FACTORS AFFECTING MIDDLE SCHOOL STUDENTS' ENGLISH LEARNING ENGAGEMENT IN THE CONTEXT OF URBAN FAMILY BACKGROUNDS

MENGJIAO YE

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION AND SOCIETY
INSTITUTE OF SCIENCE INNOVATION AND CULTURE
RAJAMANGALA UNIVERSITY OF TECHNOLOGY KRUNGTHEP
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Major Master of Arts (Education and Society)
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of the Requirements for the Master's Degree

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ABSTRACT

Learning engagement is critical in shaping students' academic success. This study examines the influence of learning engagement on English language acquisition among seventh-grade middle school students in City A's central urban area. Employing a quantitative approach, the research focuses on engagement's cognitive, behavioral, and emotional dimensions and their link to language skill development. Data were collected from 2000 students through a "Survey on English Learning Engagement," with analysis conducted using NSSE and SEM techniques. Findings indicate that student engagement in English learning outside school is generally moderate to low. Family background, particularly financial circumstances and parental education levels (predominantly at the junior college level or higher), significantly shapes learning behaviors. Family support emerges as a key positive factor, correlating with improved learning behaviors and fostering motivation and positive attitudes toward English learning. Notably, cognitive engagement in English learning activities is strongly influenced by family support. While emotional support from families positively impacts students' emotional engagement, its effect on classroom participation is less pronounced. This finding suggests that emotional support alone may not sufficiently enhance classroom engagement without the interplay of other contributing factors. The study highlights the substantial role of family environments in students' learning processes and emphasizes the need for closer collaboration between schools and families. Such partnerships can create holistic support systems that address academic and emotional needs, ultimately fostering more engaged and motivated learners. In conclusion, this research underscores the importance of family background in influencing students' English learning engagement. By leveraging family dynamics and strengthening school-family collaboration, educators and policymakers can develop strategies to enhance students' overall learning experiences, paving the way for improved educational outcomes.

Keywords: Middle School English, English Learning Engagement, Family Background

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Mengjiao YE

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CHAPTER I

INTRODUCTION

1.1 Background and Rationale

Amid the backdrop of globalization, English has emerged as a universally recognized international language, carrying significant social and economic value. Middle school students in urban areas form a crucial cohort in English language learning (Jones, 2020). Their investment in learning English is pivotal for developing language skills and academic achievements. With the continuous progress of global interactions and international education, studying English learning engagement among urban middle school students holds vital theoretical and practical significance (Chen, 2021).

Academic circles universally acknowledge learning engagement as a pivotal measure in assessing and studying the learning process. The quality of students' learning is intricately connected to their engagement. Among middle school students, issues of passive behavior and partial emotional or cognitive engagement within their learning investment persist. Simultaneously, excessive academic burdens on younger students have become a focal concern. Scientific educational ideologies remind us that while focusing on the quality of student learning, equal emphasis should be placed on the learning process itself. This article emphasizes the research on "learning engagement," as highlighted in "Student Learning Engagement" (Ren Zheng et al., 2017).

Language serves as a bridge to the world (Wang, 2017). Foreign language education traces back to the Ming Dynasty. For several centuries, the social development of our country has gradually evolved into standardized foreign language teaching and learning (Zhang, 2019). In 2002, the Department for Education and Skills of the United Kingdom released a document to enhance the nation's proficiency

in foreign languages, emphasizing the necessity to provide lifelong language learning opportunities (Smith, 2003). This has crucial implications for formulating foreign language education policies with a high degree of internationalization (Department for Education and Skills, 2002).

However, with the continuous growth of the national economy and improving living standards, more and more families are placing increasingly stringent demands on students' expectations and academic achievements. Taking English learning as an example, parents and students are not merely involved in in-school English learning but are also engrossed in the overly commercialized extracurricular English education (Smith, 2019). Middle school students engage in external English education that aligns with and deviates from the concurrent in-school curriculum objectives. Each possesses a distinct curriculum system. Students from more advantaged backgrounds gain selective advantages in shadow education, receiving a greater quantity and higher quality of educational opportunities (Wang, 2020). Behind the unequal distribution of educational resources and learning opportunities lies a challenge in achieving the goal of fair compulsory education. The problems of educational intensity and public nature regarding resource allocation and conflicting interests are unequivocally presented (Zhang & Song, 2020).

Nevertheless, students in the early stages of middle education find themselves at a crucial phase of language input. In the process of language acquisition, several researchers focus on the materials' "stimulus (S)" during language input and the individual's "response (R)." Some researchers emphasize the "grand initiator." Others believe that language possesses both social and psychological attributes. Language acquisition results from the interaction between individual cognition and the language environment, offering insights and considerations on using English learning input and achieving all-encompassing, high-quality English teaching practices and learning at the initial school stage (Ellis, 2015).

Various issues exist within the English learning journey of urban middle school students. Some students lack sufficient engagement in English learning, leading to a lack of sustained interest, thus affecting their learning outcomes (Smith & Johnson, 2019). Additionally, family background is considered an influential factor affecting students' engagement in English learning (Taylor et al., 2021). Hence, understanding the characteristics of urban middle school students and the impact of their family backgrounds on their engagement in English learning holds significant importance for guiding English teaching practices and family education (Wang & Chen, 2022). Previous research has started focusing on the relationship between students' engagement in English learning and the influence of family backgrounds (Brown & Lee, 2020). Studies have found a close correlation between students' behavior, emotions, cognition, language skills, and learning engagement, highlighting family background as an important influencing factor. However, there remain gaps in the research regarding the relationship between urban middle school students' engagement in English learning and their family backgrounds (Wang & Liu, 2019; Zhang & Guo, 2021). Specifically, there is a lack of in-depth exploration of the characteristics of urban middle school students' engagement in English learning, as well as comprehensive analyses and comparative studies of various family background factors' influence on students' engagement in English learning (Chen & Yang, 2020; Li *et al.,* 2022).

This study aims to fill these gaps by exploring the relationship between the characteristics of urban middle school students and their family backgrounds concerning their engagement in English learning. Through a profound understanding of the impact of student and family factors on learning engagement, this research seeks to provide guidance for educational practices and foster the development of students' English learning (Liu & Zhang, 2022; Luo & Wang, 2023).

1.2 Research Question

Rewriting the research questions from the perspectives of behavioral engagement, cognitive engagement, and emotional engagement:

1. Behavioral Engagement: Are there any significant associations between students' family backgrounds and their behavioral engagement in English learning, including participation in classroom activities, completion of assignments, and involvement in extracurricular language-related activities?

2. Cognitive Engagement: Which elements of family background have a significant impact on the cognitive engagement of urban middle school students in English language learning, such as their level of understanding, depth of processing, and strategic use of learning techniques?

3. Emotional Engagement: How do the family backgrounds of urban middle school students influence their emotional engagement in English language learning, including their motivation, attitude, and affective response towards the subject?

1.3 Research Hypothesis

H1: A positive correlation exists between students' family background and their behavioral engagement in English learning. Specifically, students from families with a strong educational history and cultural capital are hypothesized to exhibit higher levels of behavioral engagement, including active participation, timely completion of assignments, and frequent participation in extracurricular language-related activities.

H2: Elements of family background, such as parental educational attainment, the family's attitude towards education, and access to educational resources, are hypothesized to significantly influence the cognitive engagement of urban middle school students in English language learning. Students from families with higher levels of these factors are expected to demonstrate deeper processing, strategic learning techniques, and a higher level of understanding and comprehension.

H3: The family background of urban middle school students is hypothesized to significantly impact their emotional engagement in English learning.

Specifically, students from supportive, encouraging, and emotionally secure families are expected to exhibit higher levels of motivation, positive attitudes, and affective engagement toward English language learning than those from families with lower levels of emotional support.

These hypotheses aim to explore the influence of family background on urban middle school students' engagement in English learning from the perspectives of behavioral, cognitive, and emotional engagement. By empirically testing these hypotheses, the study aims to gain a comprehensive understanding of how family background shapes students' learning experiences and outcomes in the context of English language learning.

1.4 Research Objectives

This research seeks to analyze the impact of family background factors on students' English language learning engagement, with the following specific objectives:

1. To investigate the existence and nature of significant relationships between students' family backgrounds and their behavioral engagement in English learning. This objective explores whether specific aspects of family background, such as socioeconomic status, parental education, or cultural capital, are associated with students' participation in classroom activities, completion of assignments, and involvement in extracurricular language-related activities.

2. To identify which family background elements significantly impact the cognitive engagement of urban middle school students in English language learning. This objective seeks to determine how parental support for education, access to educational resources, and family expectations influence students' levels of understanding, depth of processing, and strategic use of learning techniques in English language acquisition.

3. To examine how the family background of urban middle school students shapes their emotional engagement in English language learning. This objective explores the influence of family dynamics, parental attitudes towards learning English, and the emotional climate at home on students' motivation, attitudes, and affective responses towards English language learning. The goal is to understand better how these emotional factors mediate students' engagement and learning outcomes.

By pursuing these research objectives, the study aims to contribute to the existing literature on the intersection of family background and student engagement in English language learning. The findings can potentially inform more targeted and effective educational interventions that address the unique needs and challenges of urban middle school students from diverse family backgrounds.

1.5 Significance of the Study

Middle school students in urban areas form an important group in English learning. Their investment in learning English is essential to developing language skills and academic achievement. With the continuous progress of global interaction and international education, studying urban middle school student's participation in English learning has important theoretical and practical significance.

1.5.1 Theoretical Significance

The theoretical significance of this research lies in its contribution to the body of knowledge regarding the intricate relationship between family background and students' engagement in English language learning. This study comprehensively explains how family-related factors shape students' academic pursuits by examining urban middle school students' behavioral, cognitive, and emotional engagement. It adds depth to the existing literature by exploring specific aspects of family background, such as socioeconomic status, parental education, and cultural capital, and their impact on students' participation in English learning activities. Furthermore, this research

contributes to the field by identifying how family background influences students' cognitive processing and strategic use of learning techniques in language acquisition.

1.5.2 Practical Significance

The practical significance of this research is twofold. Firstly, it provides educators with insights into the unique challenges and needs of urban middle school students from diverse family backgrounds. Teachers can design more targeted and inclusive teaching strategies catering to diverse learners by understanding the factors influencing students' engagement in English learning. Secondly, this research can potentially inform policymakers and educational planners about the need for equitable distribution of educational resources and support systems. By identifying the gaps in access to educational opportunities based on family background, policymakers can implement measures to ensure that all students, regardless of their socioeconomic status, have equal opportunities to engage actively in English language learning and achieve their full academic potential.

In summary, this research holds significant implications for both theory and practice. It contributes to the theoretical understanding of the role of family background in student engagement. It informs practical educational applications that promote inclusive and equitable learning environments for urban middle school students.

1.6 The Scope and Limitation of Study

1.6.1 Research Scope

This study was carried out in the central area of Wuhan. This study aims to investigate the English learning engagement of seventh-grade students in four middle schools in the Wuhan Central urban area (hereinafter referred to as "Central District of A City"). The total number of seventh-grade students in this area is about 6,000. One thousand two hundred (1,200) students are selected as samples to ensure the representativeness of the data and the influence of family-related factors on these levels of participation. The independent variables of this study include students' behavioral,

emotional, cognitive, and language skills, as well as family background (occupation, literacy, income, expectations of students' academic performance, and participation in foreign language learning), and the dependent variable is students' level of learning engagement.

1.6.2 Limitations of the Study

In researching the influence of urban middle and secondary school students' agency and family backgrounds on their engagement in English language learning, several factors may impose constraints on the study. First and foremost is the issue of sample representativeness. The sample selection may not comprehensively represent the entire population of urban middle and secondary school students. Despite employing a stratified random sampling method, research time and resource limitations make covering all schools or districts challenging. This limitation may make the research findings somewhat confined to the selected sample.

Additionally, the data collection method relies predominantly on self-reports from students and parents. This approach is susceptible to recall bias, social expectations, and subjective interpretations, thereby introducing measurement errors. Moreover, certain students might be unwilling or unable to provide accurate information for various reasons, which could undermine the reliability of the data. The data collection tools employed may also have limitations; for instance, the accuracy and effectiveness of questionnaires or assessment tools used to evaluate students' engagement in English language learning may be questionable.

Secondly, the influence of external factors cannot be disregarded. Students' engagement in English language learning may be subject to the influence of other factors, such as changes in educational policies, school environments, peer relationships, and more. These factors are challenging to control, making it difficult to ascertain whether the correlations observed in the study are genuine causal relationships between family backgrounds and students' engagement in English language learning.

Due to time constraints, the study's period may be limited. Research conducted over a short period may not capture long-term effects, especially concerning the potential enduring impact of family backgrounds on students' academic performance and English language learning.

Lastly, self-reporting bias is a concern. In their self-reports, students and parents may be influenced by societal expectations and self-presentation, potentially leading them to provide socially desirable answers rather than genuine information. The complexity of variables involved in the research hypotheses, encompassing multiple variables like students' behavioral, emotional, cognitive, and language skill engagement and family backgrounds, may result in interrelated variables, making it challenging to interpret or infer causal relationships from the research findings. Furthermore, due to cultural differences, students and families in the city center of A may possess different cultural backgrounds and values, which could impact the research findings. Thus, considering cultural factors, caution must be exercised when generalizing the study results.

1.6.3 Research Framework

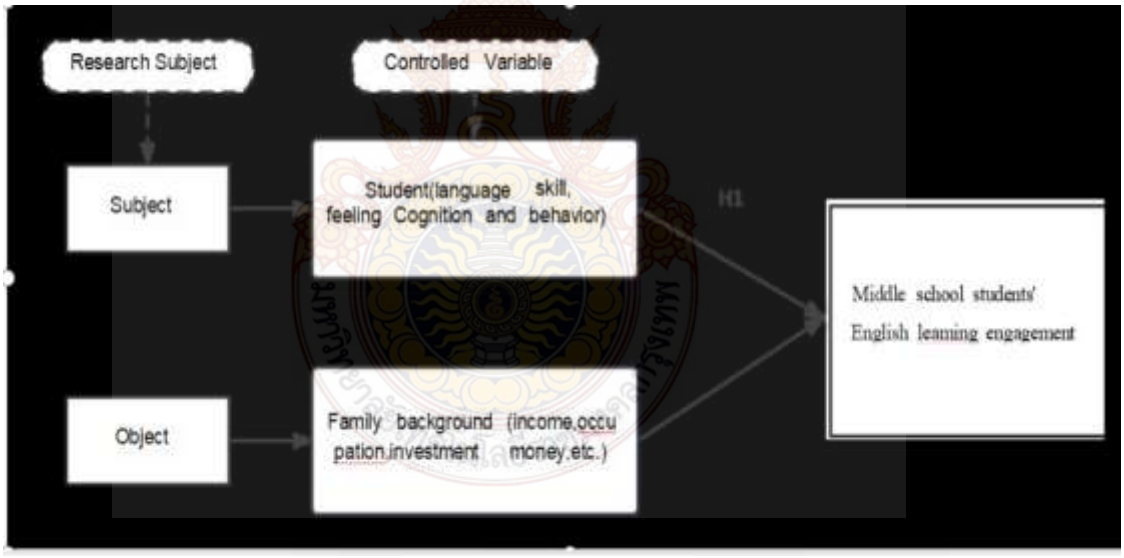

Figure 1.1 The Research Framework

1.7 Definition of Key Terms

1.7.1 Family Background

Family background is a relatively broad concept. From a broad perspective, it is a social unit composed of parents and children. In a narrow sense, it refers to the

occupation, social status, economic income, and educational level of the parents and their siblings, as well as the family's size, structure, location, and race. The connotation of family background will also change with different people, different groups, social status, educational level, and economic income. Therefore, family background should be combined with specific investigation content and groups to clarify its connotation. This study investigates whether specific family background factors influence the cognitive, behavioral, and emotional aspects that urban middle school students develop while learning English. Therefore, in this study, family background mainly includes the occupation of middle school students' parents, family cultural background and values, family income, academic expectations of family members, and their support for foreign language learning.

1.7.2 Learning Engagement

Learning engagement refers to the energy, time, interest, and effort a student demonstrates during academic activities. It reflects students' cognitive, behavioral, and emotional effort in achieving learning objectives. Learning engagement typically encompasses a student's enthusiasm, concentration, self-directed learning abilities, and involvement in learning tasks. Higher learning engagement is often associated with better academic performance and a deeper level of comprehension.

"Learning" can be broadly or narrowly defined, encompassing direct or indirect experiential learning engagement with social and academic attributes. "Engagement" implies being fully immersed and wholeheartedly involved in an activity to achieve set objectives.

Various classifications of learning engagement commonly include expressions such as “Learning/Academic/Student/School/Curriculum Engagement,” translated into different designations in Chinese, such as Learning, Academic Engagement, Participation and Degree of Participation, Curriculum Engagement, and Participation. Currently, there is no unified definition (Zhou, 2015).

For a long time, the relationship between in-school curriculum experiences and engagement in learning has been studied as a universal paradigm of learning

engagement. There is controversy over the connotations of student engagement, with three viewpoints proposed regarding learning involvement: first, as a personalized experience of curriculum learning; second, as a state of psychological investment in completing learning tasks; and third, as a state of constructing interpersonal interaction in the school context (Zeng, 2017).

The foreign scholar Erickson (1992) introduced the concept of curriculum engagement in student involvement in classroom instruction. Erickson and Schultz (1992) argue that the connection between students' social and instructional aspects is highly relevant to task completion. Fredricks et al. (2004) propose that academic engagement consists of three dimensions (cognitive, emotional, and behavioral engagement), thus broadening the perspective from a singular to a diversified view, enriching the connotations of studying children's academic engagement (Fredricks, 2004).

1.7.3 Cognitive Engagement

Cognitive engagement refers to individuals' cognitive resources and intellectual effort in learning. This encompasses cognitive activities such as thinking, analyzing, understanding, memorizing, and problem-solving. Cognitive engagement underscores the intellectual investment of learners in academic tasks, including the processing of information, absorption and comprehension of knowledge, and cognitive adaptability in addressing learning tasks.

Cognitive engagement mainly refers to students' psychological engagement in their learning process, which involves a deeper mental state. It mainly refers to students applying cognitive and metacognitive learning strategies in their learning process. Cognitive engagement is the level of learners' use of learning strategies when learning English, including cognitive strategies like previewing learning content and metacognitive strategies like making English learning plans. This study holds that cognitive engagement mainly involves English learners using cognitive and meta-cognitive strategies when learning English. Authentic engagement includes four aspects: students' self-study, helping teachers to teach English, cooperating with teachers to teach English, and helping students to learn English (Zuo, 2018).

Authentic engagement refers to the efforts made by English learners to ensure successful English teaching, such as English learners' self-efforts to learn English, helping teachers to teach English, cooperating with teachers to teach English, and helping students to learn English, and so on (Guo & Li, 2018).

1.7.4 Behavioral Engagement

Behavioral participation means that students implement a series of classroom learning behaviors under the guidance of teachers. Behavioral participation is the external manifestation of cognitive participation. It emphasizes that students must have behavioral performance and need to spend a certain amount of time. This level of participation can be used to understand students' effort and learning effectiveness in class by observation. Miselandino (1996) divides students' behavioral participation into six elements after an in-depth study: participation, persistence, escape, helplessness, participation in discussion, and concentration. This study mainly discusses the level of participation.

1.7.5 Emotional Engagement

Emotional participation refers to the emotions accompanied by students in the process of carrying out learning behaviors and cognitive activities. Students' emotional participation directly affects their cognitive participation and behavioral participation. Emotions are people's attitudes and experiences towards objective things, including motivation, interest, confidence, will, and attitude. These emotions directly affect students' learning motivation, interest, confidence, will, and attitude. If there is a lack of positive emotions, students are easy to feel tired in learning, which is not conducive to students' learning

CHAPTER II

LITERATURE REVIEW

2.1 Related Theories

Engagement in learning is a multifaceted concept encompassing learners' cognitive, affective, and behavioral aspects. To gain a deeper understanding of learning engagement, this study will interpret it from the perspectives of behaviorist theories of learning involvement, cognitive theories, self-efficacy, and self-determination theory, providing significant theoretical foundations for this research.

2.1.1 Learning Engagement

Learning engagement remains a crucial metric for assessing students' academic quality, encompassing behavioral, cognitive, and emotional dimensions. As stated by the National Survey of Student Engagement (NSSE) in the United States, "The amount of time and effort students invest in educational activities, along with the effective teaching practices provided by institutions, significantly determine the learning and development students achieve" (Kuh, 2009). Behavioral engagement refers to students' specific actions in learning, such as classroom participation and homework completion, which reflect their dedication and the importance placed on education. Cognitive engagement involves students' thought processes and learning strategies, and a high level of cognitive engagement contributes to developing a solid knowledge base and the ability to solve problems independently (Fredricks et al., 2004). Emotional engagement focuses on students' emotional experiences during the learning process, and a positive emotional state can stimulate students' motivation to learn, thus enhancing learning outcomes (Pekrun et al., 2002).

When assessing the influence of family background on middle school students' learning engagement, it is necessary to consider multiple dimensions of comprehensive learning engagement. As stated in a study, "Learning engagement is a multi-dimensional concept, encompassing behavioral, emotional, and cognitive investments" (Appleton et al., 2006).

2.1.2 Cognitive Theory

1. Cognitive Theory of Emotion

In psychological research, emotion synthesizes people's cognitive attitudes and experiences towards things. Emotions include physical feelings and cognitive factors such as evaluation and attitude. It goes from ordered emotions to disordered emotions, like fear to phobia; from short-term emotions to long-term emotions, like sadness to depression; and from positive emotions to negative emotions, like joy to sadness, which is a multi-dimensional, multifaceted psychophysiological entity. It is a kind of subjective experience (Li, 2011). According to the Cognitive Theory of Emotion, emotion is the perception of body changes, which is the feeling of one's state caused by changes in a particular situation (Lin, 2009). Moreover, people's cognitive activities are accompanied by two levels of emotion and feeling, both of which are people's subjective experiences. The expression and understanding of emotion are closely related to the body. Different types of emotions consist of human beings' power systems. Emotion is an important driving force of individual behavior, which affects the direction of people's cognitive activities, the choice of behavior, the formation of personality, and the handling of interpersonal relations. The expression and understanding of emotion are closely related to the body. Emotion plays an important role in learning. Students are always inclined to do what they like and what they are interested in and are willing to make efforts for it (Xu, 2020). That means if students are interested in or exert positive emotion on learning, they will be willing to cognitively and emotionally engage in their study. This positive emotional experience not only directly affects their learning attitude but also affects their learning engagement.

2. Cognitive Learning Theory

As mentioned, the behaviorist learning theory mainly focuses on learners' external learning behaviors to determine whether learning behaviors occur, neglecting learners' internal cognitive activity changes in the learning process. Therefore, cognitive learning theory begins to focus on learners' internal thinking processes that behaviors cannot explain. Cognitive learning theory regards learning as a process in which learners actively form or change cognitive structures through internal psychological processing or cognitive operation activities. It holds that learners'

internal mental processing or cognitive operation activities lead to the change of explicit behaviors and that the essence of learning is to establish and develop the internal cognitive structure. In addition to behavioral changes, learning is a cognitive development process of individual learners, manifested in developing knowledge, skills, abilities, understandings, opinions, or attitudes. This cognitive development process emphasizes the role of positive thinking and understanding and attaches importance to the cultivation of cognitive ability and thinking ability. The result of learning is to obtain the form or representation consistent with the objective world to acquire knowledge and use knowledge to solve problems. Therefore, learning can be represented by two processes. One is the acquisition process of learners' psychology, and the other is the interaction process between individuals and their environment. Cognitive learning theory attaches great importance to individuals' internal learning will, motivation, and initiative. It believes that once learners are motivated by internal learning motivation, they use cognitive strategies actively, set goals independently, understand task requirements, and acquire new knowledge. In the learning process, they can show more responsibility and continuity of learning, increase learning input, and have a deeper understanding of learning materials. Thus, personalized deep learning with individual value can be carried out (Xu, 2020).

Therefore, it is advised to understand cognitive engagement from the perspective of cognitive learning theory. It can be known that students are engaged in learning activities when students begin to use cognitive strategies, set goals independently, understand task requirements, and acquire new knowledge.

2.1.3 Self-Determination Theory

Self-Determination Theory (SDT), as proposed by American psychologists Edward L. Deci and Richard M. Ryan, posits that individuals are inherently proactive organisms, each possessing an inherent tendency for internal integration and the potential for self-development and self-actualization (Mihyeon, 2014). One distinctive feature of SDT is that it is not solely derived from speculative reasoning; it is grounded in the scientific method of motivation research. Deci and Ryan have substantiated their theory through extensive empirical data.

Over time, SDT has evolved internationally, forming a mature theoretical framework based on four sub-theories: Basic Psychological Needs Theory, Cognitive

Evaluation Theory, Organismic Integration Theory, and Causality Orientation Theory. Basic Psychological Needs Theory synthesizes drive theory and personality theory concepts in defining human needs (Lin, 2005). It postulates that individuals possess intrinsic, innate psychological needs. Individuals can be driven to engage in certain behaviors only when external conditions satisfy these basic psychological needs. This theory identifies three fundamental psychological needs: autonomy, competence, and relatedness. Maximum personal development can only be achieved when these three needs are met within the external environment. Failure to meet these needs hinders an individual's self-realization. Basic Psychological Needs Theory forms the cornerstone of SDT and serves as the foundation for other sub-theories. Autonomy is identified as a key element within this framework. Autonomy fulfillment allows individuals to make choices based on their genuine inner thoughts, guiding their behavior. It is crucial to note that autonomy is not synonymous with indulgence. According to Deci, genuine autonomy requires responsibility, as it entails making choices based on one's most profound and authentic inner thoughts, which includes responsibility for the happiness of others. Competence is equally significant as the second psychological need that fuels intrinsic motivation. Competence, or the perception of effectiveness, involves experiencing joy and satisfaction when completing assigned tasks and acknowledging one's capabilities. Relatedness pertains to one's connection with the external environment, precisely the degree to which an individual feels affirmation, care, support, and understanding from others. Only when these three fundamental psychological needs are satisfied can individuals experience freedom and wholesome development, ultimately leading to self-actualization.

Cognitive Evaluation Theory builds upon Basic Psychological Needs Theory to explore how external conditions affect intrinsic motivation and how they influence an individual's intrinsic motivation. Motivation sources can be categorized into motivation generated by the individual and motivation induced by external conditions. Deci argues that individuals possess inherent, intrinsic motivation, which is experienced when an individual's behavior is wholly guided by internal motivation, resulting in satisfaction and happiness. Nevertheless, research demonstrates that external events can influence intrinsic motivation, achieved through the individual's cognitive evaluation of events. External events are categorized as informational,

controlling, and motivating. Informational events can satisfy students' basic psychological needs and enhance their intrinsic motivation. Controlling events and motivating events, by contrast, fail to fulfill these basic psychological needs and weaken intrinsic motivation. Thus, the extent to which external events can enhance an individual's intrinsic motivation depends entirely on whether these events satisfy the individual's basic psychological needs.

There is a high consistency between foreign language learning motivation and individual self-determination. Students who take more responsibility for learning have a stronger connection with their learning motivation. Students with stronger motivation attribute their academic achievement to self-determination rather than external factors. Furthermore, students influenced by intrinsic motivation exhibit longer-lasting learning and greater independence. They invest more effort in their studies, employ better learning strategies, and achieve relatively better academic results than students influenced by external motivation.

2.2 Related Studies

2.2.1 Participation

Scholars at home and abroad mainly studied the concepts of learning engagement (Schaufeli et al., 2002; Fredricks et al., 2004; Chen, 2018), while some researchers focused on the measurement tools of learning engagement (Schaufeli et al., 2002; Fredricks et al., 2004; Liao, 2011; Guo & Li, 2018). Also, some researchers researched the influencing factors of learning engagement (Fredricks et al., 2004; Siu, Bakke & Jiang, 2014; Zhang, 2012), while some researchers paid attention to the current situation on learning engagement (Fredricks et al., 2004; Chen, 2016; Yang, 2018), and some researched the relationship between learning engagement and academic achievement (Mark, 2000; Liu, 2015; Zuo, 2018). Given the content of this research, the instrumental tools, influencing factors, the current situation of learning engagement, and the relationship between learning engagement and academic achievement will be summarized one by one.

Cognitive engagement refers to students' cognitive and thinking activities during the learning process, including using learning strategies, depth of thinking, and problem-solving (Fredrickset al., 2004). Emotional engagement focuses on students' emotional states, including interest, the connection of emotions with learning tasks, learning motivation, and emotional experiences (Reeve, 2012). Behavioral engagement emphasizes students' active participation in learning, including attendance, classroom participation, and the completion of learning tasks (Finn & Rock, 1997). Social engagement highlights the interaction and collaboration between students, peers, and teachers to promote learning and development (Vygotsky, 1978). Cultural engagement involves students interacting with their cultural and community backgrounds to achieve learning goals and identity (Moll, 1990). Autonomy engagement emphasizes students' voluntary participation in learning, driven by intrinsic motivation rather than external pressure (Deci & Ryan, 1985). Situational engagement focuses on the degree of student participation in different learning contexts and how the environment influences their engagement (Appleton et al., 2008). Emotional engagement includes students' emotional states, self-efficacy, academic motivation, and self-regulation (Schunk & Pajares, 2002). Dynamic engagement underscores the dynamics of the student learning process, including change and development (Skinner & Belmont, 1993). Reflective engagement focuses on students' awareness and monitoring of their learning process, including goal setting, planning, and using metacognitive strategies (Pintrich, 2002).

Learning engagement refers to students' active participation in various activities, initiative, cooperation with others, problem-solving, and the creation of new knowledge (Kram, 2009). Learning engagement is the time and energy students invest in learning, including cognitive, emotional, and behavioral aspects (Kuh, 2000). Learning engagement is students' interest and enthusiasm for learning content and their emotional investment in learning (Binney, 1995). Learning engagement is students' autonomous selection of learning content and methods based on their interests, needs, and values and taking responsibility for their learning (Noddings, 1985). Learning

engagement is when students continually challenge themselves, explore new areas and knowledge, and derive a sense of achievement and satisfaction (Watson-Smith, 2013). Learning engagement is students' deep involvement in various activities, including thinking, discussing, practicing, and reflecting, to achieve deep processing and understanding of knowledge (Virgillito, 2015). Learning engagement is students' belief in their ability to complete learning tasks, contributing to their investment of more energy and effort (Bandura, 1977). Learning engagement is when students interact and collaborate with others, sharing knowledge, experiences, and viewpoints to facilitate each other's learning and development (Atkinson, 1968). Learning engagement is when students explicitly set their learning goals and dedicate effort and time to them while maintaining focus and pursuing those goals during the learning process (Deci, 1985). Learning engagement is students' positive emotional experience, including interest, satisfaction, and achievement in their learning content.

2.2.2 Cognitive Learning

Constructivist learning theory posits that learning is an active process in which learners construct knowledge and understanding through active engagement (Piaget, 1970). Information processing learning theory focuses on how learners receive, store, retrieve, and use information, emphasizing the importance of cognitive processes (Atkinson & Shiffrin, 1968). Social cognitive learning theory emphasizes that learners acquire knowledge and skills, including self-regulation and imitation, by observing others' behaviors and experiences (Bandura, 1986). Emotional intelligence learning involves the development of cognitive and emotional skills to facilitate personal and social success (Salovey & Mayer, 1990). Gestalt psychologists' problem-solving learning theory highlights how learners face and solve problems to foster innovation and critical thinking. Metacognitive learning focuses on how learners monitor and adjust their cognitive processes, including goal setting and strategy use (Flavell, 1976). Concept mapping learning is a knowledge organization method that helps learners understand and remember information through graphical representations (Novak &

Gowin, 1984). Interdisciplinary learning involves cross-disciplinary interactions to promote comprehensive understanding and problem-solving abilities (Breck, 1985). Experiential learning emphasizes that learners gain knowledge through practical experience and manipulation to promote deep understanding (Dewey, 1916). Inquiry-based learning emphasizes active engagement in the learning process through questioning, exploration, discovery, and problem-solving (Bruner, 1961).

Behaviorist psychologist Watson (2013) considered cognitive learning as the internal process of reacting to environmental stimuli and acquiring new knowledge through experience or practice. Anderson (2022) views cognitive learning as decoding, encoding, and storing received information for retrieval and application when needed. Cognitive learning is the ongoing process of constructing and refining individual cognitive structures through assimilation and accommodation mechanisms (Piaget, 1970). Knowledge learning involves representing and storing knowledge in various ways during the learning process for retrieval and application as needed. Cognitive learning entails awareness and regulation of an individual's cognitive processes and outcomes, including planning, monitoring, and evaluation (Flavell, 1976). Cognitive learning involves applying effective cognitive strategies and methods such as induction, deduction, analogy, and more to enhance learning outcomes (Bruner, 1961). Cognitive learning is the active process of constructing the meaning of knowledge in the learning process, including decoding, associating, and integrating new knowledge. Cognitive learning involves connecting knowledge with application contexts to achieve knowledge transfer and application. Cognitive learning means using various cognitive resources and external support, such as tools, technology, others, and the environment, to achieve effective learning and problem-solving. Cognitive learning is how living organisms acquire knowledge and enhance their abilities by accumulating experience and genetic selection mechanisms during environmental adaptation.

2.2.3 Family Background

The family, the smallest unit of society, can be deemed the starting point and crucial foundation for individual development. The influences in this process stem from various sources, encompassing the family's social, economic, and cultural status and the urban-rural dual structure (Bourdieu, 1986). Building upon this theory, Coleman further proposed the division of family capital into three components: economic, cultural, and social. Family economic capital reflects the family's economic situation, and family cultural capital reflects the family's educational achievements and cultural background. In contrast, social capital mirrors the family's social class and social network relations. In this context, the term "poor family" denotes those groups disadvantaged in terms of family capital (Coleman, 1988).

Coleman noted in his renowned work, "Social Capital in the Creation of Human Capital," "Family social capital has a significant impact on the cognitive and non-cognitive development of children and adolescents, particularly in the context of unequal educational opportunities." Often, low-income families lack adequate economic, cultural, and social capital, which hinders their ability to provide a favorable educational environment and resources for their children, subsequently affecting their academic achievements and prospects.

Family background, a significant environmental factor in students' growth, profoundly influences middle school students' learning engagement. Research has shown that "family support, parental involvement, and family resources are positively correlated with students' academic achievements and learning engagement" (Fan & Chen, 2001). Family background encompasses various aspects such as family economic status, parents' education level, and cultural atmosphere. These factors influence students' educational resources, learning opportunities, and growth environment, further shaping their learning engagement. Families with highly educated parents often provide students with more academic support and guidance, enhancing their cognitive engagement. In contrast, families with an intense cultural atmosphere cultivate students' interest in learning and emotional engagement.

Therefore, when exploring the influence of family background on the learning engagement of middle school students, it is imperative to consider the combined effects of family economic capital, cultural capital, and social capital. Only

by comprehensively assessing the multifaceted impact of family capital can we better understand the challenges students from disadvantaged families face in the educational process. This, in turn, will facilitate the development of targeted educational policies and practices to promote educational equity and enhance educational quality.

When assessing the influence of family background on middle school students' learning engagement, it is necessary to construct an assessment system that includes indicators such as family economic status, parents' education level, family cultural atmosphere, learning resources, and learning opportunities. Thus, a more comprehensive evaluation of the impact of family background on students' learning engagement can be achieved. Such evaluation provides important references for educators to develop targeted intervention measures, ultimately enhancing education quality (Wang & Guo, 2019; Zhang et al., 2021).

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study explores the relationship between middle school students' English learning engagement and family backgrounds. Specifically, the research aims to understand the level of English learning engagement among middle school students in city A and to investigate the role of family background factors in this engagement process.

This study comprises two middle factors: student learning engagement behaviors and family background factors. Firstly, it involves a systematic analysis of four variables: behavior, emotion, cognition skills of students, and students' participation. The aim is to explore the correlation between these factors and students' engagement in English learning, thereby understanding how these factors impact English learning. Secondly, from the perspective of family background variables, the study analyzes the impact of these family background factors on students' English learning. This analysis thoroughly examines family members' situations, expectations regarding students' academic performance, and involvement in foreign language learning, among other factors.

The National Survey of Student Engagement (NSSE):

The National Survey of Student Engagement (NSSE) in the United States is a significant assessment tool focused on college students' learning engagement. However, its principles and indicators can also inform and guide secondary education. NSSE emphasizes students' active participation and interaction with their academic environment as critical factors in enhancing educational quality.

For secondary school students, studies aligned with the NSSE framework suggest that classroom engagement, extracurricular activities, teacher-student

interactions, and peer learning significantly impact academic achievement and personal growth (Fredricks et al., 2004). Classroom engagement extends beyond passive listening to active questioning, discussion, and collaborative problem-solving. Extracurricular activities provide opportunities for skill development, socialization, and exploring interests and hobbies. Teacher-student interactions foster trust and mentorship, while peer learning encourages cooperation and healthy competition.

The NSSE assessment dimensions, including academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment, offer a valuable framework for evaluating and improving the quality of secondary education (Kuh et al., 2007). Schools can utilize these indicators to gather data on student engagement, informing curriculum design, instructional methods, and school climate enhancements aimed at holistic student development (Christenson et al., 2006). Depending on the student group, different schools represent a mix of socioeconomic backgrounds, academic competence, and cultural diversity, providing a comprehensive view of student engagement across diverse demographic groups. Therefore, the NSSED survey was conducted in Yuxi No. 2 middle school and Optical No. 1 middle school in 4 middle schools in the city center of A.

3.2 Research Population and Samples

3.2.1 Population

According to the research requirements, this study selects middle school students' learning engagement as an example, focusing on English language learning content and referring to the curriculum standards for Grade 7 of middle school English as the academic requirements. Since Grade 7 is a preferable stage for benchmark testing in middle school English learning, the study intends to focus on English learning engagement as the primary focus among Grade 7 students in the central urban area of

City A. The plan is to distribute a questionnaire to approximately 2,000 middle school students. The questionnaire answered by Grade 7 students was selected as a valid questionnaire.

3.2.2 Samples

The sample collection for this study was conducted in four middle schools within the central area of City A. According to the English learning participation rate of Grade 7 students in the central area of City A, i.e., 50%, the allowable error range is ±5%. At the 95% confidence level, the sample size was calculated to be 384.16. To estimate the proportion of Grade 7 students engaged in English learning with a 95% confidence level and a ±5% margin of error, a sample of at least 385 students would be required. Considering additional factors, such as multi-school effects or the complexity of other variables, a larger sample size may be needed to ensure the robustness and representativeness of the findings. Therefore, a sample of 1,200 students was selected from 2,000 students to ensure statistically representative and generalizable research results. The data collection and sample selection for this study were obtained from four middle schools in the central area of City A, namely, Yucai Middle School, Experimental Middle School, Yucai Second Middle School, and Guanggu First Middle School, with each school contributing 300 samples.

3.2.3 Sampling Methods

This research employed stratified random sampling to obtain the study sample. The sampling process was as follows:

1. Stratification of the Sampling Frame

The research was focused on the central area of City A, where four middle schools were selected as the sampling sources: Yucai Middle School, Experimental Middle School, Yucai Second Middle School, and Guanggu First Middle School. Each school was further stratified into four levels according to its comprehensive school rating, which took into account aspects such as academic performance, teaching resources, and school management.

2. Determination of Sample Size Per School

Since the total sample size required for the study was 1,222 students, considering the balance and representativeness, we calculated the approximate number of students selected from each school.

Table 3.1 Sample Selection

School Name	Number of Selected Students
Yucai Middle School	305
Experimental Middle School	305
Yucai Second Middle School	306
Guanggu First Middle School	306

Taking into account the principles of randomness and representativeness in sampling, it was finally determined that 305 students would be selected from both Yucai Middle School and Experimental Middle School, while 306 students would be selected from each of Yucai Second Middle School and Guanggu First Middle School. This distribution method ensures an approximate evenness and guarantees that the total sample size is 1,222.

Meanwhile, during the random sampling process within each school, the rules of using a random number generator or other random selection tools were still adhered to. This ensures that the selected samples can represent the diversity of seventh-grade students in terms of gender, academic performance, family background, and other aspects, thus meeting the research requirements for sample representativeness and randomness.

3.3 Data Collection

The data in this study were collected to examine the influence between elementary school students' English language learning engagement in the central area of City A, China, the students' agency, and their family backgrounds. The middle data collection method employed in this research involved the distribution of questionnaires to seventh-grade elementary school students. This series of questionnaire surveys were conducted from November 2023 to January 2024.

The survey was administered using a paper-based questionnaire and a tool known as "Wenjuan Zhixing" (Questionnaire Star). Wenjuan Zhixing is a professional online survey, testing, measurement, and polling platform that is highly popular in mainland China. It focuses on providing users with a range of powerful and user-friendly services, including online questionnaire design, data collection, customized reports, and survey result analysis.

Compared to traditional survey methods and other survey websites or systems, Wenjuan Zhixing offers clear speed, ease of use, and cost-effectiveness advantages. As a result, it has been widely adopted by numerous companies and individuals. The sample for this study was derived from the "Wenjuan Zhixing" survey conducted in City A, China, and many students were invited to participate.

3.4 Research Instrument

3.4.1 Questionnaire Design

Building on the theoretical research discussed earlier, the author categorizes English learning engagement behaviors into three dimensions: behavior, emotion, and cognition. By the requirements of the seven to nine levels of curriculum standards, teaching and assessment activities should be conducted concerning students' language proficiency and the corresponding levels. Considering the practical circumstances of China's regional and ethnic diversity, as well as the uneven development of the

economy and education, and recognizing that the curriculum standards do not uniformly specify the content range of first-level English language knowledge, this study excludes the dimension of investment in English knowledge within the curriculum from the dimensions of learning engagement.

English learning engagement is conceptualized across three dimensions (Smith & Johnson, 2020): behavioral, emotional, and cognitive, and grounded in English language skills. Firstly, within the behavioral dimension, measurements encompass students' proactivity in English-related activities during the learning process, their diligence in addressing English challenges, and their level of focus during English learning (Taylor, 2019). These metrics collectively illuminate the depth and breadth of students' interaction with English learning materials (Brown & Lee, 2021).

Secondly, student interaction with peers and teachers constitutes a significant aspect of social interaction, influencing students' interest, confidence, and learning expectations (Anderson & Thompson, 2022). This study explores students' participation in group work, their openness during teacher interactions, and how these interactions shape their emotional experiences in English learning (Williams, 2020).

Thirdly, the cognitive dimension involves students' self-efficacy, motivation, and learning strategies (Wang & Chen, 2022). Within this framework, the quality of students' interaction with content, the efficiency of their collaboration with others, and the depth of their communication with teachers will be carefully considered to assess how these elements collectively contribute to their cognitive development (Wang & Chen, 2022).

Lastly, the quality of discussion serves as a critical indicator of student engagement and will permeate various sections of the questionnaire design. High-quality discussions foster deep learning and enhance students' critical thinking skills. Hence, the questionnaire will include items addressing discussion frequency, the richness of discussion content, and the application of discussion outcomes (Harris & Graham, 2021). Furthermore, the options for each item are structured based on the

specific requirements that students need to fulfill as they approach the conclusion of the initial stage of the first-level objectives (Green et al., 2023).

The variables related to family background influencing factors mainly encompass the parents' occupations, cultural education levels, the English language learning environment at home, family economic status, financial investment by the family in extracurricular English learning, participation in extracurricular English learning activities, the duration of sustained involvement in extracurricular English learning, intentions for future academic advancement, educational expectations, attention to English learning, support for English learning, daily participation in English learning activities, and situations where family expenses for extracurricular English training are reduced, among others.

In summary, the establishment of measurement variables in this study is derived from historical literature, relevant questionnaires used in previous research, and the National Survey of Student Engagement (NSSE) integration, which emphasizes students' active participation in the learning process and interaction with the campus. These elements are considered crucial for enhancing the quality of education.

3.4.2 Questionnaire Structure

The formal survey questionnaire for this study consists of two main sections, totaling 53 questions. The specific structure is as follows:

The first section comprises information on student demographics (gender and grade) and factors related to family background. This section encompasses details about the student's parents' occupations, their level of cultural education, the English language learning environment at home, family economic status, financial investments in extracurricular English language learning, participation in extracurricular English language learning, the amount of time dedicated to extracurricular English language learning, future academic intentions, educational aspirations, attention to English language learning, support for English language learning, participation in daily English language learning activities or communication, reductions in family spending on

extracurricular English language training, reductions in time spent on extracurricular English language training, reductions in the amount of English homework, and reductions in actual learning commitment. (Note: In the preliminary stages, the 'grade' item was added to the questionnaire to exclude the possibility of responses from individuals not in the seventh grade, considering the use of online survey distribution).

The second section is based on the NSSE (National Survey of Student Engagement) theory to demonstrate students' engagement in English learning. This section categorizes behavioral, emotional, and cognitive investments in English learning and the key aspects of student engagement: interaction with content, interaction with others, interaction with teachers, and the quality of discussions. This section has three dimensions: behavioral, emotional, and cognitive engagement. Using a Likert-type 5-point questionnaire, each dimension contains 10 questions, addressing various factors such as classroom learning, teacher-student interaction, time allocation for learning, learning strategies and skill development, learning concentration, emotional behaviors like enjoyment, confidence and expectations, self-efficacy, and motivational cognitive behaviors. The final three questions focus on the frequency of discussions.

All indicators were averaged for future comparisons, resulting in the formula: "English learning engagement = (behavioral engagement + emotional engagement + cognitive engagement) / 3." The average score for each dimension is calculated by summing the scores of all measurement indicators within that dimension and dividing by the number of measurement indicators. The overall questionnaire structure is presented in Table 3.2.

Table 3.2 Questionnaire Structure Part 1

Category	Number	Variable Name	Variable Description
Family Background	Q1	Gender	1=Man；2=Woman
	Q2	Grade	1=Seventh grade；2=Other
	Q3	Mother and Father's occupation	1=unemployed 2=Ordinary employees 3=Middle and high management personnel/professional and technical personnel 4=public functionary
	Q4	Family economic situation	1=is weak 2=same as 3=is strong
	Q5	Expenditure on off-campus English learning and education (￥ / year, according to the highest annual monetary expenditure in history)	1= not have 2=1-3000 3=3001-8000 4=8001-15000 5=＞15001
	Q6	Parent's educational level	1=High School or Technical Secondary School 2=junior college 3=undergraduate course 4=Graduate student or above
	Q7,	Family English Language Learning Environment	1= very bad 2= not very good 3=same as 4=preferably 5=beyond compare
	Q8	My family's attention to my English learning	1=is very low 2=lower 3=same as 4=higher 5=very high
	Q9	Family member's support for my English learning	1=is very low 2=lower 3=same as 4=higher 5=very high

Table 3.2 Questionnaire Structure Part 1 (continued)

Category	Number	Variable Name	Variable Description
	Q10	My family will help or communicate with me daily in English learning activities.	1=very few 2=less 3=same as 4=more 5=a lot of

Table 3.3 Questionnaire Structure Part 2

English Learning Investment			
Category	**Number**	**Variable Name**	**Variable Description**
Behavioral Involvement	Q21	I take the initiative to participate in English activities more frequently	1 = Not at all 2 = Slightly 3 = Somewhat 4 = Moderately 5 = Very Much
	Q22	I am diligent in overcoming problems in learning English.	
	Q23	I have an intense concentration on learning English.	
	Q24	I have often worked with my learning partners to complete my English tasks.	
	Q25	I spoke actively in the English class.	
	Q26	I have a positive attitude towards my English learning tasks.	
	Q27	I learn English independently after class frequently.	
	Q28	I have participated in the English corner or related activities many times.	
	Q29	I have a strong willingness to use English for daily communication.	
	Q30	I think it is difficult to learn English.	

Table 3.3 Questionnaire Structure Part 2 (continued)

English Learning Investment			
Category	**Number**	**Variable Name**	**Variable Description**
Emotional, Engagement	Q31	My interest in learning English.	1 = Not at all; 2 = Slightly; 3 = Somewhat; 4 = Moderately; 5 = Very Much
	Q32	I have the pleasure of learning English together with my classmates.	
	Q33	I like taking the English class.	
	Q34	The sense of achievement that learning English study brings me.	
	Q35	My satisfaction with my English scores	
	Q36	I like to communicate in English with teachers.	
	Q37	I feel confident in my English study.	
	Q38	I have good expectations for English learning.	
	Q39	I have the pleasure of working with others.	
	Q40	I am interested in the English language culture.	
Cognitive Engagement	Q41	I have confidence in my ability to complete English learning tasks	1 = Not at all; 2 = Slightly; 3 = Somewhat; 4 = Moderately; 5 = Very Much
	Q42	I believe that English learning is crucial for my future development.	
	Q43	I can formulate and execute effective English learning plans.	
	Q44	I can deeply understand the meanings of English texts and materials.	
	Q45	I can actively ponder the problems encountered in English learning and attempt to solve them.	
	Q46	When collaborating with classmates, I can contribute my opinions and ideas effectively.	

Table 3.3 Questionnaire Structure Part 2 (continued)

English Learning Investment			
Category	**Number**	**Variable Name**	**Variable Description**
	Q47	When discussing English problems with teachers, I can express my opinions clearly and accurately.	
	Q48	In English class, I actively participate in discussions and attempt to contribute insightful opinions.	
	Q49	I believe that discussions in English class are constructive for my learning.	
	Q50	Through English learning, I have improved my critical thinking skills.	
Frequency and Depth of Discussion	Q51	In the English class, the frequency of participation in the discussions is high.	1 = Not at all; 2 = Slightly; 3 = Somewhat; 4 = Moderately; 5 = Very Much
	Q52	I think the discussion content in the English class is meaningful.	
	Q53	I often apply class discussion to my studies.	

In this study, the second section of the questionnaire on learning engagement employed the Likert five-point scale developed by Likert. The scale ranged from "1" indicating "strongly disagree" to "5" indicating "strongly agree." Specifically, the behavioral engagement assessment comprised 9 items, including 3 on active learning, 3 on diligent learning, and 3 on focused learning. Emotional engagement was measured using 9 items, with 3 items related to interest in learning, 3 items concerning confidence in learning, and 3 items linked to expectations about learning. The cognitive engagement assessment was divided into 9 items, encompassing 3 items on self-efficacy, 3 on motivation, and 3 on learning strategies. Additionally, the NSSE (National Survey of Student Engagement) interactive engagement assessment included 3 items addressing the frequency and depth of discussions.

Furthermore, the measurement of family background influencing factors in this study was included because it was considered that parents of urban elementary school students might have higher academic expectations for their children, and parents also place importance on their children's learning engagement. Students from different family backgrounds may exhibit significant differences in their engagement in foreign language learning. Therefore, this questionnaire also included information about students' family backgrounds. To safeguard the students' privacy, this questionnaire was administered anonymously.

3.5 Content Validity and Reliability

3.5.1 Content Validity

This study examines the issue of content validity through the careful design and selection of survey questions and structures related to the English learning engagement of middle school students in the central area of City A and their relationship with student subjectivity and their family background. The interviews each utilize an Index of Item-Objective Congruence (IOC) table to verify content validity. In the IOC evaluation, A score of +1 indicates that the question aligns with the objectives. A score of 0 indicates uncertainty about alignment with the objectives. A score of -1 indicates that the question does not align with the objectives.

Table 3.4 Content Validity

IOC on Academic Pressure			**Expert 1**	**Expert 2**	**Expert 3**	**IOC index**
Behavioral Involvement	Q1	I take the initiative to participate in English activities more frequently	1	1	1	1
	Q2	I am diligent in overcoming problems in English learning.	1	1	1	1
	Q3	I have a strong concentration on learning English.	0	1	1	0.67
	Q4	I have often worked with my learning partners to complete my English tasks.	1	1	1	1

Table 3.4 Content Validity (continued)

		IOC on Academic Pressure	Expert 1	Expert 2	Expert 3	IOC Index
	Q5	I spoke actively in the English class.	1	1	1	1
	Q6	I have a positive attitude towards my English learning tasks.	1	1	1	1
	Q7	I learn English independently after class frequently.	0	1	1	0.67
	Q8	I have participated in the English corner or related activities many times.	1	1	1	1
	Q9	I have a strong willingness to use English for daily communication.	1	1	1	1
	Q10	I think it is challenging to learn English.	1	1	1	1
	Q11	I have an interest in learning English language	1	1	1	1
	Q12	I have the pleasure of learning English together with my classmates.	1	1	1	1
	Q13	I like taking the English class.	1	1	1	1
	Q14	The sense of achievement that learning English brings me.	1	1	1	1
Emotional, Engagement	Q15	My satisfaction with my English scores	1	1	1	1
	Q16	I like to communicate in English with teachers.	1	1	1	1
	Q17	I feel confident in my English studies.	0	1	1	0.67
	Q18	I have good expectations for English learning.	1	1	1	1
	Q19	I have the pleasure of working with others.	1	1	1	1
	Q20	I am interested in the English language culture.	1	1	1	1
	Q21	I have confidence in my ability to complete English learning tasks	1	1	1	1
	Q22	I believe that English learning is crucial for my future development	1	1	1	1
	Q23	I can formulate and execute effective English learning plans.	1	1	1	1
	Q24	I can deeply understand the meanings of English texts and materials.	1	1	1	1
	Q25	I can actively ponder the problems encountered in English learning and attempt to solve them.	0	1	1	0.67
Cognitive Engagement	Q26	When collaborating with classmates, I can contribute my opinions and ideas effectively.	1	1	1	1
	Q27	When discussing English problems with teachers, I can express my opinions clearly and accurately.	1	1	1	1
	Q28	In English class, I actively participate in discussions and attempt to contribute insightful opinions.	1	1	1	1
	Q29	I believe that discussions in English class are very helpful for my learning.	1	1	1	1

Table 3.4 Content Validity (continued)

		IOC on Academic Pressure	Expert 1	Expert 2	Expert 3	IOC Index
Frequency and Depth of Discussion	Q30	Through English learning, I have improved my critical thinking skills.	1	1	1	1
	Q31	In the English class, the frequency of participation in the discussions is high	1	1	1	1
	Q32	I think the discussion content in the English class is meaningful.	1	1	1	1
	Q33	I often apply class discussion to my studies.	0	1	1	0.67

3.5.2 Reliability

The test will use p (item difficulty) and r (item discrimination) to verify reliability, ensuring each question meets specific reliability criteria.

Criteria for p and r are as follows:

p (Item Difficulty): Indicates the percentage of respondents who answer each item correctly; ideal values typically range between 0.3 and 0.7 for balanced difficulty.

r (Item Discrimination): Measures how well an item differentiates between high and low performers, with ideal values generally above 0.3 for acceptable discrimination.

The questionnaire and interview will use Cronbach's alpha to verify their reliability.

Together, these metrics help ensure reliability across all assessment methods. The questionnaire and interview will use "Cronbach alpha" to verify the reliability.

Table 3.5 Reliability

Classification		Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Behavioral Involvement	Q1	I take the initiative to participate in English activities more frequently	0.588	0.914	0.912
	Q2	I am diligent in overcoming problems in English learning.	0.532	0.915	
	Q3	I have a strong concentration on learning English.	0.527	0.915	
	Q4	I have often worked with my learning partners to complete my English tasks.	0.457	0.917	
	Q5	I spoke actively in the English class.	0.719	0.91	
	Q6	I have a positive attitude towards my English learning tasks.	0.682	0.911	
	Q7	I learn English independently after class frequently.	0.703	0.911	
	Q8	I have participated in the English corner or related activities many times.	0.719	0.91	
Emotional, Engagement	Q9	I have a strong willingness to use English for daily communication.	0.682	0.911	0.921
	Q10	I think it is challenging to learn English.	0.703	0.911	
	Q11	I have an interest in learning English language	0.673	0.912	
	Q12	I have the pleasure of learning English together with my classmates.	0.629	0.913	
	Q13	I like taking the English class.	0.603	0.914	
	Q14	The sense of achievement that learning English brings me.	0.641	0.912	
	Q15	My satisfaction with my English scores	0.61	0.913	
	Q16	I like to communicate in English with teachers.	0.448	0.917	
	Q17	I feel confident in my English studies.	0.448	0.918	
	Q18	I have good expectations for English learning.	0.344	0.92	
Cognitive Engagement	Q19	I have the pleasure of working with others.	0.925	0.945	095
	Q20	I am interested in the English language culture.	0.809	0.949	
	Q21	I have confidence in my ability to complete English learning tasks	0.735	0.951	
	Q22	I believe that English learning is crucial for my future development	0.71	0.952	
	Q23	I can formulate and execute effective English learning plans.	0.787	0.949	
	Q24	I can deeply understand the meanings of English texts and materials.	0.754	0.95	
	Q25	I can actively ponder the problems encountered in English learning and attempt to solve them.	0.74	0.951	
	Q26	When collaborating with classmates, I can contribute my opinions and ideas effectively.	0.755	0.95	

Classification		Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Frequency and Depth of Discussion	Q27	When discussing English problems with teachers, I can express my opinions clearly and accurately.	0.751	0.95	0.95
	Q28	In English class, I actively participate in discussions and attempt to contribute insightful opinions.	0.788	0.949	
	Q29	I believe that discussions in English class are very helpful for my learning.	0.805	0.949	
	Q30	Through English learning, I have improved my critical thinking skills.	0.755	0.95	
	Q31	In the English class, the frequency of participation in the discussions is high	0.74	0.951	
	Q32	I think the discussion content in the English class is meaningful.	0.755	0.95	
	Q33	I often apply class discussion to my studies.	0.751	0.95	

This passage regarding "Table 3.5 Reliability" presents the reliability analysis data for dimensions related to English learning. The behavioral involvement dimension encompasses 10 items, such as taking the initiative to participate in English activities and actively speaking in class. The corrected item-total correlation coefficients of each item range from 0.457 to 0.719, and the Cronbach's Alpha if each item is deleted ranges from 0.91 to 0.917. The overall Cronbach's Alpha is 0.912, indicating good consistency and reliability among the items within this dimension.

The Emotional Engagement dimension includes 20 items, such as interest in English learning and the pleasure of learning English with classmates. The corrected item-total correlation coefficients range from 0.344 to 0.925, and Cronbach's Alpha, if each item is deleted, ranges from 0.912 to 0.949. The overall coefficient is 0.921, suggesting that the data in this dimension is also relatively reliable.

For the Cognitive Engagement dimension, the 10 items involve confidence in the ability to complete English learning tasks and formulate learning plans. The corrected item-total correlation coefficients range from 0.71 to 0.805, and Cronbach's Alpha, if each item is deleted, ranges from 0.949 to 0.952. The overall coefficient is 0.95, demonstrating a high degree of internal consistency.

In the Frequency and Depth of Discussion dimension, the 3 items have corrected item-total correlation coefficients ranging from 0.74 to 0.755, and the Cronbach's Alpha, if each item is deleted, ranges from 0.95 to 0.951. The overall coefficient is 0.95, which also shows good reliability. Overall, the question settings in each dimension of this survey are highly reliable and consistent when measuring aspects of English learning.

3.6 Data Analysis

3.6.1 Descriptive Statistical Analysis

This study conducted a descriptive statistical analysis, including calculating means and standard deviations, on various dimensions and measurement indicators related to fourth-grade elementary school students' engagement in English learning. Additionally, a one-sample T-test was utilized to compare students' English learning engagement to understand the current level of engagement among seventh-grade elementary school students. The levels of English learning engagement were categorized as follows: 1-1.999 as "very low engagement," 2-2.999 as "low engagement," 3-3.999 as "high engagement," and 4-5 as "very high engagement." Furthermore, this study used the midpoint of 3 as the test value. It employed a one-sample T-test to investigate the statistical significance of English learning engagement among seventh-grade elementary school students.

3.6.2 Inferential Statistics

Within the category of inferential statistics, various statistical methods are used according to the research hypothesis. This study focuses on college art students, and the specific assumptions and statistical applications are as follows:

H1: A positive correlation exists between students' family background and their behavioral engagement in English learning. Specifically, students from families with a strong educational history and cultural capital are hypothesized to exhibit higher

levels of behavioral engagement, including active participation, timely completion of assignments, and frequent participation in extracurricular language-related activities.

Gender differences were analyzed using an independent sample t-test. Grades were explored through one-way analysis of variance (One-way ANOVA).

H2: Elements of family background, such as parental educational attainment, the family's attitude towards education, and access to educational resources, are hypothesized to significantly influence the cognitive engagement of urban middle school students in English language learning. Students from families with higher levels of these factors are expected to demonstrate deeper processing, strategic learning techniques, and a higher level of understanding and comprehension.

Mother and Father's occupation 、 Family economic situation 、 Expenditure on off-campus English learning and education、Parent's educational level 、Family English language learning environment、My family's attention to my English learning、Family member's support for my English learning、My family will help or communicate with me in English learning activities every day were explored through one-way analysis of variance (One-way ANOVA).

H3: The family background of urban middle school students is hypothesized to impact their emotional engagement in English learning significantly. Specifically, students from supportive, encouraging, and emotionally secure families are expected to exhibit higher levels of motivation, positive attitudes, and affective engagement toward English language learning than those from families with lower levels of emotional support.

Multiple linear regression analysis was used to explore the influence of the family background of urban middle school students, which is hypothesized to impact their emotional engagement in English learning significantly.

CHAPTER IV

ANALYSIS RESULTS

The main objective of this study was to investigate the influence of demographic variables, family background, behavioral input, emotional input, and student cognitive level on the learning input of middle school students. The statistical symbols and implications used for data analysis and interpretation are as follows:

N = number of population

n = number of samples

$\bar{X}$ = Mean

SD = Standard Deviation

t = t-Distribution

F = F-Distribution

SS = Sum of Squares

MS = Mean of Square

df = Degree of freedom

LSD = Least Significant Difference

Sig. = The level of statistics significance to test the hypothesis

* = The statistical significance is at the 0.05 level

4.1 The Descriptive Statistics

This part will present the results based on the research objectives by splitting into 2 parts as follows:

Part 1: Analysis of the family background data of respondents' demographic students.

Part 2: Analysis results of learning behavior participation, cognitive

participation, emotional input, and performance level of classroom participation.

4.1.1 Demographic Factor

Table 4.1 Descriptive Statistics of the Demographic Factors

Gender	**Frequency**	**Percent (%)**
Male	652	63.4
Female	570	46.6
Total	1222	100
Grade	**Frequency**	**Percent (%)**
Seventh grade	1129	94.2
Other	71	5.8
Total	1222	100

Descriptive statistics of demographic factors, especially the gender and age distribution in the study population, are presented according to Table 4.1. The Table is divided into two parts: one is gender, and the other is age. In the gender distribution, there were 1222 individuals in the study population with approximately comparable male and female distributions. In terms of gender, there are 652 males, accounting for 63.4%, 570 females, accounting for 46.6%, and a total of 1222 people, accounting for 100%.In terms of grade, there are 1129 seventh-grade students, accounting for 94.2%, 71 students from other grades, accounting for 5.8%, and the total number is also 1222 people, accounting for 100%.

4.1.2 Descriptives of Dependent and Independent Variables

1. Descriptives of Dependent Variable

Table 4.2 Descriptive Statistics of Demographic Factors for Grade 7 Students

Gender	**Frequency**	**Percent (%)**
Male	360	64.5
Female	198	35.5
Total	558	100
Parents career	**Frequency**	**Percent (%)**
Unemployed	24	4.4
Ordinary Employees	245	43.7
Middle and High Management Personnel/ Professional and Technical Personnel	242	43.2
Public Functionary	47	8.7
Total	558	100

Family Economic Status	**Frequency**	**Percent (%)**
Weak	280	50.2
Same as	207	37.1
Strong	71	12.7
Total	558	100

Expenditure on Off-Campus English Learning and Education	**Frequency**	**Percent (%)**
Not have	94	16.8
1-3000	304	54.5
3001-8000	103	18.5
8001-15000	45	8.1
＞15001	12	2.1
Total	558	100

Table 4.3 Descriptive Statistics of Demographic Factors for Grade 7 Students (continued)

Mother and Father's Educational Level	**Frequency**	**Percent (%)**
High School or Technical Secondary School	71	12.7
Junior College	279	50
Undergraduate Course	107	19.2
Graduate Student or Above	101	18.1
Total	558	100

Based on the overall data screening, 558 valid data from Grade 7 students were collected in this study.

Table 4.2 provides detailed data on demographic factors for seventh-year secondary school students, including gender, parental occupation, family economic status, after-school English learning and education expenditure, and parental education level. Of the 558 seventh-grade students, the vast majority were male, with 360 (64.5%) and 198 (35.5%) female students. In the parent occupation category, the average employee (ordinary employees) accounted for the largest proportion, with 245 (43.7%). It was followed by middle-level and senior management personnel/professional and technical personnel (middle and high management personnel/professional and technical personnel), with 242 people (43.2%). Civil servants (public functionaries) and the unemployed (unemployed) accounted for 8.7% and 4.4%, respectively. This distribution reflects the diversity of parental occupations, but lay staff and professional technicians dominate. Regarding family financial status, 280 students (50.2%) had a weak family financial status. There were 207 (37.1%) students with average financial status, while only 12.7% had strong financial status. This indicates that a significant portion of students in this seventh-grade group came from families with relatively poor economic conditions. Most students (54.5%) spend

1-3,000 yuan on out-of-school English learning and education. Students who spent between 3001 and 8000 yuan accounted for 18.5%, while only students who spent more than 8000 yuan (8.1% + 2.1%). It is worth noting that 16.8% of the students did not spend on off-campus English learning and education. These data reflect the differences in students 'spending on out-of-school English learning and education expenditure. However, most students' spending is at low and low levels, matching their family economic situation.

Regarding parents' education level, junior college degrees (junior college) accounted for the most significant proportion, with 279 students (50%). High school or technical secondary school certificates (high school or technical secondary school) and bachelor's degrees (undergraduate courses) accounted for 12.7% and 19.2%, respectively. Parents with a graduate degree or above accounted for 18.1%. This distribution indicates that the overall education level of parents is high, mainly college degrees, and a considerable proportion of bachelor's degrees or above, so it may be more inclined to intra-family education.

2. Descriptive of Independent Variables

The following Table provides descriptive statistics on learning behavior engagement, cognitive engagement, emotional engagement, and classroom engagement level performance.

Table 4.3 Descriptive Statistical Study of Engagement in Learning Behavior

	1	2	3	4	5	Mean	SD	Meaning	Rank
Q1. Initiative to participate in English activities more frequently	51	93	145	208	61	3.24	1.134	Moderate	9
Q2. Diligent to overcome English problems	40	110	142	170	96	3.31	1.177	Moderate	6

Table 4.3 Descriptive Statistical Study of Engagement in Learning Behavior (continued)

	1	2	3	4	5	Mean	SD	Meaning	Rank
Q3. Have a strong concentration in English learning	61	111	137	169	80	3.17	1.219	Good	4
Q4. Many times, to complete English tasks	44	87	151	205	71	3.31	1.12	Moderate	10
Q5. Spoke actively in the English class	50	92	183	171	62	3.18	1.115	Moderate	8
Q6. Positive attitude toward English learning tasks	45	75	151	188	99	3.4	1.162	Moderate	7
Q7. Learn English independently after class frequently	42	90	141	175	110	3.4	1.188	Moderate	5
Q8. Participated in the English corner many times	67	81	147	178	85	3.24	1.225	Good	3
Q9. Use English for daily communication	82	65	106	186	119	3.35	1.331	Good	1
Q10. Difficult to learn English	72	113	115	181	77	3.14	1.256	Good	2

Table 4.3 presents data on various indicators regarding English learning attitude and behavior, including the mean value, standard deviation, degree level, and ranking. The Table lists ten indicators related to English learning behavior, which mainly focus on students' initiative, persistence, attention, task completion, classroom interaction, learning attitude, and extracurricular learning in English learning. The average value (mean) was between 3.14 and 3.4, indicating that students had moderate to good performance on each indicator. Among them, the average value of "positive attitude towards English learning tasks" and "learn English independently after class frequently" is the highest (3.4), indicating that students generally have a positive

attitude towards English learning tasks and can learn English frequently by themselves after class. "Difficult to learn English" has the lowest average value (3.14), which may mean that students generally believe that English learning is somewhat tricky. The standard deviation (SD) was between 1.115 and 1.331, indicating some degree of difference in students' performance on different indicators. "Use English for daily communication" has the largest standard deviation (1.331), meaning that students are the most dispersed, with some students using English frequently for daily communication, while others using little or none. The standard deviations between "participated in the English corner many times" and "have a strong concentration in English learning" were small (1.12 and 1.219, respectively), indicating a relatively consistent performance in these indicators.

It is divided into the "Good" and "Moderate" categories. Most indicators were classified as "Moderate," indicating moderate student performance in these areas. "Have a strong concentration in English learning" and "participated in the English corner many times" were named "Good," meaning that students performed well in both areas. According to the mean, "Use English for daily communication" ranked the highest, indicating that students performed the best of all indicators. "Learn English independently after class frequently" and "Positive attitude towards English learning tasks" were also ranked higher (5 and 7, respectively), indicating that students performed well in self-learning and learning attitude after class. Students have the lowest ranking on the "Difficult to learn English" indicator, which may mean that students generally regard English learning as challenging.

In summary, the data in Table 4.3 shows students' performance in many aspects of English, including initiative, attitude, and extracurricular learning. Although the students perform well in some aspects, some aspects need further improvement. Educators and teachers can develop targeted teaching strategies based on this data to help students better master English.

Table 4.4 Descriptive Statistical Study of Learning Affective Engagement

	1	2	3	4	5	Mean	SD	Meaning	Rank
Interest in learning English language	49	36	205	147	121	3.46	1.158	Moderate	3
Learning English together with classmates	27	93	140	203	95	3.44	1.101	Moderate	7
Like taking an English class	57	85	105	220	91	3.36	1.216	Good	2
The sense of achievement in learning English	22	76	171	197	92	3.47	1.044	Moderate	10
Satisfaction with my English scores	42	65	163	186	102	3.43	1.139	Moderate	4
Like to communicate in English with teachers	64	71	139	175	109	3.35	1.25	Good	1
I feel confident in my English study	64	71	139	175	109	3.53	1.093	Moderate	8
Have good expectations for English learning	27	62	176	192	101	3.5	1.061	Moderate	9
Have a pleasure working with others	34	81	160	180	103	3.42	1.128	Moderate	6
Interested in the English language culture	34	81	160	180	103	3.51	1.129	Moderate	5

Table 4.4 presents descriptive statistics on learning emotional engagement. The Table lists 10 indicators related to learning emotional participation, including interest in different learning activities, learning with classmates, classroom preferences, the sense of achievement, scoring satisfaction, communicating with the teacher, confidence, expectations for future learning, the pleasure of cooperation with others, and interest in English culture. Most indicators averaged between 3.35 and 3.53, indicating a generally higher student emotional engagement in these areas.

"I feel confident in my English study" and "Have good expectations for English learning" had the highest mean values (3.53 and 3.5), meaning that students are very confident in their English learning and have high expectations for future learning. The mean values of "The sense of achievement in learning English" and "Have a

pleasure working with others" were slightly lower (3.47 and 3.42), which may indicate that although students are happy in learning English and working with others, this feeling may not be as strong as others. The standard deviation was generally between 1.044 and 1.25, suggesting some differences in students' emotional engagement across the indicators. The standard deviation between "Like to communicate English with teachers" and "I feel confident in my English study" was the largest (1.25), indicating that students have significant differences in communicating English with their teachers and confidence in their learning in English. Also, "The sense of achievement in learning English" and "Have good expectations for English learning" had the minimum standard deviations (1.044 and 1.061), meaning that students had relatively consistent emotional engagement in these areas. Most of the indicators were classified as "Moderate" (moderate level), indicating that students' emotional engagement in these areas was generally moderate. "Like to communicate in English with teachers" and "Like taking the English class" were rated as "Good," indicating that students had high emotional engagement in communicating in English with teachers and liking English classes, according to the average "Like to communicate in English with teachers," followed by “Like the English class.” Among all the indicators, students felt the lowest sense of achievement in learning English, which may mean that teachers need to pay more attention to enhancing students' achievement in learning English.

Table 4.5 Descriptive Statistical Study of Cognitive Engagement in Learning

	1	**2**	**3**	**4**	**5**	**Mean**	**SD**	**Meaning**	**Rank**
I have confidence in my ability to complete English learning tasks	49	57	175	186	91	3.38	1.138	Moderate	7
I believe that English learning is crucial for my future development	83	47	161	167	100	3.28	1.274	Good	1
I can formulate and execute effective English learning plans	64	71	188	155	80	3.21	1.182	Moderate	5

Table 4.5 Descriptive Statistical Study of Cognitive Engagement in Learning (continued)

	1	2	3	4	5	Mean	SD	Meaning	Rank
I can deeply understand the meanings of English texts and materials	74	47	164	184	89	3.3	1.223	Good	3
I can actively ponder the problems encountered in English learning and attempt to solve them	47	66	205	172	68	3.27	1.088	Moderate	10
When collaborating with classmates, I can contribute my opinions and ideas effectively	47	58	204	167	82	3.32	1.108	Moderate	8
When discussing English problems with teachers, I can express my opinions clearly and accurately	61	62	166	185	84	3.3	1.18	Moderate	6
In English class, I actively participate in discussions and attempt to contribute insightful opinions	84	54	146	192	82	3.24	1.255	Good	2
I believe that discussions in English class are very helpful for my learning	39	87	182	172	78	3.29	1.104	Moderate	9
Through English learning, I have improved my critical thinking skills	71	66	172	167	82	3.22	1.212	Good	4

Table 4.5 provides descriptive statistics on the student's cognitive engagement in learning. The indicators listed in the Table mainly focus on students' cognitive participation in the process of English learning, including confidence in their ability, faith in future development, the ability to develop and perform a learning plan, the ability to understand text materials, the ability to solve problems, the ability to interact with classmates and teachers, and participation in classroom discussion and the development of critical thinking. The mean values for most indicators ranged between 3.21 and 3.38, suggesting that students generally had above-average performance in these cognitive engagement aspects. The relatively high mean values of "I have confidence in my ability to complete English learning tasks" and "I can deeply understand the meanings of English texts and materials" (3.38 and 3.30) indicate that

students have strong confidence in completing English learning tasks and understanding English texts. "I can actively ponder the problems encountered in English learning and attempt to solve them" and "Through English learning, I have improved my critical thinking skills" have relatively low mean values (3.27 and 3.22), which may mean that there is room for improvement in active thinking and problem solving and improving their critical thinking skills through English learning.

The standard deviation ranged from 1.088 to 1.274, indicating some differences in students' performance on different cognitive participation indicators. Thus, "I believe that English learning is crucial for my future development" and "When collaborating with classmates, I can contribute my opinions and ideas effectively" have a significant standard deviation (1.274 and 1.108). This shows that students differ greatly in their belief in future development and effective communication with their classmates. Minor standard deviations for "I can actively ponder the problems encountered in English learning and attempt to solve them" and "I believe that discussions in English class are very helpful for my learning" (1.088 and 1.104) show that students' cognitive participation in active thinking and classroom discussion on help is more consistent. Most indicators were classified as "Moderate" (moderate level), indicating that students were generally moderate in cognitive participation. "I believe that English learning is crucial for my future development" and "In English class, I actively participate in discussions and attempt to contribute insightful opinions" were rated as "Good," and this indicates that students' belief in future development and cognitive participation in classroom participation are high. Based on the average, students had the highest confidence in completing English learning tasks ("I have confidence in my ability to complete English learning tasks") and the lowest ability to improve critical thinking skills through English learning ("Through English learning, I have improved my critical thinking skills"). This ranking reflects the relative strength of students in different cognitive participation, and teachers can adjust their teaching

strategies according to this information to improve students' overall cognitive participation.

Table 4.6 Descriptive Statistical Study of Learning Classroom Engagement

	1	2	3	4	5	Mean	SD	Meaning	Rank
In the English class, the frequency of participation in the discussions is high	65	32	122	120	219	3.71	1.345	Good	2
I think the discussion content in the English class is meaningful	54	51	81	177	195	3.73	1.289	Good	3
I often apply the class discussion to my study	59	74	81	146	198	3.63	1.359	Good	1

Table 4.6 presents the descriptive statistics on student participation in English classes: "In the English class, the frequency of participation in the discussions is high," with a mean of 3.71 and a standard deviation of 1.345, indicating that most students discuss participation frequently in English classes, but there are some differences in participation between students. The "Meaning" (degree level) of this indicator was rated as "Good," indicating that students generally believed that their discussion participation frequency in class was positive. The project was ranked 2 among all indicators, indicating that students thought participation in class discussions was relatively frequent, but there was still room for improvement.

For the indicator "I think the discussion content in the English class is meaningful," the mean value was 3.73, and the standard deviation was 1.289, indicating that students generally believe the discussion in the English class is meaningful. This index's "Meaning degree level" was also rated as "Good," which further confirmed the consistency of students' positive evaluation of the discussion content. The item ranked third, indicating that while students find the discussion meaningful, it may be less important than other indicators.

The mean value of "I often apply the class discussion to my study" was 3.63, and the standard deviation was 1.359, indicating that students more frequently apply the classroom discussion content to their study. However, different students differ in the application degree. The "Meaning" of this indicator was also rated as "Good," indicating that students generally considered it beneficial to apply classroom discussion to individual learning. Of all the metrics, this project had the highest "Rank" ranking of 1, reflecting students agreeing to combine classroom discussions with individual learning and finding it helpful for their learning.

4.2 Inferential Statistics

In this survey, the variables were divided into gender, which is further divided into two discrete variables, and family economic status, which is divided into three discrete variables. Parents' occupation and education level are divided into four discrete variables, and the behavioral input, emotional input, cognitive performance, and classroom participation indicators are divided into five discrete variables. To assess the influence of secondary students' family background on English learning engagement, learning engagement with independent sample t-test and one-way ANOVA was used.

One-way ANOVA and canonical correlation analysis were used to identify and quantify factors, including family background, learning behavior, emotional participation, cognitive performance, and classroom participation.

This section presents the study results based on the study objectives, with the following two parts:

Part I: To evaluate the influence of gender on student learning investment, an independent sample t-test was used to evaluate the influence of occupation, education level, economic status, and learning expenditure on the English learning behavior of middle school students, as well as one-way analysis of variance (ANOVA).

Part 2: Multiple linear regression analysis was used to identify and quantify factors such as learning behavior, emotional input, cognitive performance, and classroom participation for middle school students.

4.2.1 Factors that Affect Learning Behavior

H 1: A positive correlation exists between students' family background and their behavioral engagement in English learning. Specifically, students from families with a strong educational history and cultural capital are hypothesized to exhibit higher levels of behavioral engagement, including active participation, timely completion of assignments, and frequent participation in extracurricular language-related activities.

H1a: The effects of gender differences on students' English learning behavior vary.

Table 4.7 Independent Sample T-test for Gender Differences Between the Two Groups

Learning Behavior Engagement Degree	Gender	N	Mean	Std. Deviation	t-value	df	Sig.
Initiative to participate in English activities more frequently	Male	360	3.26	1.131	0.46	556	0.646
	Female	198	3.21	1.142	0.459	402.381	0.647
Diligent to overcome English problems	Male	360	3.38	1.176	1.811	556	0.071
	Female	198	3.19	1.171	1.813	407.376	0.071
Have a strong concentration in English learning	Male	360	3.13	1.254	-1.157	556	0.248
	Female	198	3.25	1.152	-1.186	435.774	0.236
Many times to complete English tasks	Male	360	3.31	1.091	0.16	556	0.873
	Female	198	3.3	1.174	0.157	381.516	0.875

Table 4.7 Independent Sample T-test for Gender Differences Between the Two Groups (continued)

Learning Behavior Engagement Degree	Gender	N	Mean	Std. Deviation	t-value	df	Sig.
Spoke actively in the English class	Male	360	3.23	1.075	1.155	556	0.249
	Female	198	3.11	1.183	1.124	374.264	0.262
Positive attitude toward English learning tasks	Male	360	3.46	1.131	1.634	556	0.103
	Female	198	3.29	1.21	1.602	383.187	0.11
Learn English independently after class frequently	Male	360	3.41	1.198	0.329	556	0.742
	Female	198	3.37	1.171	0.331	413.612	0.741
Participated in the English corner many times	Male	360	3.23	1.251	-0.203	556	0.84
	Female	198	3.25	1.178	-0.206	427.036	0.837
Use English for daily communication	Male	360	3.4	1.3	1.277	556	0.202
	Female	198	3.25	1.384	1.253	384.81	0.211
Difficult to learn English	Male	360	3.13	1.229	-0.304	556	0.761
	Female	198	3.16	1.308	-0.299	385.021	0.765

Table 4.7 gives the independent sample t-test for sex differences between the two groups and demonstrates sex differences in learning behavior engagement between two groups (men and women). According to the data in the Table, the different learning behavioral engagement measures did not show significant sex differences between males and females.

First, we observed that all indicators' mean (mean) was close between the sexes, and the standard deviation (std. deviation) was similar, indicating a similar distribution and dispersion of learning behavioral engagement in males and females. In

terms of the t-value (t-value), the absolute t-value of most indicators is less than 2, which usually means that the difference between the two groups is insignificant. Further, the significance level (Sig.) or p-value showed that all indicators except "diligent in overcoming English problems" and "positive attitude towards English learning tasks" had p-values greater than 0.05, which further confirms that the sex difference was not significant for these indicators. For both "diligent in overcoming English problems" and "positive attitude towards English learning tasks," although the t-value is relatively high, the p-value is still greater than 0.05, meaning that despite weak differences, these differences are not statistically significant.

H1b: Parental occupational differences affect learning behavior differently.

One-way ANOVA was used to analyze data to assess the difference in mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.8 Results of One-Way ANOVA for Parental Occupational Differences Affecting Performance in Learning Behavior

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Initiative to participate in English activities more frequently	Between Groups	1.358	6	0.226	0.174	0.984
	Within Groups	714.981	551	1.298		
	Total	716.339	557			
Diligent to overcome English problems	Between Groups	7.078	6	1.18	0.851	0.531
	Within Groups	763.904	551	1.386		
	Total	770.982	557			
Have a strong concentration in English learning	Between Groups	5.187	6	0.864	0.579	0.747
	Within Groups	822.297	551	1.492		
	Total	827.484	557			

Table 4.8 Results of One-Way ANOVA for Parental Occupational Differences Affecting Performance in Learning Behavior (continued)

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Many times to complete English tasks	Between Groups	3.398	6	0.566	0.449	0.846
	Within Groups	695.584	551	1.262		
	Total	698.982	557			
Spoke actively in the English class	Between Groups	3.328	6	0.555	0.444	0.849
	Within Groups	688.659	551	1.25		
	Total	691.987	557			
Positive attitude toward English learning tasks	Between Groups	6.653	6	1.109	0.82	0.554
	Within Groups	744.818	551	1.352		
	Total	751.471	557			
Learn English independently after class frequently	Between Groups	2.746	6	0.458	0.322	0.925
	Within Groups	782.725	551	1.421		
	Total	785.471	557			
Participated in the English corner many times	Between Groups	0.658	6	0.11	0.072	0.999
	Within Groups	834.641	551	1.515		
	Total	835.299	557			
Use English for daily communication	Between Groups	3.065	6	0.511	0.286	0.944
	Within Groups	983.79	551	1.785		
	Total	986.855	557			
Difficult to learn English	Between Groups	9.883	6	1.647	1.044	0.396
	Within Groups	869.214	551	1.578		
	Total	879.097	557			

According to Table 4.8 above, parents' career differences affect children's learning behavior performance, as the one-way variance analysis results show parents' occupational differences in children's learning behavior. Through one-way variance

analysis (ANOVA), we can observe variation between parents' occupational groups in the learning behavior investment index.

First, from the sum of squares of "Between Groups," except "difficult to learn English," which was relatively high (9.883), indicating that the effect of parental occupational differences on most measures of learning behavior engagement was not significant. Among them, the "Between Groups" square sum of indicators such as "participated in the English corner many times" and "spoke actively in the English class" is closer to 0, further indicating that these behaviors are minimally affected by parental occupation. Secondly, looking at the F value, we can see that most F values are less than 1, which means that parental occupational differences do not significantly affect these indicators of learning behavior engagement. Only "difficult to learn English" has an F value close to 1 (1.044), but it is still not customarily considered statistically significant, finally, from the Sig. Value (i.e., p-value), the p-value of all indicators was much more significant than 0.05, which further confirms that the effect of parental occupational differences on children's learning behavior engagement is not significant. This means that, in most cases, there was no significant difference in the child's performance per learning behavior engagement, regardless of parental occupation.

H1c: Differences in Education Level Have Different Influences on Learning Behavior.

One-way ANOVA was used to analyze data to test the difference of mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.9 Results of the Analysis of Differences in Parental Education Affecting Children's Learning Behavior

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Initiative to participate in English activities more frequently	Between Groups	2.136	3	0.712	0.552	0.647
	Within Groups	714.203	554	1.289		
	Total	716.339	557			
Diligent to overcome English problems	Between Groups	2.159	3	0.72	0.519	0.67
	Within Groups	768.823	554	1.388		
	Total	770.982	557			
Have a strong concentration in English learning	Between Groups	0.652	3	0.217	0.146	0.933
	Within Groups	826.832	554	1.492		
	Total	827.484	557			
Many times to complete English tasks	Between Groups	2.44	3	0.813	0.647	0.585
	Within Groups	696.543	554	1.257		
	Total	698.982	557			
Spoke actively in the English class	Between Groups	0.992	3	0.331	0.265	0.851
	Within Groups	690.996	554	1.247		
	Total	691.987	557			
Positive attitude toward English learning tasks	Between Groups	3.271	3	1.09	0.807	0.49
	Within Groups	748.2	554	1.351		
	Total	751.471	557			
Learn English independently after class frequently	Between Groups	0.605	3	0.202	0.142	0.935
	Within Groups	784.866	554	1.417		
	Total	785.471	557			
Participated in the English corner many times	Between Groups	1.938	3	0.646	0.429	0.732
	Within Groups	833.362	554	1.504		
	Total	835.299	557			
Use English for daily communication	Between Groups	4.144	3	1.381	0.779	0.506
	Within Groups	982.711	554	1.774		
	Total	986.855	557			
Difficult to learn English	Between Groups	1.69	3	0.563	0.356	0.785
	Within Groups	877.407	554	1.584		
	Total	879.097	557			

Table 4.9 above shows the analysis results of differences in parents' educational level affecting children's learning behavior, showing the influence of parents' educational level differences on children's investment in learning and behavior in detail. From the results of one-way analysis of variance (ANOVA), we can observe the difference in the index of learning behavior investment between different parent groups.

First, from the sum of squares of "Between Groups," the values of most indicators are relatively small, indicating that the effect of parental literacy differences on these indicators is insignificant. Specifically, except for "positive attitude towards English learning tasks" and "use English for daily communication," the "Between Groups" square sum of the other indicators is less than 1, which further confirms the above view. Secondly, looking at the F value, we can see that most F values are less than 1 and far less than the F value usually considered statistically significant (e.g., F = 3.84, corresponding to the significance level of $\alpha = 0.05$). This further confirms that the influence of parental education differences on children's learning behavior engagement is not significant. Finally, from the Sig. Value (i.e., p-value): the p-value of all indicators is more significant than 0.05, which means that, statistically, we cannot believe that differences in parental literacy significantly influence these measures of learning behavior engagement.

H1d: The difference in family economic status differs in the influence of students' English learning behavior.

One-way ANOVA was used to analyze data to evaluate the difference in mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.10 Analysis Results of Differences in Family Economic Status Affecting Students' English Learning Behavior

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Initiative to participate in English activities more frequently	Between Groups	2.136	3	0.712	0.552	0.647
	Within Groups	714.203	554	1.289		
	Total	716.339	557			
Diligent to overcome English problems	Between Groups	2.159	3	0.72	0.519	0.67
	Within Groups	768.823	554	1.388		
	Total	770.982	557			
Have a strong concentration in English learning	Between Groups	0.652	3	0.217	0.146	0.933
	Within Groups	826.832	554	1.492		
	Total	827.484	557			
Many times, to complete English tasks	Between Groups	2.44	3	0.813	0.647	0.585
	Within Groups	696.543	554	1.257		
	Total	698.982	557			
Spoke actively in the English class	Between Groups	0.992	3	0.331	0.265	0.851
	Within Groups	690.996	554	1.247		
	Total	691.987	557			
Positive attitude toward English learning tasks	Between Groups	3.271	3	1.09	0.807	0.49
	Within Groups	748.2	554	1.351		
	Total	751.471	557			
Learn English independently after class frequently	Between Groups	0.605	3	0.202	0.142	0.935
	Within Groups	784.866	554	1.417		
	Total	785.471	557			
Participated in the English corner many times	Between Groups	1.938	3	0.646	0.429	0.732
	Within Groups	833.362	554	1.504		
	Total	835.299	557			

Table 4.10 Analysis Results of Differences in Family Economic Status Affecting Students' English Learning Behavior (continued)

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Use English for daily communication	Between Groups	4.144	3	1.381	0.779	0.506
	Within Groups	982.711	554	1.774		
	Total	986.855	557			
Difficult to learn English	Between Groups	1.69	3	0.563	0.356	0.785
	Within Groups	877.407	554	1.584		
	Total	879.097	557			

Table 4.10 presents the analysis results of the differences in family economic status affecting students' English learning behavior. This Table shows the influence of family economic status differences on students' English learning behavior input. Through the results of one-way analysis of variance (ANOVA), we can observe differences in family performance.

First, from the sum of squares of "Between Groups," the values of most indicators are relatively small, indicating that the effect of differences in household economic status on these indicators is insignificant. Specifically, except for the slightly higher "positive attitude towards English learning tasks" and "use English for daily communication," the "Between Groups" square sum is smaller, which preliminarily indicates that the family's economic situation may have less influence on students' English learning behavior. Secondly, looking at the F value, we can see that most F values are less than 1, further confirming that the effect of family economic status difference on students' English learning behavior investment is insignificant. Specifically, except that the F value of "positive attitude towards English learning tasks" is 0.807, slightly greater than 1, all other indicators have F values far less than 1, further indicating that the family economic status has little influence on students'

English learning behavior. Finally, from the value of Sig. (i.e., p-value), the p-value of all indicators is much greater than 0.05, which means that statistically, we cannot believe that differences in family economic status significantly impact these learning behavior engagement indicators. In other words, there was no significant difference in student performance in English learning behavior engagement regardless of family economic status.

H1e: Difference in the impact of off-campus English learning education expenditure on students' English learning behavior.

One-way ANOVA was used to analyze data to test the difference of mean values among more than 2 data groups at the statistically significant level of 0.05.

Table 4.11 Analysis of Results of Off-Campus English Learning Education Expenditure Affecting Students' English Learning Behavior

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Initiative to participate in English activities more frequently	Between Groups	1.965	4	0.491	0.38	0.823
	Within Groups	714.374	553	1.292		
	Total	716.339	557			
Diligent to overcome English problems	Between Groups	3.779	4	0.945	0.681	0.605
	Within Groups	767.203	553	1.387		
	Total	770.982	557			
Have a strong concentration in English learning	Between Groups	5.263	4	1.316	0.885	0.473
	Within Groups	822.221	553	1.487		
	Total	827.484	557			
Many times to complete English tasks	Between Groups	2.166	4	0.542	0.43	0.787
	Within Groups	696.816	553	1.26		
	Total	698.982	557			
Spoke actively in the English class	Between Groups	3.156	4	0.789	0.633	0.639
	Within Groups	688.832	553	1.246		
	Total	691.987	557			

Table 4.11 Analysis of Results of Off-Campus English Learning Education Expenditure Affecting Students' English Learning Behavior (continued)

Learning Behavior Engagement Degree	Gender	Sum of Squares	df	Mean Square	F	Sig.
Positive attitude toward English learning tasks	Between Groups	2.237	4	0.559	0.413	0.799
	Within Groups	749.234	553	1.355		
	Total	751.471	557			
Learn English independently after class frequently	Between Groups	3.093	4	0.773	0.547	0.702
	Within Groups	782.378	553	1.415		
	Total	785.471	557			
Participated in the English corner many times	Between Groups	1.89	4	0.472	0.314	0.869
	Within Groups	833.409	553	1.507		
	Total	835.299	557			
Use English for daily communication	Between Groups	2.723	4	0.681	0.382	0.821
	Within Groups	984.132	553	1.78		
	Total	986.855	557			
Difficult to learn English	Between Groups	5.842	4	1.461	0.925	0.449
	Within Groups	873.255	553	1.579		
	Total	879.097	557			

Table 4.11 shows the analysis results of the influence of off-campus English learning education expenditures on students' English learning behavior. This table explores the influence of off-campus English learning education expenditures on students' English learning behavior investment by one-way analysis of variance (ANOVA). As can be seen from the data in the Table, the differences between the different education expenditure groups are not significant.

First of all, from the perspective of the sum of squares of "Between Groups," except for the sum of squares of "difficult to learn English," which is relatively high (5.842), the sum of squares of other indicators is small, which preliminarily shows that the expenditure of off-campus English learning education may have a small impact on the investment of most learning behavior. Secondly, by looking at the F value, we can find that the F value of all indicators is less than 1, which further confirms that the

influence of off-campus English learning education expenditure on students' learning behavior investment is not significant. Specifically, even the F value of "difficult to learn English" (0.925) is much smaller than that usually considered statistically significant (e.g., 1.96). Finally, from the value of Sig. (i.e., p-value), the p-value of all indicators is much greater than 0.05, which means that statistically, we cannot think that the expenditure of out-of-school English learning education significantly impacts these learning behavior investment indicators. In other words, there was no significant difference in their performance on English learning behavioral engagement, regardless of their spending on out-of-school English learning.

H1f: Family support significantly impacts students' English learning behavior.

Discussion from four aspects: 1. Learning environment; 2. Attention degree of family members in English learning; 3. Support degree of family members for English learning; and 4. Family members will use typical correlation analysis to conduct English learning guidance or communication.

Table 4.12 Typical Correlation Results

Typical Correlation							
Relativity	**Characteristic value**		**Wilke statistics**	**F**	**Molecular df**	**Denominator df**	**Sig.**
1	0.555	0.444	0.513	9.936	40	2064.64	0
2	0.398	0.188	0.741	6.379	27	1592.323	0
3	0.309	0.106	0.88	4.49	16	1092	0
4	0.163	0.027	0.973	2.128	7	547	0.039

After a canonical correlation analysis, the resulting data revealed the linear association between the two sets of variables and their statistical significance. First, from the value of canonical correlation, although the correlation between each pair of

canonical variables gradually weakened, they showed a positive correlation trend. This suggests a systematic, direction-consistent pattern of association in the set of variables studied. In particular, the correlation of the first canonical pair reached 0.555, indicating a moderate strength of linear relationship between these two groups of variables. Second, from the eigenvalue perspective, the first pair of canonical variables could explain 44.4% of the variation in the original variables, showing high explanatory power. However, with the increasing order of the typical variables, the eigenvalues gradually decreased, indicating that the explanatory power of the subsequent typical variables was gradually weakened for the original variable. This suggests we should focus on the information revealed by the first pair of canonical variables when interpreting and analyzing the relationship between these two sets of variables.

Furthermore, the significance level of the Wilke statistics and F values indicates that all canonical correlations reached are statistically significant. This means we can reject the null hypothesis that the correlation in the current and subsequent rows is considered zero. Therefore, there is good reason to believe a significant linear association exists between these two sets of variables.

4.2.2 Affect Cognitive Participation in Learning

Hypothesis 2: Family background factors will significantly impact the cognitive participation of English learning among urban middle school students.

First, one-way ANOVA was used to estimate the relationship between the independent variables of the family essential factors and the dependent variables of cognitive participation in English learning. Second, the typical correlation analysis is used from four aspects: 1. learning environment; 2. English learning; 3. family support for English learning; 4. The family will conduct English learning guidance or communication.

H2a: Parents' occupation influenced the work performance of students' cognitive participation in learning English, and the data were analyzed by one-way ANOVA.

Table 4.13 Analysis of Results of Parental Occupational Differences Influencing Students' English Learning Behavior

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I have confidence in my ability to complete English learning tasks	Between Groups	8.68	6	1.447	1.118	0.35
	Within Groups	713.013	551	1.294		
	Total	721.694	557			
I believe that English learning is crucial for my future development	Between Groups	2.751	6	0.458	0.28	0.946
	Within Groups	900.748	551	1.635		
	Total	903.498	557			
I can formulate and execute effective English learning plans	Between Groups	5.582	6	0.93	0.664	0.679
	Within Groups	772.303	551	1.402		
	Total	777.885	557			
I can deeply understand the meanings of English texts and materials	Between Groups	13.489	6	2.248	1.511	0.172
	Within Groups	819.531	551	1.487		
	Total	833.02	557			
I can actively ponder on the problems encountered in English learning and attempt to solve them	Between Groups	8.032	6	1.339	1.133	0.341
	Within Groups	650.714	551	1.181		
	Total	658.746	557			
When collaborating with classmates, I can contribute my opinions and ideas effectively	Between Groups	9.229	6	1.538	1.257	0.276
	Within Groups	674.349	551	1.224		
	Total	683.579	557			

Table 4.13 Analysis of Results of Parental Occupational Differences Influencing Students' English Learning Behavior (continued)

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
When discussing English problems with teachers, I can express my opinions clearly and accurately	Between Groups	5.862	6	0.977	0.699	0.65
	Within Groups	769.953	551	1.397		
	Total	775.815	557			
In English class, I actively participate in discussions and attempt to contribute insightful opinions	Between Groups	5.595	6	0.933	0.589	0.739
	Within Groups	872.226	551	1.583		
	Total	877.821	557			
I believe that discussions in English class are very helpful for my learning	Between Groups	10.479	6	1.747	1.439	0.198
	Within Groups	668.906	551	1.214		
	Total	679.385	557			
Through English learning, I have improved my critical thinking skills	Between Groups	6.377	6	1.063	0.722	0.632
	Within Groups	811.511	551	1.473		
	Total	817.887	557			

According to Table 4.13, we performed a one-way analysis of variance (one-way ANOVA) to assess whether parental occupation significantly affected the work performance of the students' cognitive participation in English learning. One-way ANOVA was used to test whether significant differences existed between three or more independent groups. In the "Between Groups" and "Within Groups" columns in the analysis Table, we observe that the mean square (Mean Square) of "Between Groups" is usually smaller while the mean square of "Within Groups" is larger. The F value (i.e., the ratio of mean square between groups and mean square within groups) was used to test for significant differences. In most cases, the F value is low, and the corresponding significance (Sig.) value is greater than 0.05. This suggests that parental

occupation had no significant influence on various indicators of cognitive participation in English learning. Considering the above analysis, we can conclude that in this study, parental occupation did not significantly affect the work performance of students' cognitive participation in English learning. This may be because other factors (such as students' interest, learning motivation, and teaching methods) play a more important role in cognitive participation in English learning. However, this does not mean that parental occupation does not affect students' English learning; no significant effect was found in this study.

H2b: Students' cognitive participation in learning English and the data were analyzed by one-way ANOVA

Table 4.14 Analysis Results of Differences in Parents' English Learning Behaviors

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I have confidence in my ability to complete English learning tasks	Between Groups	1.689	3	0.563	0.433	0.729
	Within Groups	720.005	554	1.3		
	Total	721.694	557			
I believe that English learning is crucial for my future development	Between Groups	0.441	3	0.147	0.09	0.965
	Within Groups	903.057	554	1.63		
	Total	903.498	557			
I can formulate and execute effective English learning plans	Between Groups	5.949	3	1.983	1.423	0.235
	Within Groups	771.936	554	1.393		
	Total	777.885	557			
I can deeply understand the meanings of English texts and materials	Between Groups	6.377	3	2.126	1.425	0.235
	Within Groups	826.642	554	1.492		
	Total	833.02	557			

Table 4.14 Analysis Results of Differences in Parents' English Learning Behaviors (continued)

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I can actively ponder the problems encountered in English learning and attempt to solve them	Between Groups	3.803	3	1.268	1.072	0.36
	Within Groups	654.942	554	1.182		
	Total	658.746	557			
When collaborating with classmates, I can contribute my opinions and ideas effectively	Between Groups	2.515	3	0.838	0.682	0.563
	Within Groups	681.064	554	1.229		
	Total	683.579	557			
When discussing English problems with teachers, I can express my opinions clearly and accurately	Between Groups	2.542	3	0.847	0.607	0.611
	Within Groups	773.274	554	1.396		
	Total	775.815	557			
In English class, I actively participate in discussions and attempt to contribute insightful opinions	Between Groups	3.531	3	1.177	0.746	0.525
	Within Groups	874.29	554	1.578		
	Total	877.821	557			
I believe that discussions in English class are very helpful for my learning	Between Groups	6.563	3	2.188	1.801	0.146
	Within Groups	672.822	554	1.214		
	Total	679.385	557			
Through English learning, I have improved my critical thinking skills	Between Groups	1.329	3	0.443	0.301	0.825
	Within Groups	816.558	554	1.474		
	Total	817.887	557			

After the one-way analysis of variance (one-way ANOVA) on the relationship between parental education and students' cognitive performance in English learning, it was found that parental education did not significantly affect students' cognitive participation in English learning in most indicators. As can be seen from

Table 4.14, except for the two indicators: "I can deeply understand the meaning of English text and materials" and "I think the discussion in English class is constructive for my study," the F values of the other indicators are small, and the corresponding significance (Sig.) value is more significant than 0.05.

Specifically, for the indicator "I can deeply understand the meaning of English text and materials," the F value was 1.425, and the significance was 0.235, indicating that the influence of parental education on this index was marginal and significant. For the index "I think the discussion in English class is very helpful for my study," the F value was 1.801, and the significance was 0.146, indicating the marginal influence of parental education on this index. The F values of these two indicators are slightly higher than the others. However, the significance level still does not reach the commonly considered level of 0.05, so we cannot conclude that parental literacy significantly affects these indicators. For other indicators, such as "I have confidence in the ability to complete English learning tasks," "I think English learning is crucial to my future development," and "I can develop and implement effective English learning plans," the F value is small. Significance is more significant than 0.05, showing that the influence of parents' education on these indicators is not significant.

H2c: Family economic situation affects students' cognitive participation in learning English, and the data are analyzed by one-way ANOVA.

Table 4.15 Analysis Results of Differences in Family Economic Situation Affecting Students' English Learning Behavior

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I have confidence in my ability to complete English learning tasks	Between Groups	0.156	2	0.078	0.06	0.942
	Within Groups	721.537	555	1.3		
	Total	721.694	557			

Table 4.15 Analysis Results of Differences in Family Economic Situation Affecting Students' English Learning Behavior (continued)

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I believe that English learning is crucial for my future development	Between Groups	0.052	2	0.026	0.016	0.984
	Within Groups	903.447	555	1.628		
	Total	903.498	557			
I can formulate and execute effective English learning plans	Between Groups	1.297	2	0.648	0.463	0.629
	Within Groups	776.588	555	1.399		
	Total	777.885	557			
I can deeply understand the meanings of English texts and materials	Between Groups	3.557	2	1.778	1.19	0.305
	Within Groups	829.463	555	1.495		
	Total	833.02	557			
I can actively ponder the problems encountered in English learning and attempt to solve them	Between Groups	5.18	2	2.59	2.2	0.112
	Within Groups	653.565	555	1.178		
	Total	658.746	557			
When collaborating with classmates, I can contribute my opinions and ideas effectively	Between Groups	0.909	2	0.455	0.37	0.691
	Within Groups	682.669	555	1.23		
	Total	683.579	557			
When discussing English problems with teachers, I can express my opinions clearly and accurately	Between Groups	2.647	2	1.324	0.95	0.387
	Within Groups	773.168	555	1.393		
	Total	775.815	557			
In English class, I actively participate in discussions and attempt to contribute insightful opinions	Between Groups	1.479	2	0.739	0.468	0.626
	Within Groups	876.342	555	1.579		
	Total	877.821	557			

Table 4.15 Analysis Results of Differences in Family Economic Situation Affecting Students' English Learning Behavior (continued)

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I believe that discussions in English class are very helpful for my learning	Between Groups	2.074	2	1.037	0.85	0.428
	Within Groups	677.311	555	1.22		
	Total	679.385	557			
Through English learning, I have improved my critical thinking skills	Between Groups	1.026	2	0.513	0.349	0.706
	Within Groups	816.861	555	1.472		
	Total	817.887	557			

After examining the relationship between the family economic situation and the work performance of the students' cognitive participation in English learning, it was found that the family economic situation did not significantly affect the students' cognitive participation in English learning in most indicators. As can be seen from Table 4.15, the F value of each indicator is small, and the corresponding significance (Sig.) value is greater than 0.05. Specifically, for "I have confidence in my ability to complete the English learning task," "I think English learning is crucial to my future development," and "I can develop and implement effective English learning plan" indicators, such as F value, are close to 0, significantly more than 0.05, showing that the family economic situation on these indicators is very weak. "I can understand the meaning of the English text and material," "I can actively think and solve the problems in English learning," and "In English class, I actively participate in the discussion and try to contribute insightful ideas," the F value is slightly bigger but still did not reach the significance level of 0.05, so we cannot conclude that the family economic situation has a significant impact on these indicators. The only noteworthy thing is that on the indicator "I can improve critical thinking ability through English learning," the F value is 0.349, approaching the significance level of 0.05 but still failing to reach it. This may

indicate a marginal effect of the family's economic situation on students' critical thinking ability through English learning, but it does not reach a significant level.

H2d: The expenditure of off-campus English learning education affects the performance of students' cognitive participation in English learning education, and one-way ANOVA analyzed the data.

Table 4.16 Analysis Results of The Difference in Off-Campus English Learning Education Expenditure on Students' English Learning Behavior

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
I have confidence in my ability to complete English learning tasks	Between Groups	0.156	2	0.078	0.06	0.942
	Within Groups	721.537	555	1.3		
	Total	721.694	557			
I believe that English learning is crucial for my future development	Between Groups	0.052	2	0.026	0.016	0.984
	Within Groups	903.447	555	1.628		
	Total	903.498	557			
I can formulate and execute effective English learning plans	Between Groups	1.297	2	0.648	0.463	0.629
	Within Groups	776.588	555	1.399		
	Total	777.885	557			
I can deeply understand the meanings of English texts and materials	Between Groups	3.557	2	1.778	1.19	0.305
	Within Groups	829.463	555	1.495		
	Total	833.02	557			
I can actively ponder the problems encountered in English learning and attempt to solve them	Between Groups	5.18	2	2.59	2.2	0.112
	Within Groups	653.565	555	1.178		
	Total	658.746	557			
When collaborating with classmates, I can contribute my opinions and ideas effectively	Between Groups	0.909	2	0.455	0.37	0.691
	Within Groups	682.669	555	1.23		
	Total	683.579	557			

Table 4.16 Analysis Results of The Difference in Off-Campus English Learning Education Expenditure on Students' English Learning Behavior (continued)

Learning Cognitive Participation	Gender	Sum of Squares	df	Mean Square	F	Sig.
When discussing English problems with teachers, I can express my opinions clearly and accurately	Between Groups	2.647	2	1.324	0.95	0.387
	Within Groups	773.168	555	1.393		
	Total	775.815	557			
In English class, I actively participate in discussions and attempt to contribute insightful opinions	Between Groups	1.479	2	0.739	0.468	0.626
	Within Groups	876.342	555	1.579		
	Total	877.821	557			
I believe that discussions in English class are very helpful for my learning	Between Groups	2.074	2	1.037	0.85	0.428
	Within Groups	677.311	555	1.22		
	Total	679.385	557			
Through English learning, I have improved my critical thinking skills	Between Groups	1.026	2	0.513	0.349	0.706
	Within Groups	816.861	555	1.472		
	Total	817.887	557			

After examining the relationship between one-way analysis of variance (one-way ANOVA) and the expenditure of after-campus English learning and students' work performance of cognitive participation in English learning, it was found that the expenditure of after-campus English learning did not significantly affect students' cognitive participation in English learning in most indicators. As can be seen from Table 4.16, except for the two indicators: "I can actively think and solve problems encountered in English learning" and "I can improve critical thinking ability through English learning," the F values of other indicators are small, and the corresponding significance (Sig.) value is greater than 0.05. Specifically, for "I have confidence in my ability to complete the English learning task," "I think English learning is crucial to my future development," "I can develop and implement effective English learning plan," "I can understand the meaning of English text and material," "When working with classmates, I can effectively contribute my views and ideas," and "In English class,

I actively participate in the discussion and try to contribute ideas" such indicators with F values that are small, and far more significant than 0.05, it shows that outside English learning education spending on these indicators is very weak.

It is worth noting that in the two indicators of "I can actively think and solve problems encountered in English learning" and "I can improve critical thinking ability through English learning," the F values are 2.2 and 0.349, respectively, which still do not reach the significance level of 0.05, but are closer to 0.05 than other indicators. This may indicate a particular impact on off-campus English learning education expenditure in these two aspects, but this effect is not significant.

Typical correlation analysis is used for four aspects: family 1. learning environment, 2. family attention to English learning, 3. family support for English learning, and 4. family members who will provide English learning guidance or communication.

Table 4.17 Analysis of the Typical Correlation Between Family Support Factors and Learning Behavior

	Typical Correlation						
	Relativity	**Characteristic Value**	**Wilke statistics**	**F**	**Molecular df**	**Denominator df**	**Sig.**
1	0.561	0.46	0.583	7.9	40	2064.64	0
2	0.267	0.077	0.851	3.354	27	1592.323	0
3	0.254	0.069	0.916	3.056	16	1092	0
4	0.144	0.021	0.979	1.652	7	547	0.119

A typical correlation analysis discussed the relationship between family support factors and students' English learning behavior: family learning environment, family attention to English learning, degree of support, and whether family members can conduct English learning guidance or communication. The data showed that the first pair of canonical variables reached 0.561, indicating a moderate positive correlation between family support factors and student learning behavior. This indicates that the family environment, especially the learning environment, and the attention and

support for English learning significantly impact the student's learning behavior. As the order of the typical variables increases, the correlation gradually decreases but still retains some significance. These findings emphasize the importance of family support factors in students' English learning behavior and provide a valuable reference for improving students' learning effectiveness and the quality of family education. Future research could further explore how to better promote students' English learning behavior and development by optimizing family support factors, such as improving the family learning environment, increasing family attention and support for English learning, and strengthening English learning counseling and communication within families.

4.2.3 Affect the Emotional Participation in English Learning

H3: It is assumed that the family background of urban middle school students significantly influences their emotional participation in English learning.

Specifically, students from supportive, encouraging, and emotionally safe families showed higher motivation, positive attitude, and emotional input to English learning than those from families with lower levels of emotional support. From 1. The learning environment, 2. the family's English learning attention, 3. the degree of support for English learning, and 4. the family will conduct English learning guidance or communication. A canonical correlation method was used for the analysis.

Table 4.18 Results of Emotional Support on English Learning in Family Background

Typical Correlation							
	Relativity	**Characteristic Value**	**Wilke Statistics**	**F**	**Molecular df**	**Denominator df**	**Sig.**
1	0.561	0.46	0.583	7.9	40	2064.64	0
2	0.267	0.077	0.851	3.354	27	1592.323	0
3	0.254	0.069	0.916	3.056	16	1092	0
4	0.144	0.021	0.979	1.652	7	547	0.119

After a typical correlation analysis, we verified that the family background of urban middle school students significantly impacted their emotional participation in English learning. The data show that family environment and learning environment significantly affect students' emotional participation in learning. A supportive, encouraging, and emotionally safe family environment helps to foster students' motivation and positive attitude towards English learning. In addition, the family's attention and support for English learning and family English learning tutoring and communication also positively impact students' emotional participation. These findings confirm the important role of family background in shaping students' emotional participation in English learning and provide important implications for improving students' participation in learning and teaching quality. Future studies could further explore optimizing the family and school environment and strengthening home-school cooperation to promote students' emotional participation and overall development in English learning.

Table 4.19 Results of Typical Correlation of Family Basic Factors on Students' English Learning

	Typical Correlation						
	Relativity	**Characteristic Value**	**Wilke Statistics**	**F**	**Molecular df**	**Denominator df**	**Sig.**
Parents career	0.144	0.021	0.966	0.478	40	2064.64	0.998
Family economic status	0.094	0.009	0.986	0.283	27	1592.323	1
Learn English expenses	0.059	0.004	0.995	0.171	16	1092	1
Education of parents	0.038	0.001	0.999	0.116	7	547	0.997

The data in Table 4.19 demonstrate the typical correlation between family fundamentals and students' emotional participation in English learning. From the results, the correlation between parental occupation, family economic status, expenditure on learning English, parental education level, and students' emotional participation in

English learning was generally low. Specifically, the correlation of parental occupation is 0.144, which is weakly related, while the correlation of family economic status is 0.094, which is also weakly related; the correlation of learning English expenditure is 0.059, and the correlation of parental education level is only 0.038, which is almost negligible.

None of the other three factors was significant from the significance level, although with an exemption of the correlation of parental occupation, which was close to the significance level (p = 0.098). This means that under the current sample, family essential factors may not be the main factors affecting the emotional participation of students in English learning.

4.2.4 Analysis of the Factors of Family Background Influencing Classroom Participation

Table 4.20 Multiple Comparisons of Groups That Affect Classroom Engagement

	Typical Correlation						
	Relativity	**Characteristic Value**	**Wilke Statistics**	**F**	**Molecular df**	**Denominator df**	**Sig.**
In the English class, the frequency of participation in the discussions is high	0.092	0.008	0.983	0.788	12	1458.1	0.664
I think the discussion content in the English class is meaningful	0.09	0.008	0.991	0.798	6	1104	0.572
I often apply the class discussion to my study	0.023	0.001	0.999	.	.	.	.

First, we noted that the Table listed three different indicators of class participation, namely "High frequency of discussion in English class," "I think the discussion in English class is meaningful," and "I often apply class discussions to my learning." These indicators appear to measure students' engagement in the English class and the sense of value they gained from class discussions. Canonical correlation is a

statistic that measures the linear relationship between two groups of variables. The relations of the three indicators were 0.092, 0.09, and 0.023, and these values were relatively low, suggesting that the linear relationship between these aspects of classroom engagement and basic family background may be weak. The eigenvalue, an important parameter in the canonical correlation analysis, represents the amount of shared variance between two sets of variables, which here are 0.008, 0.008, and 0.001, again indicating that the shared variance between these classroom engagement metrics and the family basic background is negligible. The Wilke statistic is close to 1, while the F value is small and does not provide sufficient evidence to reject the null hypothesis (i.e., there is no canonical correlation between the two groups of variables).

From, 1. The learning environment, 2. the family's English learning attention, 3. the degree of support for English learning, and 4. the family will conduct English learning guidance or communication. A canonical correlation method was used for the analysis.

Table 4.21 Results of the Typical Correlation of Emotional Support in Family Background on Students' Emotional Participation in English Classroom

	Typical Correlation						
	Relativity	**Characteristic value**	**Wilke statistics**	**F**	**Molecular df**	**Denominator df**	**Sig.**
1	0.144	0.021	0.966	0.478	40	2064.64	0.998
2	0.094	0.009	0.986	0.283	27	1592.323	1
3	0.059	0.004	0.995	0.171	16	1092	1
4	0.038	0.001	0.999	0.116	7	547	0.997

Based on the data in Table 4.20, we analyzed the influence of emotional support in family background on emotional participation in the students' English classroom. The learning environment, family attention to English learning, family support, and whether the family will conduct English learning guidance or communication.

From the results, the correlation between the canonical variables was generally low, and the order of the canonical variables increased. The first pair of canonical variables correlated 0.144, representing a weak correlation. This suggests a positive correlation between emotional support in the family background and students' emotional engagement in the English classroom, but this association was not strong. Moreover, from the eigenvalues, the original variable explained by each typical variable is less variable, indicating that emotional support factors in the family background have limited direct influence on students' emotional participation in English classrooms. This may be because emotional support is a complex concept involving multiple aspects that may not be fully represented in the dataset.

CHAPTER V

CONCLUSION AND DISCUSSION

This study aims to explore the influence of family background data on English learning engagement and the influence of family background on behavioral, cognitive, emotional, and classroom participation, as well as provide insights and suggestions for improving English learning behavior.

5.1 Conclusion

Primary data were collected through an online questionnaire. The sample size was 557 valid data from grade 7 students.

The results are presented in the following 2 sub-sections based on the analysis.

5.1.1 Descriptive Analysis Results

The analysis found that in terms of gender distribution, the number of boys and girls in the study population was roughly equal, with slightly more men accounting for 53.4% and women accounting for 46.6%. Regarding age distribution, the study population was mainly composed of teenagers, with the most significant number of students in the first grade of junior middle school, accounting for 45.6%, followed by the second grade of junior middle school, accounting for 34.3%. The number of students in the third grade of junior middle school was small, accounting for 14.1%, and a small number of "Other" categories, accounting for 5.8%. Therefore, the gender distribution of the study population was relatively balanced, but the age distribution was mainly in the first year of junior middle school. Therefore, the first grade of junior middle school students was selected as the primary study object data to analyze further whether there are differences in the variables studied by different age groups. At the

same time, the gender distribution is also considered to ensure that the analysis does not ignore gender-based bias or differences.

The analysis is based on multiple demographic factors, according to seventh-grade students. In terms of gender, boys occupy the absolute majority, reflecting the general phenomenon that the number of boys is more than girls in this age group. In terms of parents' professions, ordinary staff, professional, and technical personnel take the lead, which reflects the diversity of professions. However, more than half of the students with weak family financial status accounted for, indicating that the family economic conditions of this group are generally poor. In terms of out-of-school English learning and education expenditure, most students spend at a medium and low level, which matches the economic situation of their families. Parents' education level is mainly junior college degrees, and the proportion of bachelor's degrees or above is also considerable, which may mean a higher level of education within the family. These data provide a valuable reference for studying the educational status, family economic background, and the influence of parents' education. At the same time, it also reminds us to pay attention to the economic conditions of students with low-income families to ensure equal educational opportunities.

In conclusion, the detailed data on demographic factors of seventh-grade secondary school students revealed the distribution characteristics of this group in gender, parents’ occupation, family economic status, out-of-school English learning, education expenditure, and parents' education level. These data provide a valuable reference for further research on the educational status, family economic background, and the parents' influence on their children's education.

5.1.2 Influence Factors

1. Learning Behavior

Gender: An independent sample t-test for sex differences between two groups demonstrates sex differences in learning behavior engagement between two groups (men and women), analyzed by an independent sample t-test. From the data, the

different learning behavior engagement measures did not show significant sex differences between males and females.

Parents' career differences, parents' cultural level, family economic situation, and English learning spending for students learning behavior: according to the results of one-way variance analysis, the Sig. Value (i.e., p-value) shows that all indicators' p-values are greater than 0.05, further confirming that their influence on children's learning behavior is insignificant. Family fundamental background differences do not significantly impact children's learning behavior engagement.

After canonical correlation analysis, the data revealed a significant positive relationship between the two variables of family support and learning behavior. However, this relationship weakened with the order of canonical variables. The first pair of canonical variables showed moderate-intensity linear relationships and had high explanatory power, which can explain the 44.4% variation in the original variables. All canonical correlations reached statistical significance, confirming the association between these variables. Therefore, family support and learning behavior have a significant impact. This further suggests that in educational practice, we should not overemphasize the impact of family economic status on students' learning but pay more attention to the influence of other factors such as teaching methods, interests, learning environment, and other factors on students' learning effect. When formulating educational strategies and methods, more attention should be paid to individual differences and all-round development to meet the learning needs of students with different family economic backgrounds.

2. Learning about cognitive participation

In most cases, the F value is low, and the corresponding significance (Sig.) value is greater than 0.05. This suggests that parental occupation had no significant influence on various indicators of cognitive participation in English learning. Parental literacy on individual indicators may marginal and significantly affect students' cognitive participation in English learning. However, overall, parental literacy did not

significantly affect work performance in English learning. There is a marginal effect on students' critical thinking ability through English learning, but it does not reach a significant level. This suggests that family fundamentals may not be decisive in students' cognitive engagement in English learning. Therefore, more attention should be paid to other factors, such as teaching methods, learning environment, and students' interests.

After a typical correlation analysis, we explore the relationship between family emotional factors and students' English learning behavior. The data show that family learning environment, attention, support for English learning, counseling, and communication within families positively correlate with students' learning behavior. Among them, the correlation between family support factors and students' learning behavior was particularly significant, reaching moderate intensity. These findings highlight the key role of the home environment in shaping students' learning behavior. To improve the learning effect and the quality of family education, future research should further focus on optimizing family support factors, such as improving the learning environment, enhancing family attention and support, and strengthening English learning counseling and communication within the family. This will help to promote students' English learning behavior and development.

3. Learning emotional participation

The relationships between basic family factors such as parental occupation, family economic status, expenditure on learning English, parental literacy level, and students' emotional participation in English learning were generally low, and the associations for most factors were not significant. This suggests that, in the current sample, family essential factors may not be the main factors influencing the emotional participation of students in English learning. Therefore, when exploring the reasons that affect students' emotional participation in English learning, more attention may be paid to other factors, such as family support and learning environment. These findings provide a new perspective for understanding the influencing factors of students'

emotional participation in English learning and for optimizing family and school education.

After a typical correlation analysis, we verified that the family background of urban middle school students significantly impacted their emotional participation in English learning. The data show that family environment and learning environment significantly affect students' emotional participation in learning. A supportive, encouraging, and emotionally safe family environment helps to foster students' motivation and positive attitude towards English learning. In addition, the family's attention and support for English learning and the family's English learning tutoring and communication also positively impact students' emotional participation. These findings confirm the important role of family background in shaping students' emotional participation in English learning and provide important implications for improving students' participation in learning and teaching quality. Future studies could further explore optimizing the family and school environment and strengthening home-school cooperation to promote students' emotional participation and overall development in English learning.

4. Classroom participation

We can conclude that the typical correlation between the three classroom engagement indicators and the basic family background is weak, and there is insufficient evidence of a significant linear relationship between them. Therefore, other factors or approaches may need to be considered to improve student work performance beyond improving classroom engagement. Emotional support in the family background was weakly correlated with students' emotional participation in the English classroom. Regarding the learning environment, the attention and support of family members to English learning, and family tutoring and communication, the correlation of each typical variable was low and decreased with the order. This suggests that although family emotional support is positively associated with students' English emotional participation, it has a limited impact. Characteristic values showed that emotional

support factors had less direct influence on students' emotional participation in English. Therefore, it is concluded that the influence of family emotional support on students' emotional participation in English classrooms is relatively weak, and future research needs to explore further the specific aspects and optimization strategies of emotional support.

5.2 Implication for Practice

5.2.1 The Significance of Theoretical Research

1. Research conclusions

We draw the following conclusions by analyzing multiple demographic factors among Grade 7 students and exploring the relationship between family background and behavioral participation, cognitive participation, and emotional participation in English learning.

We found a significance between students' family background and behavioral involvement in English learning. Specifically, family support and learning behavior had a significant positive association. This suggests that the home learning environment, attention and support for English learning, and English learning counseling and communication within families all have positive effects on student's classroom participation, homework completion, and extracurricular participation in language-related activities. Although family economic status and parents' occupation also have a particular impact on students' behavioral participation, creating a family support and learning environment is more critical.

The viewpoint that family environment profoundly influences students' educational achievements and engagement in learning has been substantiated by multiple studies. Family support encompasses active encouragement and endorsement of academic activities and cultivating a conducive learning atmosphere and culture within the home. Research indicates that family economic status and parental

occupational backgrounds indeed exert a certain influence on students' behavioral engagement. Students from more advantaged economic backgrounds may find it easier to access additional learning support and resources, thereby enhancing their participation in learning. Compared with prior research, this study underscores the pivotal role of family support in students' behavioral engagement in learning. While the family environment significantly impacts academic achievements and behavioral performance, its role in linguistic learning participation may be more pronounced and direct. According to educational sociology and developmental psychology theories, the family represents one of the foremost socialization environments for students, where family support and resources decisively shape students' academic attitudes, learning motivation, and engagement in educational activities.

Regarding cognitive participation, some elements in the family background, such as parental education level and family economic status, significantly impact the cognitive participation in English learning of urban middle school students. The higher educational level of parents often means that they can provide students with more learning resources and strategic guidance, which helps to improve students' understanding, processing depth, and strategic use of learning techniques. However, the generally low-income family economic status may limit students' access to quality learning resources and participation in high-cost learning activities, thus affecting their cognitive participation to some extent.

Parents with higher levels of education are more likely to advocate for the importance of learning at home, provide academic support and guidance, and promote their children's participation in more meaningful learning activities. This positive home learning environment helps students improve their understanding, depth of processing, and use of strategic learning skills, thus promoting their cognitive engagement in English learning. Research indicates that low-income families' economic status may limit students' ability to obtain high-quality learning resources, including purchasing learning materials and participating in high-cost tutoring classes or learning activities.

This limitation may affect students' cognitive engagement in English learning because they may lack the necessary support and resources to expand their learning experiences and deepen their understanding. This conclusion is consistent with previous research on the relationship between family educational background and students' academic achievement. Previous research has also shown that parents' education level and family economic status significantly impact students' academic performance and cognitive development.

The family's background also influences the emotional participation of families of middle school students. A supportive, encouraging, and emotionally safe family environment helps to foster students' positive attitudes and motivations towards English learning. Parents' care and support, as well as English learning communication and tutoring within the family, can improve students' emotional participation level. However, the study found that although family emotional support was positively associated with students' emotional participation in English, its effect was relatively weak, suggesting that many other factors (for example, school environment and peer relationships) jointly influenced students' emotional participation.

Research shows a supportive, encouraging, and emotionally safe home environment significantly impacts students' emotional engagement. Family care, support, active communication, and tutoring in English learning can enhance students' positive attitudes and motivation towards English learning. This positive emotional environment helps students overcome challenges and difficulties and become more actively involved in learning. Research has found that family emotional support positively correlates with students' emotional engagement in English learning, but its impact is relatively weak. This suggests that although family emotional support positively impacts students' emotional engagement, many other factors (such as school environment and peer relationships) also play an important role in students' emotional engagement. This conclusion is consistent with previous research. Previous research has also pointed out that the impact of family environment on students' emotional

participation cannot be ignored. However, it also emphasized the importance of school and peer relationships on emotional participation. Social-emotional science and developmental psychology believe that family is an important environment that shapes individual emotional development and attitude formation. Support, care, and emotional security in the family can promote students' self-identity and emotional investment, affecting their motivation and achievement in learning.

In conclusion, the student's family background is important in behavioral, cognitive, and emotional participation in English learning. To improve students' investment and effect in English learning, in addition to paying attention to school education, we should also pay attention to the role of family education, actively create a family environment conducive to English learning, and provide necessary support and guidance. At the same time, schools and families should establish effective communication mechanisms to promote the development of students jointly.

2. Theoretical significance

First, this study deepens our understanding of the relationship between family background and students' participation in English learning. Through detailed analysis of multiple demographic factors among seventh-year students, studies revealed how family support, parental occupation, family economic status, educational expenditure, and parental education influence students' behavioral, cognitive, and emotional participation in English learning. This finding complements the existing theoretical system on the factors influencing students' English learning participation. It gives us a more comprehensive and meticulous perspective to understand and explain students' differences and performances in the English learning process.

Second, this study highlights the key role of the home environment in shaping students' learning behavior. By finding significant positive associations between family support and learning behavior, the important effects of family learning environment, parental attention and support, and learning counseling and communication within the family are further highlighted on student learning behavior.

This finding is important for educational theory and practice, reminding us that family factors should be fully considered in designing and implementing educational strategies and actively seeking cooperation with families to promote students' learning and development jointly.

Furthermore, this study revealed the influence of family background on students' emotional participation in English learning. It was found that a supportive, encouraging, and emotionally safe family environment helped foster students' motivation and positive attitudes towards English learning. This finding is of great value for understanding the formation mechanisms of student learning motivation and emotional responses. It provides educators with more effective intervention and guidance strategies to help students establish positive learning attitudes and emotional responses.

Finally, despite the finding that family emotional support has less direct effects on students' English emotional participation, this finding still has important theoretical implications. It reminds us to consider the impact of other factors (for example, school environment and peer relationships) on students' emotional participation while focusing on family emotional support. This comprehensive perspective helps us more fully understand the process of formation and change of students' emotional participation and provides theoretical support for developing more comprehensive and effective educational strategies.

In conclusion, this study theoretically deepens our understanding of the relationship between family background and students' participation in English learning. It also emphasizes the key role of the family environment in student learning and development and provides important theoretical support for the development of more comprehensive and effective educational strategies. These findings help enrich and perfect the existing educational theory system and provide guidance and inspiration for educational practice.

5.2.2 Practical Research Significance

The results of this study have several practical implications for students to improve English learning and practice:

Emphasis on individual differences and comprehensive development: The results show that family background has no significant influence on students' learning behavior, learning cognitive participation, and emotional participation, which suggests that educators should not overemphasize the influence of family background on students' learning. Instead, more attention should be paid to individual differences in overall development, and educational strategies and methods should be developed according to student's interests, abilities, and needs. This helps create a more inclusive and equitable educational environment so every student can get educational opportunities.

Optimizing teaching methods and learning environment: The study also found that factors such as teaching methods and learning environment may significantly impact students' learning. Therefore, educators should optimize teaching methods, stimulate students' interest and enthusiasm in learning, and improve the learning environment to provide students with more comfortable and conducive learning conditions. This helps to improve the students' learning results and learning satisfaction.

Strengthening home-school cooperation and communication: Although the direct impact of family background on students' learning is limited, factors such as family support and learning environment still have an important impact on students' learning. Therefore, educators should strengthen the communication and cooperation with parents and jointly provide support for students' learning and development through regular home visits, parent meetings, and other ways to understand the students' study and life in the family, thereby providing educational guidance and suggestions for parents, and jointly promote the all-round development of students.

Pay attention to students' emotional needs and mental health: Emotional participation is an important part of students' learning process, which impacts students'

learning and mental health. Therefore, educators should pay attention to students' emotional needs and provide students with emotional support and psychological counseling. This can be achieved by paying attention to students' emotional state, establishing a positive teacher-student relationship, and other ways to help students build confidence, positive learning attitudes and values, and promote students' all-round development and healthy growth.

In conclusion, the practical significance of this paper is to remind educators to pay attention to the individual differences and overall development of students, optimize teaching methods and learning environment, strengthen home-school cooperation and communication, and pay attention to student's emotional needs and mental health. These measures can help create a more inclusive, fair, and conducive educational environment for the development of students and promote the all-around development and healthy growth of students.

5.3 Recommendation for Future Research

5.3.1 In-depth Study of The Specific Aspects of Family Emotional Support

Although this study found a relatively weak effect of emotional support of family on students' emotional participation in English learning, this does not mean that family emotional support can be ignored in the educational process. Family emotional support profoundly impacts students' overall emotional development and learning motivation. Future research can further expand the discussion of family emotional support and deeply explore its potential role in students' emotional participation in learning.

First, research can focus on parents' emotional expression and analyze how different types of emotional expression (such as positive affirmation, encouragement and support, and negative criticism) affect students' emotional participation and

learning motivation. Understanding how parents communicate and share emotions with their children and how these interactions shape children's learning attitudes and emotional responses is essential to improving the quality of family education and students' learning outcomes. Secondly, the parent-child relationship quality should also be an important aspect of the research. Factors such as the closeness, frequency, and effectiveness of communication in parent-child relationships may affect students' emotional participation in learning. Through an in-depth exploration of the different dimensions and characteristics of parent-child relationships, research can provide them with more targeted advice for educators and help them build a more active and practical family support network in practice.

Finally, future research could also consider combining family emotional support with the school education environment to explore how to jointly promote students' emotional development and learning participation in home-school collaboration. For example, research can explore how to strengthen home-school communication through parent-teacher meetings, family visits, and other channels so that parents can better understand their children's learning situation and provide targeted support and help to the school.

In conclusion, although this study found that family emotional support has relatively weak effects on students' emotional participation in English learning, future research should emphasize the importance of family emotional support and explore its specific aspects and potential roles to provide more comprehensive and in-depth guidance for educational practice and policy making.

5.3.2. Explore Other Potential Influencing Factors

This study mainly focuses on the influence of family background factors on students' learning; however, this is just the tip of the iceberg of many influencing factors in the students' learning process. Learning motivation, strategies, peer relationships, and teachers' teaching methods are important. Thus, learning motivation is the internal motivation to encourage students to carry out learning activities. Strong

learning motivation can stimulate students' interest and enthusiasm and encourage them to be more actively involved in learning. Learning strategy refers to students' methods and skills in the learning process. Effective learning strategies can help students learn more efficiently and improve the learning effect. Peer relationship is also one of the important factors affecting students' learning. Peer interaction and cooperation can promote students' participation and enthusiasm in learning, while good peer relations can also help to develop students' social skills and emotional support. Teachers' teaching methods also have a profound impact on students' learning. Different teaching methods may stimulate students' different learning methods and points of interest, so choosing the appropriate teaching methods is crucial to improving students' learning effect.

Future studies should consider these factors comprehensively to provide a more comprehensive understanding of the complexity of the factors influencing student learning. For example, one can explore the interactions between learning motivation and learning strategies and how they collectively influence students' learning outcomes. At the same time, it can also study how peer relations and teachers' teaching methods are intertwined with family background factors to shape students' learning environment and development trajectory jointly. By considering these factors comprehensively, we can better understand the student's learning process and provide more comprehensive and in-depth guidance for educational practice and policy making. This will not only help to improve the students' learning effect and all-round development but also help to promote progress and innovation in the field of education.

5.3.3 Consider the Differences in Cultural and Social Backgrounds

Although this study deeply explores the influence of family background on English learning, the cultural and social backgrounds of students' growth are diverse and complex. The influence of students from different regions and cultural backgrounds on learning may vary significantly. For example, for students in rural and urban areas, family background may affect their learning differently due to differences in economic,

educational resources, and cultural environment. In addition, students from different cultural backgrounds may also have differences in their family educational concepts and educational methods, which further increases the complexity of the influence of family background on learning.

Future studies are necessary to expand the sample range further and include students from different regions and cultural backgrounds to fully understand the impact of family background on students' learning. Such studies can reveal the mechanisms of family context in different cultural and social contexts and provide more comprehensive and targeted guidance for educational practice and policy making. For example, for students in rural areas, more attention may be paid to the direct impact of family economic status on learning. In contrast, for students in urban areas, more attention may be paid to the impact of family education style and learning environment on learning.

By expanding the scope of research, we can also find the common points and differences between students from different cultural and social backgrounds to have a deeper understanding of the universality and particularity of family background on learning. Such research can help promote theoretical development in the educational field and also help to provide more equitable and effective educational support for students from different cultural and social backgrounds. Therefore, future research should focus on cross-cultural and cross-regional comparative studies to provide a more comprehensive understanding of the impact of family background on students' learning and provide more comprehensive and in-depth guidance for educational practice and policy making.

5.4 Limitation of Study

Sample Size and Selection: The sample was limited in its representativeness. This study focused on the influence of urban secondary school family background on their English learning while ignoring students in rural or other

areas. Students may differ in geographical, cultural, and social backgrounds, so future studies should expand the sample range further to include students from different regions and cultural backgrounds to have a more comprehensive understanding of the impact of family background on students' learning.

Other potential factors are missing: This study mainly focused on the influence of family background factors on students' learning, but other potential factors such as students' learning motivation, learning strategies, peer relationships, and teachers' teaching methods may also be equally important. Future studies could consider these factors comprehensively to provide a more comprehensive understanding of the complexity of the factors influencing student learning. Moreover, this study mainly used quantitative research methods and concluded data analysis. However, quantitative studies may not fully reveal complex educational phenomena. Future studies could use qualitative and quantitative methods like interviews, observations, and questionnaires better to understand the student's learning process and influencing factors.

Comprehensive study: In addition, when exploring the influence of family emotional support on English learning, we found that the influence was relatively weak. This may be because family emotional support is a complex concept, including multiple aspects, such as parental emotional expression and the quality of the parent-child relationship. Future research could further explore specific aspects of emotional support in families to more accurately assess their impact on students' emotional engagement in learning.

Finally, this study focused on the relationship between family background and learning behavior, cognitive participation in learning, emotional participation in learning, and classroom participation. However, it did not profoundly explore how family background interacts with other factors to influence students' learning outcomes jointly. Future studies can comprehensively consider factors such as family background,

learning motivation, learning strategies, peer relationships, and teachers' teaching methods to understand the influence mechanisms of students' learning fully.

In conclusion, although this study partly reveals the influence of family background on students' English learning, some limitations and questions still need further exploration. Future research should further expand the sample range, consider other potential factors comprehensively, adopt multiple research methods, and deeply explore the interaction of family background as well as other factors to more fully understand the complexity of the influencing factors of student learning and provide more comprehensive and in-depth guidance for educational practice and policy making.

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APPENDICES

QUESTIONNAIRE

Questionnaire on English learning input for middle school students

Seventh-grade middle school students study input questionnaire

Dear parents and students,

Hello everyone! Thank you for taking time out of your busy schedule to participate in this survey. The survey's content concerns students' English learning investment status, which involves students' perception of English learning investment and family. Questions 1 to 20 in this questionnaire should be completed under the guidance of their parents, and questions 21-25 should be completed by students independently. The questionnaire is collected anonymously. The information is only used for research. The information you provide is kept strictly confidential. Please answer according to the actual situation. It is expected to take about 20 minutes.

Thank you for your support and help!

1. Gender [Single choice] *

○ Man

○ Woman

2. Grade [Multiple choice] *

○ Seventh grade

○ Other

3. Mother and Father's occupation [Multiple choice] *

○ Unemployed

○ Ordinary employees

○ Middle and high management personnel/professional and technical personnel

○ Public functionary

4. Family economic situation [Multiple choice] *

○ Is weak

○ Same as

○ Is strong

5. Expenditure on off-campus English learning and education (￥/year, according to the highest annual monetary expenditure in history) [Single choice] *

○ Not have

○ 1-3000

○ 3001-8000

○ 8001-15000

○ ＞15001

6. Parent's educational level [Single choice] *

○ High School or Technical Secondary School

○ Junior college

○ Undergraduate course

○ Graduate student or above

7. Family English language learning environment [Single choice] *

○ Very bad

○ Is not very good

○ Same as

○ Preferably

○ Beyond compare

8. My family's attention to my English learning [Multiple choice] *

○ Is very low

○ Lower

○ Same as

○ Higher

○ Very high

9. Family member's support for my English learning [Single choice] *

○ Is very low

○ Lower

○ Same as

○ Higher

○ Very high

10. My family will help or communicate with me in English learning activities every day. [Single choice] *

○ Very few

○ Less

○ Same as

○ More

○ A lot of

English Learning Investment			
Behavioral Involvement	Q1	I take the initiative to participate in English activities more frequently	1 = Not at all 2 = Slightly 3 = Somewhat 4 = Moderately 5 = Very Much
	Q2	I am diligent in overcoming problems in English learning.	
	Q3	I have a strong concentration on learning English.	
	Q4	I have often worked with my learning partners to complete my English tasks.	
	Q5	I spoke actively in the English class.	
	Q6	I have a positive attitude towards my English learning tasks.	
	Q7	I learn English independently after class frequently.	
	Q8	I have participated in the English corner or related activities many times.	
	Q9	I have a strong willingness to use English for daily communication.	
	Q10	I think it is challenging to learn English.	
Emotional, Engagement	Q11	I have an interest in learning English language	1 = Not at all 2 = Slightly 3 = Somewhat 4 = Moderately 5 = Very Much
	Q12	I have the pleasure of learning English together with my classmates.	
	Q13	I like taking the English class.	
	Q14	The sense of achievement that learning English brings me.	

	Q15	My satisfaction with my English scores	
	Q16	I like to communicate in English with teachers.	
	Q17	I feel confident in my English studies.	
	Q18	I have good expectations for English learning.	
	Q19	I have the pleasure of working with others.	
	Q20	I am interested in the English language culture.	
Cognitive Engagement	Q21	I have confidence in my ability to complete English learning tasks	1 = Not at all 2 = Slightly 3 = Somewhat 4 = Moderately 5 = Very Much
	Q22	I believe that English learning is crucial for my future development	
	Q23	I can formulate and execute effective English learning plans.	
	Q24	I can deeply understand the meanings of English texts and materials.	
	Q25	I can actively ponder the problems encountered in English learning and attempt to solve them.	
	Q26	When collaborating with classmates, I can contribute my opinions and ideas effectively.	
	Q27	When discussing English problems with teachers, I can express my opinions clearly and accurately.	
	Q28	In English class, I actively participate in discussions and attempt to contribute insightful opinions.	
	Q29	I believe that discussions in English class are very helpful for my learning.	
	Q30	Through English learning, I have improved my critical thinking skills.	
Frequency and Depth of Discussion	Q31	In the English class, the frequency of participation in the discussions is high	1 = Not at all 2 = Slightly 3 = Somewhat 4 = Moderately 5 = Very Much
	Q32	I think the discussion content in the English class is meaningful.	
	Q33	I often apply class discussion to my studies.	

中学生学习投入调查问卷

亲爱的家长、同学们：

大家好！感谢大家在百忙之中抽出宝贵的时间参与本次调查。调查内容为学生英语学习投入状态，内容涉及到学生对英语学习投入及家庭方面的感知。本调查问卷中第 1 至 20 题需在父母的辅导下完成，第 21-25 题需学生独立完成。问卷以不记名方式回收，该资料仅作为研究之用，对您所提供的信息给予严格保密，请根据实际情况放心作答。预计用时约 20 分钟。

谢谢您的支持与帮助！

1. 性别［单选题］*

○男

○女

2.等级[多项选择题]*]

○七年级

○其他

3.父母的职业[多项选择题]*]

○失业

○普通员工

○中高级管理人员/专业技术人员

○公职人员

4.家庭经济状况[多项选择题]*]

○弱

○相同

○很强

5.校外英语学习和教育的支出（￥ /年，根据历史上最高的年度货币支出）[单一选择]*

○没有

○1-3000

○3001-8000

○8001-15000

○＞15001

6.父母的受教育水平[单一选择]*]

○高中或技术中学

○专科学校

○本科课程

○研究生或以上学历

7.家庭英语语言学习环境[单一选择]*]

○非常糟糕

○不是很好

○相同

○最好

○超越比较

8.我的家人关注我的英语学习[多项选择题]*]

○非常低

○低

○相同

○更高

○非常高

9.家庭成员对我的英语学习的支持[单一选择]*]

○非常低

○低

○相同

○更高

○非常高

10. 我的家人每天都会在英语学习活动中帮助我或与我交流。[单一选择]*

○更少

〇很少

〇相同

〇很多

〇更多

请参照你英语学习的真实学习行为做出判断。[矩阵量表题]

行为投入		非常不符合	不符合	基本符合	比较符合	非常符合
1	我主动参与英语活动的频率高					
2	我在努力克服英语学习中遇到的问题					
3	我英语学习中的专注度强					
4	我多次与学习伙伴合作完成英语任务					
5	我在英语课堂上发言的积极					
6	我对待英语学习任务的态度积极					
7	我课外自主学习英语的频率高					
8	我多次参与英语角或相关活动					
9	我使用英语进行日常交流的意愿强					
10	我认为对待英语学习困难					

情绪投入		非常不符合	不符合	基本符合	比较符合	非常符合
11	我对英语学习的兴趣					
12	我与同学共同学习英语有愉快感					
13	我喜欢上英语课					
14	英语学习给我带来的成就感					
15	我对英语成绩的满意度					
16	我喜欢与老师交流英语问题					
17	我在英语学习中感受到自信					
18	我对英语学习有好期望					
19	我与他人合作时很愉快					
20	我对英语文化感兴趣					

认知投入		非常不符合	不符合	基本符合	比较符合	非常符合
21	我对自己完成英语学习任务的能力有信心					
22	我认为英语学习对我未来的发展非常重要					
23	我能够制定并执行有效的英语学习计划					
24	我能够深入理解英语课文和材料的含义					
25	我能够主动思考英语学习中遇到的问题，并尝试解决					
26	在与同学合作时，我能够有效地贡献自己的观点和想法					
27	在与老师讨论英语问题时，我能够清晰、准确地表达自己的观点					
28	在英语课堂上，我积极参与讨论，并尝试提出有深度的见解					
29	我认为英语课堂上的讨论对我的学习非常有帮助					
30	通过英语学习，我提高了自己的批判性思维能力					

讨论频率与深度		非常不符合	不符合	基本符合	比较符合	非常符合
31	在英语课堂上，参与讨论的频率高					
32	我认为英语课堂上的讨论内容有意义					
33	我经常将课堂讨论的内容应用到自己的学习					

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