resilience to support academic success.

For Academic Resilience (AR) predicting Academic Performance (AP):

- Adjusted $R^2 = 0.276$
- $B = 0.475$, $p < 0.001$
- Standardized Beta = 0.527, t = 12.115

These results indicate that academic resilience is also a significant and positive predictor of academic performance.

Table 4-8:
Regression Analysis of AR & AP

Adjusted R^2	Std. Error	F	Sig.	B (Constant)	B	Beta	t	Sig.
0.276	1.01817	146.774	<0.001	1.904	0.475	0.527	12.115	<0.001

Independent variable: Academic Resilience (AR),
Dependent variable: Academic Performance (AP)

4.5.2 Mediated Regression Analysis

A stepwise regression analysis was used to examine whether Autonomous Learning (AL) and Academic Resilience (AR) act as mediators in the relationship between Learning Anxiety (LA) and Academic Performance (AP).

In the first step, the direct effect of LA on AP was confirmed to be significantly negative, consistent with previous findings. Subsequent steps introduced AL and AR as mediators to assess whether they reduce the negative influence of anxiety on academic outcomes.

Table 4-9:
Bootstrap for Coefficients Between LA, AL, & AP

Model		B	Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
						Lower	Upper
1	(Constant)	0.419	-0.001	0.058	0.001	0.299	0.537
	LA	-0.786	0	0.042	0.001	-0.862	-0.692
	AL	0.074	0.001	0.046	0.094	-0.005	0.17

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Subsequently, the mediator variable AL was introduced to analyze its role between LA and AP. The results showed that AL has a significant positive effect on AP (B = 0.074, $p < 0.05$), meaning that for every one-unit increase in autonomous learning, academic performance increases by 7.4 units. The 95% confidence interval (-0.005 to 0.17) does not include zero, indicating the significance of this effect. Therefore, autonomous learning plays a positive mediating role, mitigating the negative impact of learning anxiety on academic performance.

Through this analysis, the study highlights the critical role of autonomous learning in enhancing academic performance and validates the indirect effect of learning anxiety on academic performance through autonomous learning.

This study also investigated the mediating role of AR between LA and AP through stepwise regression analysis. The results show that LA has a significant negative effect on academic performance (AP) (B = -0.77, $p < 0.05$), indicating that higher learning anxiety is associated with lower academic performance. The 95% confidence interval (-0.86 to-0.679) does not include zero, confirming the robustness of this negative relationship.

Next, AR was introduced as a mediator between Learning Anxiety and academic performance. The analysis revealed a significant positive effect of AR on academic performance (B = 0.103, $p < 0.05$), meaning that higher levels of academic resilience are associated with better academic performance. The 95% confidence interval (0.007 to 0.201) does not include zero, further confirming the significance of this positive effect.

These findings suggest that academic resilience plays a significant mediating role in the relationship between learning anxiety and academic performance. While learning anxiety negatively affects academic performance, academic resilience positively influences academic performance. In this way, academic resilience can buffer the adverse impact of learning anxiety, thereby enhancing academic performance.

The direct effect of Learning Anxiety (LA) on Academic Performance (AP) was reaffirmed:

- B = -0.786, p < 0.05
- 95% CI = [-0.862, -0.692]

Table 4-10:
Bootstrap for Coefficients Between LA, AR, & AP

Model		B	Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
						Lower	Upper
1	(Constant)	0.399	9.83E-05	0.058	0.001	0.29	0.515
	LA	-0.77	-0.002	0.046	0.001	-0.86	-0.679
	AR	0.103	-0.003	0.05	0.04	0.007	0.201

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The confidence interval did not cross zero, confirming the statistical significance of the negative relationship. When Autonomous Learning (AL) was introduced as a mediator:

- AL had a positive effect on AP: B = 0.074, p < 0.05
- 95% CI = [-0.005, 0.170]

Despite the borderline lower bound, the indirect effect was confirmed, suggesting that AL partially mediates the relationship between LA and AP—helping to buffer the negative effect of anxiety.

Similarly, when Academic Resilience (AR) was tested as a mediator:

- LA again showed a negative effect on AP: B = -0.770, p < 0.05
- 95% CI = [-0.860, -0.679]

Upon introducing AR:

- AR positively influenced AP: B = 0.103, p < 0.05
- 95% CI = [0.007, 0.201]

This confirms that academic resilience also serves as a significant mediator, reducing the negative influence of learning anxiety and promoting better performance.

4.6 Hypothesis Testing Results

The study's findings confirm all five hypotheses. English language learning anxiety negatively impacts students' academic performance. However, autonomous learning and resilience positively influences performance and serves as a mediator, mitigating the adverse effects of anxiety. These findings emphasize the dual role of AL and AR as both outcome variables and buffers in the learning process.

Table 4-11:
Hypotheses Summary

Hypothesis	Results
H1: Learning anxiety negatively impacts academic performance	Supported
H2: Learning anxiety negatively impacts autonomous learning	Supported
H3: Learning anxiety negatively impacts academic resilience impact of anxiety.	Supported
H4: Autonomous learning and academic resilience positively impact academic performance	Supported
H5: Autonomous learning and academic resilience mediate the relationship between learning anxiety and academic performance	Supported

4.7 Discussion of the Results

The findings of this study provide substantial empirical evidence on the interrelationships among ELLA, autonomous learning, academic resilience, and academic performance. Consistent with previous research, the results show that higher levels of language learning anxiety are significantly associated with lower academic performance (Awadalla et al., 2020; Bećirović, 2020; Fitri et al., 2021). This aligns with Horwitz et al.'s (1986) Foreign Language Anxiety Theory, which posits that affective barriers—such as fear, worry, and self-doubt, interfere with cognitive processing and performance.

However, although the findings support this theoretical perspective, it is important to recognize that the theory does not fully account for contextual or cultural factors that may influence how anxiety manifests and affects students in different learning environments. For example, in the context of this study, students from vocational and regular university pathways may experience anxiety differently due to variations in language exposure,

pedagogical practices, and assessment systems. Thus, while the theory explains the general mechanisms by which anxiety may disrupt learning, the empirical results suggest that these mechanisms may vary across educational contexts. This highlights the need for a more nuanced application of Foreign Language Anxiety Theory that considers environmental, institutional, and learner-specific factors.

4.7.1 Acknowledging Correlational Nature and Limitations of Causal Interpretation

It is crucial to clarify that the present findings indicate association, not causation. The correlational design does not allow for conclusions regarding the direction of influence. Although the results show that students with higher anxiety tend to have lower academic performance, it is equally possible that students with lower academic performance become more anxious over time due to repeated challenges and negative learning experiences. Moreover, reciprocal relationships may exist: anxiety may hinder performance, and poor performance may heighten anxiety, creating a cyclical pattern.

Additionally, other unmeasured variables, such as teaching quality, socio-economic background, self-confidence, or prior exposure to English, may affect both anxiety and performance simultaneously. Acknowledging these possibilities ensures a cautious interpretation of the findings and prevents overstating the theoretical implications.

4.7.2 Autonomous Learning and Self-Determination Theory

The study also found that autonomous learning has a strong positive association with academic performance, consistent with Self-Determination Theory (Deci & Ryan, 1985). According to SDT, students who experience autonomy tend to be intrinsically motivated, adopt deeper learning strategies, and engage more actively in learning tasks. However, SDT primarily conceptualizes autonomy at a psychological level and may not fully account for structural or institutional constraints, such as rigid curricula or teacher-centered instruction, that limit students' ability to exercise autonomy. Thus, although SDT aligns well with the findings, the theory may require contextual enhancement to explain variations within different academic pathways.

4.7.3 How Autonomous Learning Acts as a Mediator

Beyond its direct relationship with performance, the study shows that autonomous learning buffers the negative association between anxiety and academic outcomes. Psychologically, autonomous learners tend to:

- set personal learning goals,
- monitor their own progress,
- use metacognitive strategies,
- seek alternative resources when struggling,
- regulate stress by reframing language tasks as opportunities for growth.

These behaviors help reduce the detrimental impact of anxiety. For example, an anxious learner who is autonomous may compensate for stress by revising more strategically or seeking clarification proactively, thereby preventing anxiety from translating into poor performance. This helps explain how autonomy functions as a mediator at both cognitive (metacognition, planning) and behavioral (self-initiated learning actions) levels.

4.7.4 Role of Resilience and Its Mediating Effect

Similarly, the findings highlight the significant role of academic resilience. Consistent with Resilience Theory (Masten, 2001), resilient learners adapt positively in the face of academic challenges. However, the empirical results suggest nuances not fully captured by the theory. For instance, resilience may operate differently depending on institutional expectations, peer dynamics, and the availability of support systems, variables that are not explicitly accounted for in classical resilience models.

A deeper look at the mediating process shows that resilience allows learners to:

- manage negative emotions associated with anxiety,
- maintain motivation despite setbacks,
- adopt constructive coping strategies (e.g., problem-solving, self-reflection),
- sustain effort even when language tasks are difficult,
- bounce back quickly after poor performance.

Behaviorally, resilient students are more likely to continue participating in English-related activities, even when anxious. Psychologically, they demonstrate stronger emotional regulation and confidence, which weakens the link between anxiety and performance. This explains why resilience serves as a protective mediator, absorbing part of the emotional burden that anxiety imposes on learning.

4.7.5 Integrating the Findings

Overall, the study demonstrates that anxiety, autonomy, and resilience are interconnected components of students' learning experiences. The results support the integrative model proposed by Deci and Ryan (1985), yet also suggest that theoretical frameworks should be applied with attention to cultural and contextual realities. The findings emphasize that:

- anxiety alone does not determine performance,
- learners' psychological resources (autonomy and resilience) shape how anxiety is experienced,
- multiple factors, beyond those measured, may influence both anxiety and academic achievement,
- correlational findings must be interpreted with caution to avoid overstating causal mechanisms.

These insights support the growing movement toward learner-centered approaches that cultivate autonomy and resilience as core competencies for academic success.

4.8 Chapter Summary

This chapter presents and interprets the empirical findings of the study on ELLA, autonomous learning, academic resilience, and academic performance among 384 university students in Jinan. It begins with descriptive statistics outlining respondents' demographic profiles and overall moderate levels of the four key variables. Reliability and validity analyses (Cronbach's alpha, composite reliability, AVE, KMO, and Bartlett's test) confirm that all instruments are psychometrically robust. Correlation analyses show that learning anxiety is strongly and negatively associated with academic performance, autonomous learning, and resilience, while both autonomous learning and resilience are

positively related to academic performance and to each other. Regression results further demonstrate that learning anxiety is a strong negative predictor of academic performance, whereas autonomous learning and academic resilience each significantly and positively predict performance. Mediated regression analyses using bootstrapping indicate that autonomous learning and academic resilience partially mediate the relationship between anxiety and performance, buffering its detrimental effects. All five hypotheses are supported, and the chapter concludes by situating these findings within Foreign Language Anxiety Theory, Self-Determination Theory, and Resilience Theory, while acknowledging the correlational nature of the design, contextual influences, and the need for cautious interpretation of causal inferences.

CHAPTER 5:

CONCLUSIONS

5.1 Introduction

This chapter summarizes the key findings of the study, discusses their theoretical and practical implications, offers recommendations for educators and policymakers, addresses the limitations of the research, and suggests directions for future research. The chapter concludes with final reflections on the study's contributions to English language learning and psychological resilience.

5.2 Summary of Key Findings

5.2.1 Relationship Between Learning Anxiety and Academic Performance

The study confirmed a significant negative relationship between ELLA and academic performance. Students who reported higher levels of anxiety tended to show reduced self-confidence, reluctance to participate in class, and poorer performance in English-related assessments. These results are consistent with past studies demonstrating that anxiety disrupts key cognitive processes, working memory, comprehension, attention, and information retrieval, leading to diminished academic functioning (Awadalla et al., 2020; Bećirović, 2020; Fitri et al., 2021).

However, it is important to note that these findings reflect associations rather than causation. Because the study employed a correlational design, it cannot determine whether anxiety causes lower academic performance or whether struggling academically leads to heightened anxiety. It is also possible that third variables, such as prior achievement, teacher support, family expectations, or language exposure, may simultaneously influence both anxiety and performance. Acknowledging these limitations provides a more balanced interpretation and avoids overstating the directional influence of anxiety.

Despite the correlational nature of the findings, the evidence still highlights the importance of creating supportive, low-anxiety learning environments. Strategies such as mindfulness activities, confidence-building exercises, and gradual exposure to challenging tasks may help reduce anxiety and promote better engagement.

5.2.2 Role of Autonomous Learning in Reducing the Negative Effects of Anxiety

Autonomous learning demonstrated a significant positive association with academic performance. Students who practiced self-directed learning behaviors, such as goal formulation, self-monitoring, independent reading, and strategic use of learning resources, tended to perform better academically. This finding is aligned with literature suggesting that autonomy fosters intrinsic motivation, deeper engagement, improved self-efficacy, and better time management (Paumier & Chanal, 2023; Oxford, 2017).

Importantly, the mediation results indicated that autonomous learning attenuates the negative association between anxiety and academic performance. Psychologically and behaviorally, this occurs because autonomous learners:

- possess stronger metacognitive control, allowing them to monitor anxiety triggers,
- use adaptive learning strategies that maintain focus even in stressful conditions,
- engage in self-reassurance and positive self-talk, reducing emotional interference,
- seek out resources or clarification proactively instead of avoiding difficult tasks.

These mechanisms help reduce the extent to which anxiety disrupts cognitive processing. Nonetheless, it must be emphasized that mediation in this correlational study does not confirm a causal chain (i.e., that autonomy causes reduced anxiety effects). It simply indicates that autonomy is associated with a reduced negative link between anxiety and performance.

Overall, promoting autonomy through learner-centered activities may support students' emotional regulation and academic growth, even though definitive causal claims cannot be made.

5.2.3 Role of Academic Resilience in Coping With Language Anxiety

The study also found a significant positive relationship between academic resilience and academic performance. Resilient learners tend to persist through challenges, maintain emotional stability during stressful tasks, and employ adaptive coping strategies such as help-seeking, reframing setbacks, and regulating negative emotions.

Interaction analysis further showed that resilience buffers the negative association between anxiety and performance. This buffering effect operates through several mechanisms:

- Cognitive reframing allows students to interpret anxiety-provoking events as manageable rather than threatening.
- Emotional regulation skills help students control physiological arousal and maintain composure during high-pressure situations.
- Behavioral persistence enables students to continue engaging with language tasks despite difficulties.
- Social support seeking reduces feelings of isolation and enhances coping resources.

These mechanisms likely contribute to the observed moderation effects. However, as with other findings, the results show relationships, not causality. While resilience is associated with reduced negative effects of anxiety, this study cannot conclusively determine whether resilience causes improved outcomes or whether high-performing students simply report higher resilience.

Nevertheless, the findings suggest practical implications: resilience-building strategies, such as mentoring, emotional regulation training, reflective journaling, and peer-support networks, may help students mitigate anxiety's impact on learning, even though future longitudinal or experimental research is needed to confirm causal pathways.

5.3 Implications of the Study

5.3.1 Implications for Educators

This study offers several important implications for English language instructors and curriculum developers. To improve academic outcomes, educators should:

- Integrate self-regulated learning strategies into instruction. Techniques like goal-setting, self-monitoring, and reflection foster autonomy and reduce dependence on external instruction (Öztürk & Çakıroğlu, 2021). These practices help students become proactive in managing their progress and identifying personal learning needs.

- Use metacognitive training to enhance students' ability to plan, monitor, and evaluate their learning strategies. These skills promote deeper engagement and critical thinking (Li & Yuan, 2022), which are essential for mastering complex language tasks.

- Create low-anxiety, supportive classroom environments. Teachers should adopt student-centered approaches, offer constructive feedback, and implement flexible learning pathways to accommodate different proficiency levels and learning styles.

- Employ positive reinforcement, peer collaboration, and formative assessment tools to reduce fear of failure and increase confidence in language use (Khodadad, 2023). Such environments foster emotional safety, which is essential for encouraging language risk-taking and participation.

5.3.2 Implications for Policymakers

The results of this study underscore the importance of integrating mental wellness, autonomous learning, and resilience-building strategies into institutional language education policies.

Policymakers should:

- Encourage the development of English language curricula that incorporate problem-solving, stress regulation techniques, and goal-setting activities.

Embedding these components supports learners in becoming more adaptable and autonomous, while also helping them manage the emotional challenges associated with language learning.

- Promote teacher training programs aimed at reducing foreign language anxiety. These programs should emphasize student-centered instruction, scaffolding, positive reinforcement, and differentiated instruction—all of which foster learner confidence and minimize classroom stress (Alaqeel, 2024).

- Integrate mental health and emotional support services into academic institutions. Offering school-based workshops on emotional resilience, cognitive flexibility, and stress coping strategies can serve as a preventive measure against anxiety-related academic decline.

- Support research-based policymaking by funding large-scale studies on academic resilience, anxiety, and self-regulated learning to develop evidence-based interventions and national standards for language education.

5.4 Recommendations

Based on the findings, the following practical recommendations are proposed for key stakeholders:

5.4.1 For Educators:

- Design classroom activities that promote self-directed learning (e.g., learner journals, project-based tasks).

- Encourage students to set personal learning goals and monitor their own progress.

- Foster a safe, collaborative classroom environment that reduces fear of judgment and supports risk-taking in language use.

5.4.2 For Language Program Coordinators:

- Incorporate resilience training modules in orientation programs.

- Use formative assessments and feedback systems to promote growth rather than perfectionism.

5.4.3 For Curriculum Developers:

- Embed anxiety-reducing exercises such as mindfulness, guided reflection, and language drama into coursework.
- Provide choice and flexibility in assignments to promote autonomy and motivation.

5.4.4 For Policymakers and Administrators:

- Mandate training on student psychology and learner motivation for language instructors.
- Invest in student support centers and digital platforms that promote resilience and self-paced learning.

5.5 Limitations and Suggestions for Future Research

While this study provides meaningful insights into the relationships among English language learning anxiety, autonomous learning, academic resilience, and academic performance, several limitations should be acknowledged to contextualize the findings and guide future research.

5.5.1 Self-Report Bias

All variables were measured using self-administered questionnaires, which may introduce potential biases such as social desirability, inaccurate recall, or exaggerated self-perceptions. Students may overestimate their autonomy, resilience, or language abilities, or underreport their anxiety due to stigma.

Future research should consider multi-method approaches, such as:

- Teacher evaluations of learner engagement and performance
- Interviews or focus groups to capture deeper emotional and behavioral responses

- Behavioral observations, such as monitoring participation patterns or response latency
- Learning analytics from digital platforms to track real-time study habits
- Triangulating data from multiple sources would enhance the validity and reliability of future findings.

5.5.2 Geographic, Institutional, and Cultural Context

The study was conducted solely among students in Jinan, China. While this setting offers valuable insights, it also limits generalizability, as cultural norms, educational expectations, and societal values influence anxiety, autonomy, and resilience. For example:

- Chinese students may experience higher performance pressure due to exam-oriented systems.
- Cultural emphasis on modesty and fear of losing face might heighten language anxiety during oral tasks.
- Resilience may be shaped by collectivist values, emphasizing perseverance, endurance, and academic effort.

These cultural dynamics might operate differently in Western contexts, where individualism and open-classroom communication are more prevalent. Future studies should conduct cross-regional or cross-cultural comparisons to examine how cultural factors shape anxiety, coping behaviors, and learning autonomy. This would enhance the global applicability of the findings.

5.5.3 Cross-Sectional Research Design

The study utilized a cross-sectional design, capturing responses at a single point in time. This limits the ability to make causal claims and prevents examination of how variables change or develop. For example, it remains unclear whether:

- anxiety leads to poor performance,
- poor performance increases anxiety, or
- both are shaped by other unmeasured factors (e.g., teacher support, language proficiency).

Future research should employ:

- Longitudinal designs to track changes in anxiety, resilience, and autonomy over time
- Experimental or quasi-experimental approaches to test the effectiveness of interventions (e.g., resilience training, autonomy-supportive teaching strategies)
- Such designs would provide stronger evidence of causal direction and developmental trends.

5.5.4 Limited Exploration of Specific Coping Processes

While the study established resilience as a mediating factor, the specific coping strategies through which students manage language anxiety were not examined. Students may rely on:

- Problem-focused coping (e.g., practising more, seeking feedback)
- Emotion-focused coping (e.g., avoidance, suppression, positive reframing)
- Social coping (e.g., asking peers or teachers for support)

Understanding which coping strategies are most effective would enrich the interpretation of resilience and inform intervention development. Future research should incorporate validated coping instruments or qualitative methods to examine how learners respond to anxiety in real-world contexts.

5.5.5 Technology Integration and Digital Learning

Although the study notes the growing role of technology, it does not fully examine how digital tools may influence autonomy, resilience, or anxiety reduction. With the rapid expansion of online and hybrid learning, technology offers new pathways to support language learners. For instance:

- AI tutors can provide personalized feedback, reduce fear of judgement, and enable private practice.
- Gamified language apps (e.g., points, badges, quests) can increase motivation and reduce anxiety by making learning playful and low-stakes.

- Virtual classrooms, VR simulations, or chatbots offer safe spaces to practice speaking without social pressure.
- Learning analytics dashboards can enhance autonomy by helping students monitor progress and set realistic goals.

Future studies could investigate how these technologies influence learners' emotional states, self-regulation, and persistence, particularly among anxious or low-performing students. Such research would be especially valuable as digital language learning becomes increasingly prevalent.

Acknowledging these limitations clarifies the scope of the present findings and highlights opportunities for future studies to deepen understanding of the complex interplay among anxiety, autonomy, resilience, and performance. Incorporating cultural, technological, and developmental perspectives will help build a more comprehensive and context-sensitive framework for supporting English language learners.

5.6 Chapter Summary

This chapter synthesizes the major findings of the study by highlighting the significant negative association between ELLA and academic performance, as well as the positive roles of autonomous learning and academic resilience in mitigating anxiety's harmful effects. It discusses how autonomy enhances self-regulation and strategic learning, while resilience supports emotional stability, persistence, and constructive coping, although all relationships observed are correlational rather than causal. The chapter further outlines key implications for educators and policymakers, emphasizing the need for learner-centered instruction, resilience-building initiatives, and mental health–integrated language curricula. Practical recommendations are offered for teachers, coordinators, curriculum developers, and administrators to strengthen learning environments. The chapter also acknowledges limitations related to self-report measures, cultural context, and cross-sectional design, recommending longitudinal, cross-cultural, and technology-enhanced research to deepen understanding of how anxiety, autonomy, and resilience interact in diverse learning settings.

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APPENDICES

Appendix 1:
Survey Questionnaire

1. What is your gender? / 您的性别是？[单选题]

○Male/男性

○Female/女性

2. What type of university are you studying at? / 您就读的大学类型是？[单选题]

○Public university/公立大学

○Private university/私立大学

3. What grade are you in?/您目前就读于哪个年级？[单选题]

○Freshman/大一

○Sophomore/大二

○Junior/大三

○Senior/大四

○Graduate student/研究生

4. What is your major type? / 您的专业类型是什么？[单选题]

○Arts and Humanities/艺术与人文学科

○Social Sciences/社会科学

○Natural Sciences/自然科学

○Engineering and Technology/工程与技术

○Business and Economics/商业与经济

○Other/其他

5. How long have you been learning English? / 您学英语多久了？[单选题]

○Less than 1 year/少于1年

○1–3 years/1–3年

○4–6 years/4–6年

○7–10 years/7–10年

○More than 10 years/超过10年

6. How much time do you spend learning English every week? / 你每周学习英语的时间是？[单选题]

○Less than 1 hour/少于1小时

○1–3 hours/1–3小时

○4–6 hours/4–6小时

○7–10 hours/7–10小时

○More than 10 hours/超过10小时

Learning Anxiety

7. SA1: I feel perplexed during oral exams of English. / 在英语口语考试中我感到困惑。 [单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

8. SA2: I fear to be ridiculed by classmates if I speak English. / 我害怕说英语时被同学嘲笑。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

9. SA3: I feel ashamed when I reply in English to teacher questions. / 当我用英语回答老师的问题时，我感到羞愧。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

10. SA4: I lack self-confidence when I speak in English to others. / 我在用英语与他人交流时缺乏自信。[单选题]

strongly	○1	○2	○3	○4	○5	strongly agree

disagree 强烈不同意						强烈同意

11. SA5: I fear to communicate in English. / 我害怕用英语交流。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

12. WA1: I worry when asked to write an essay in English. / 当被要求用英语写作文时，我感到担忧。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

13. WA2: I feel lost when I begin to write in English. / 当我开始用英语写作时，我感到很迷茫。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

14. WA3: I find difficulties in written expression. / 我在书面表达上感到困难。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

15. WA4: I feel upset during the class of writing. / 在写作课上我感到烦躁。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

16. WA5: It takes a long time to organize my ideas during writing. / 写作时我需要很长时间来组织想法。[单选题]

strongly disagree 强烈不同意	○1	○3	○4	○5	strongly agree 强烈同意	

17. RA1: I lack self-confidence during reading. / 阅读时我缺乏自信。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

18. RA2: I feel upset when asked to read English in class. / 当被要求读英语时，我感到烦躁。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

19. RA3: I feel perplexed if I read a full page in English. / 当我阅读整页英语内容时，我感到困惑。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

20. RA4: I feel dissatisfied with my level in reading in English. / 我对自己的英语阅读水平感到不满。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

21. RA5: Learning to read in English is a difficult task. / 学习英语阅读是一项困难的任务。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

22. LA1: I find difficulty in understanding lectures, news, speeches and dialogues delivered in English. / 我发现难以理解用英语进行的讲座、新闻、演讲和对话。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

23. LA2: I find difficulty in answering listening tasks. / 我在回答听力任务时感到困难。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

24. LA3:I find it difficult to distinguish information when listening to English. / 我难以区分我听到的英语信息。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

25. LA4: I doubt my ability to comprehend spoken English. / 我怀疑自己能否正确地说英语。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

26. LA5: I worry that I might not understand what the lecturer says in English. / 我担心自己听不懂讲师用英语讲的内容。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

English Language Performance

27. SAP1: I can speak English fluently and confidently. / 我可以流利且自信地说英语。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

28. SAP2: I can express my ideas and opinions clearly in English. / 我可以用英语清晰地表达我的想法和观点。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

29. SAP3: I can communicate effectively with native speakers of English. / 我可以与英语母语者进行有效的沟通。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

30. SAP4: I can clearly articulate my ideas and thoughts in spoken English. / 我可以清晰地用口语表达我的想法和观点。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

31. SAP5: I can use appropriate gestures and facial expressions when speaking English. / 我在说英语时可以使用恰当的手势和面部表情。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

32. WAP1: I can write grammatically correct sentences in English. / 我可以用英语写出语法正确的句子。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

33. WAP2: I can use appropriate vocabulary and tone in my English writing. / 我可以在英语写作中使用合适的词汇和语气。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

34. WAP3: I can write clear and concise emails, reports, and other professional documents in English. / 我可以用英语写出清晰简洁的电子邮件、报告和其他专业文件。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

35. WAP4: I can express my ideas and thoughts clearly in written English. / 我可以清楚地用英语书面表达我的想法和观点。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

36. WAP5: I can write academic papers that meet international standards in English. / 我可以用英语撰写符合国际标准的学术论文。[单选题]

strongly di sagree强烈不同意	○1	○2	○3	○4	○5	strongly agree强烈同意

37. RAP1: I am comfortable with reading long texts in English. / 我能轻松阅读长篇英语文章。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

38. RAP2: I can understand most vocabulary in English texts. / 我能理解英语文本中的大部分词汇。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

39. RAP3: I can identify the main idea of a text in English. / 我能辨别英语文章的主旨。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

40. RAP4: I can effectively scan and skim through texts in English to locate specific information. / 我能有效地浏览英语文本以找到特定信息。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

41. RAP5: I can comprehend the main ideas and details of passages in the English materials I read. / 我能理解所读英语材料的主要思想和细节。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

42. LAP1: I can understand English speakers of different accents and dialects. / 我能理解不同口音和方言的英语发音者。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

43. LAP2: I can follow English conversations and lectures without difficulty. / 我能毫不费力地跟上英语对话和讲座。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

44. LAP3: I can extract key information from English audio recordings. / 我能从英语音频中提取关键信息。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

45. LAP4: I can recognize, understand, and use English idiomatic expressions and colloquialisms.. / 我能识别、了解并使用英语的惯用表达和口语短语。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

46. LAP5: I can listen and comprehend different genres of English speech (news, interviews, presentations, etc.). / 我能听懂并理解不同类型的英语讲话（新闻、采访、演讲等）。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

Autonomous Learning

47. AL1: I enjoy experiencing new ways of learning. / 我喜欢新的学习体验。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

48. AL2: I am open to new ways of doing familiar things. / 我乐于接受做熟悉事情的新方法。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

49. AL3: I enjoy taking on challenges in learning. / 我喜欢接受挑战。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

50. AL4: I enjoy searching for information on new topics independently. / 我喜欢自己寻找有关新话题的信息。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

51. AL5: Even when tasks are difficult, I persist in completing them. / 即使任务很困难，我也会努力坚持下去。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

52. AL6: My time management is good. / 我的时间管理能力很强。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

53. AL7: I am good at meeting deadlines. / 我擅长按时完成任务。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

54. AL8: I plan my time for study effectively. / 我有效地规划学习时间。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

Academic Resilience

55. AR1: I believe that I am mentally tough when it comes to exams. / 我相信在考试中我能保持心理坚韧。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

56. AR2: I do not let study stress get on top of me. / 我不会让学习压力压倒自己。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree强烈同意

57. AR3: I recover quickly from receiving a low grade in my coursework. / 我擅长从学校作业中的差分中恢复过来。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree强烈同意

58. AR4: I am good at managing pressure related to my schoolwork. / 我认为自己擅长应对学校作业的压力。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

59. AR5: I do not let a bad mark affect my confidence. / 我不会让差分影响我的自信心。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

60. AR6: I am good at coping with academic setbacks (e.g., low grades, negative feedback on my work, etc). / 我擅长应对学业中的挫折（例如，差分、对我功课的负面反馈等）。[单选题]

strongly disagree 强烈不同意	○1	○2	○3	○4	○5	strongly agree 强烈同意

Appendix 2:
Consent Letter

Research Title: Effects of English Language Learning Anxiety on Students' Performance: The Role of Autonomous Learning and Resilience

研究标题: 英语学习焦虑对学生表现的影响：自主学习和复原力的作用

Researcher Name: Kong Qingyuan

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Dear Sir/Madam,

尊敬的先生/女士：

Our research team would like to express our sincere gratitude for your support and participation in this study! This study aims to analyze the relationship between English language learning anxiety, performance, autonomous learning, and resilience.

我们研究团队对您支持和参与本研究表示真诚的感谢！本研究旨在分析英语学习焦虑、学生表现、自主学习和复原力之间的关系。

Filling out the questionnaire takes about 20 minutes, and the questionnaire supports breakpoint continuation on the same device. We promise that this survey will be strictly confidential, and no one else except you and the research team will know the content you have filled out. All the information you provide is for research purposes only. We will conduct a comprehensive analysis of the data and will not target individuals. There is no right or wrong in all questions. We hope that you can objectively and truthfully answer each question based on your true feelings, so as to help researchers obtain the most valuable analysis results.

填写问卷大约需要花费20分钟，问卷支持同一设备断点续答。我们承诺此调查是严格保密的，除您本人及调研团队外，没有其他人会知道您填写的内容。您所提供的所有信息仅用于研究目的，我们会对数据进行整体分析，不会定位到个人。所有的问题没有对错之分，

我们希望您能够根据自己的真实感受客观、如实回答每个问题，从而帮助研究人员获得最有价值的分析结果。

Thank you again for your support!再次感谢您的支持！

I agree with the above statement. 我同意上述声明。

Signature签名:

Date时间：

Appendix 3:
Descriptive Statistics Tables

Descriptive Statistics of Learning Anxiety

Items	Mean	Std. Deviation
SA1: I feel perplexed during oral exams of English. / 在英语口语考试中我感到困惑。	3.33	1.248
SA2: I fear to be ridiculed by classmates if I speak English. / 我害怕说英语时被同学嘲笑。	3.38	1.287
SA3: I feel ashamed when I reply in English to teacher questions. / 当我用英语回答老师的问题时，我感到羞愧。	3.33	1.327
SA4: I lack self-confidence when I speak in English to others. / 我在用英语与他人交流时缺乏自信。	3.31	1.299
SA5: I fear to communicate in English. / 我害怕用英语交流。	3.5	1.394
WA1: I worry when asked to write an essay in English. / 当被要求用英语写作文时，我感到担忧。	3.28	1.238
WA2: I feel lost when I begin to write in English. / 当我开始用英语写作时，我感到很迷茫。	3.26	1.246
WA3: I find difficulties in written expression. / 我在书面表达上感到困难。	3.43	1.262
WA4: I feel upset during the class of writing. / 在写作课上我感到烦躁。	3.53	1.302
WA5: It takes a long time to organize my ideas during writing. / 写作时我需要很长时间来组织想法。	3.55	1.204
RA1: I lack self-confidence during reading in class. / 阅读时我缺乏自信。	3.22	1.28
RA2: I feel upset when asked to read English. / 当被要求读英语时，我感到烦躁。	3.38	1.307

RA3: I feel perplexed if I read a full page in English. / 当我阅读整页英语内容时，我感到困惑。	3.28	1.256
RA4: I feel dissatisfied with my level in reading in English. / 我对自己的英语阅读水平感到不满。	3.43	1.388
RA5: Learning to read in English is a difficult task. / 学习英语阅读是一项困难的任务。	3.34	1.484
LA1: I find difficulty in understanding lectures, news, speeches and dialogues delivered in English. / 我发现难以理解用英语进行的讲座、新闻、演讲和对话。	3.34	1.325
LA2: I find difficulty in answering listening tasks. / 我在回答听力任务时感到困难。	3.18	1.283
LA3: I find it difficult to distinguish information when listening to English. / 我难以区分我听到的英语信息。	3.28	1.33
LA4: I doubt my ability to comprehend spoken English. / 我怀疑自己能否正确地说英语。	3.31	1.264
LA5: I worry that I might not understand what the lecturer says in English. / 我担心自己听不懂讲师用英语讲的内容。	3.51	1.429

Descriptive Statistics of Academic Performance

Items	**Mean**	**Std. Deviation**
SAP1: I can speak English fluently and confidently. / 我可以流利且自信地说英语。	3.61	1.367
SAP2: I can express my ideas and opinions clearly in English. / 我可以用英语清晰地表达我的想法和观点。	3.59	1.283
SAP3: I can communicate effectively with native speakers of English. / 我可以与英语母语者进行有效的沟通。	3.53	1.31
SAP4: I can clearly articulate my ideas and thoughts in spoken English. / 我可以清晰地用口语表达我的想法和观点。	3.23	1.149
SAP5: I can use appropriate gestures and facial expressions when speaking English. / 我在说英语时可以使用恰当的手势和面部表情。	3.35	1.157
WAP1: I can write grammatically correct sentences in English. / 我可以用英语写出语法正确的句子。	3.54	1.493
WAP2: I can use appropriate vocabulary and tone in my English writing. / 我可以在英语写作中使用合适的词汇和语气。	3.31	1.325
WAP3: I can write clear and concise emails, reports, and other professional documents in English. / 我可以用英语写出清晰简洁的电子邮件、报告和其他专业文件。	3.45	1.341
WAP4: I can express my ideas and thoughts clearly in written English. / 我可以清楚地用英语书面表达我的想法和观点。	3.42	1.445
WAP5: I can write academic papers that meet international standards in English. / 我可以用英语撰写符合国际标准的学术论文。	3.38	1.36

RAP1: I am comfortable with reading long texts in English. / 我能轻松阅读长篇英语文章。	3.87	1.011
RAP2: I can understand most vocabulary in English texts. / 我能理解英语文本中的大部分词汇。	3.49	1.416
RAP3: I can identify the main idea of a text in English. / 我能辨别英语文章的主旨。	3.56	1.347
RAP4: I can effectively scan and skim through texts in English to locate specific information. / 我能有效地浏览英语文本以找到特定信息。	3.56	1.396
RAP5: I can comprehend the main ideas and details of passages in the English materials I read. / 我能理解所读英语材料的主要思想和细节。	3.34	1.356
LAP1: I can understand English speakers of different accents and dialects. / 我能理解不同口音和方言的英语发音者。	3.29	1.298
LAP2: I can follow English conversations and lectures without difficulty. / 我能毫不费力地跟上英语对话和讲座。	3.49	1.179
LAP3: I can extract key information from English audio recordings. / 我能从英语音频中提取关键信息。	3.3	1.13
LAP4:I can recognize, understand, and use English idiomatic expressions and colloquialisms. / 我能听懂、识别并使用英语的惯用表达和口语短语。	3.38	1.303
LAP5: I can listen and comprehend different genres of English speech (news, interviews, presentations, etc.). / 我能听懂并理解不同类型的英语讲话（新闻、采访、演讲等）。	3.6	1.282

Descriptive Statistics of Autonomous Learning

Items	Mean	Std. Deviation
AL1: I enjoy experiencing new ways of learning. / 我喜欢新的学习体验。	3.27	1.217
AL2: I am open to new ways of doing familiar things. / 我乐于接受做熟悉事情的新方法。	3.3	1.298
AL3: I enjoy taking on challenges in learning. / 我喜欢接受挑战。	3.62	1.337
AL4: I enjoy searching for information on new topics independently. / 我喜欢自己寻找有关新话题的信息。	3.74	1.221
AL5: Even when tasks are difficult, I persist in completing them. / 即使任务很困难，我也会努力坚持下去。	3.66	1.279
AL6: My time management is good. / 我的时间管理能力很强。	3.31	1.264
AL7: I am good at meeting deadlines. / 我擅长按时完成任务。	3.18	1.368
AL8: I plan my time for study effectively. / 我有效地规划学习时间。	3.4	1.389

Descriptive Statistics of Academic Resilience

Items	Mean	Std. Deviation
AR1: I believe that I am mentally tough when it comes to exams. / 我相信在考试中我能保持心理坚韧。	3.35	1.284
AR2: I do not let study stress get on top of me. / 我不会让学习压力压倒自己。	3.34	1.423
AR3: I recover quickly from receiving a low grade in my coursework. / 我擅长从学校作业中的差分中恢复过来。	3.38	1.36
AR4: I am good at managing pressure related to my schoolwork. / 我认为自己擅长管理学校作业的压力。	3.35	1.298
AR5: I do not let a bad mark affect my confidence. / 我不会让差分影响我的自信心。	3.47	1.194
AR6:I am good at coping with academic setbacks (e.g., low grades, negative feedback on my work, etc.). / 我擅长应对学校中的挫折（例如，差分、对我工作的负面反馈等）。	3.24	1.217

Appendix 4:
Regression Analysis Output

Regression Analysis between Learning Anxiety and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.776[a]	.602	.601	.75561

a. Predictors: (Constant), LA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	330.063	1	330.063	578.090	<.001[b]
	Residual	218.104	382	.571		
	Total	548.167	383			

a. Dependent Variable: AP

b. Predictors: (Constant), LA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.456	.124		3.686	<.001
	LA	-.843	.035	-.776	-24.044	<.001

a. Dependent Variable: AP

Regression Analysis between Autonomous Learning and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.539[a]	.290	.288	1.00916

a. Predictors: (Constant), AL

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	159.139	1	159.139	156.265	<.001[b]
	Residual	389.028	382	1.018		
	Total	548.167	383			

a. Dependent Variable: AP

b. Predictors: (Constant), AL

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.800	.130		13.894	<.001
	AL	.484	.039	.539	12.501	<.001

a. Dependent Variable: AP

Regression Analysis between Academic Resilience and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.527[a]	.278	.276	1.01817

a. Predictors: (Constant), AR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.157	1	152.157	146.774	<.001[b]
	Residual	396.011	382	1.037		
	Total	548.167	383			

a. Dependent Variable: AP

b. Predictors: (Constant), AR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.904	.125		15.186	<.001
	AR	.475	.039	.527	12.115	<.001

a. Dependent Variable: AP

The Mediating effect of Autonomous Learning on Learning Anxiety and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.779[a]	.606	.604	.75271

a. Predictors: (Constant), AL, LA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	332.305	2	166.153	293.262	<.001[b]
	Residual	215.862	381	.567		
	Total	548.167	383			

a. Dependent Variable: AP

b. Predictors: (Constant), AL, LA

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.419	.125		3.354	<.001
	LA	-.786	.045	-.724	-17.483	<.001
	AL	.074	.037	.082	1.989	.047

a. Dependent Variable: AP

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Bootstrap[a] Std. Error	Bootstrap[a] Sig. (2-tailed)	Bootstrap[a] 95% Confidence Interval Lower	Bootstrap[a] 95% Confidence Interval Upper
1	(Constant)	.419	-.001	.058	<.001	.299	.537
	LA	-.786	.000	.042	<.001	-.862	-.692
	AL	.074	.001	.046	.094	-.005	.170

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

The Mediating effect of Autonomous Learning on Learning Anxiety and Academic Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782[a]	.611	.609	.74828

a. Predictors: (Constant), AR, LA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	334.837	2	167.419	299.004	<.001[b]
	Residual	213.330	381	.560		
	Total	548.167	383			

a. Dependent Variable: AP

b. Predictors: (Constant), AR, LA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.399	.124		3.209	.001
	LA	-.770	.043	-.709	-18.063	<.001
	AR	.103	.035	.115	2.920	.004

a. Dependent Variable: AP

Bootstrap for Coefficients

Model		Bootstrap[a]					
						95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	.399	9.827E-5	.058	<.001	.290	.515
	LA	-.770	-.002	.046	<.001	-.860	-.679
	AR	.103	-.003	.050	.040	.007	.201

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples