

# The Relationship between Parenting Styles, Learning Motivation and Self-Efficacy of Diverse Age

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**Abstract.** Linked to personal and national development, student education has long been regarded as an important project. In addition to school education, parental education at home also plays an essential role in students' learning. Among previous research, there have been numerous studies on the relationship between parenting styles and students' learning motivation and self-efficacy, but there have been relatively few studies comparing these situations across different grade groups. Therefore, this article adopts a review method to comprehensively compare five empirical researches on students of different school ages respectively, in order to explore the similarities and differences in the relation between parenting styles, learning motivation, and self-efficacy among students from different school ages, then provide a constructive reference for parental education. Research has found that overall, the results are approximately alike: parenting styles closely related to learning motivation and self-efficacy despite students from different school ages, and positive parenting styles significantly positively affect the learning motivation and self-efficacy of all school-age students while sometimes negative parenting styles also encourage self-efficacy.

**Keywords:** Parenting styles; learning motivation; self-efficacy.

## 1. Introduction

Young students are often regarded as the hope for the future of a country, which leads to many countries attaching great importance to student education while scholars invest a lot of effort in researching better and more suitable educational models. Apart from grabbing knowledge in professional teaching schools, parents actually play another weighty role when raising children. It is generally accepted that parents are the enlighteners of their children. Since children are growing up in a family environment, the behavior and consciousness of them are inevitably influenced by the words and actions of their fathers and mothers in daily life, which also affects the forming of their own understanding of the world [1]. The values of parents not only affect the way they guide and educate their children, but also shape their children's values and behavioral patterns, thereby further affecting children's learning.

Given that people are of various personalities, so the parenting styles. Scholars worldwide have extensively studied parenting and classified it into different types. There are already lots of papers about how diverse parenting styles could influence their children in learning differently, such as, Learning Motivation, Self-Efficacy, Academic Performance etc. Taking learning motivation and self-efficacy as an example, although there have been a large number of studies delved into the impact of parental parenting styles on students of different school ages, there are currently relatively few comparative studies on students of different grades. Thereby, the purpose of this article is to examine the influence of parental parenting styles on the learning motivation and self-efficacy of students from different school ages through a review method, plus comparing similarities and differences to provide some constructive reference ideas for contemporary parental education.

## **2. The Definition of Research Object**

### **2.1. Motivation**

Motivation, initially put forward and applied in psychology by Woodworth in 1918, was described as a natural drive which determines human behaviors [2]. Subsequently, other scholars argued that not only internal nature controls behaviors but also external stimulus affect how people react. As a result, motivation theories are generally classified into intrinsic one and extrinsic one. Intrinsically motivation means behaviors are done out of personal preference, interest and affection whereas extrinsically motivation relates to pursuing rewards or avoiding punishment. In short, motivation explains why people do or do not devote themselves to something, and the different levels of motivation contribute to different outcomes on individuals' behaviors and cognition. Motivation for learning is called academic motivation. According to Gottfried, academic motivation was defined as a psychological inclination to enjoy and desire learning, characterized by curiosity, perseverance, task endogeneity, and a preference for challenging and novel learning tasks. And in terms of intrinsic academic motivation, it is a mental component featuring reliable, effective and essential, which has a close relationship between achievement, IQ, and perception of competence [3]. As for students, the higher and stronger motivation they have on learning, the higher of chances they will receive to achieve success in study [4,5].

### **2.2. Self-efficacy**

Derived from Self-Efficacy Theory by Bandura, self-efficacy refers to individuals' judgments, beliefs, or subjective self-control and feelings about the level at which they can complete a certain behavioral activity before executing it [6]. It has become an essential mental component affecting individuals' behaviors and performance. To measure self-efficacy, questionnaires are recognized as the most popular method, with the General Self-Efficacy Scale [7]. Academic self-efficacy then is the cognition, judgment and evaluation of one's academic performance, execution ability and competence, as well as expectations and beliefs about whether one can achieve one's studies [8]. The higher level of learning self-efficacy students has, the more learning confidence they will have, and there is more likelihood for them to complete academic achievement.

### **2.3. Parenting Styles**

Apart from schooling education, family education has been long recognized as another pivotal role in children's learning. When cultivating children, parents display a relatively stable behavioral style, including the beliefs, behaviors, thoughts, emotions, attitudes, etc [9]. Since teachers have different teaching methods, parents also have many different styles when raising their children. Early in 1966, Diana Baumrind, an American psychologist, based on emotional support and parental control and created a concept called "parenting styles", which was characterized as the ways for parents to express and expect their children to abide by behaviors, values, and standards [10]. Specifically, different parental methods are named authoritative, authoritarian, and permissive styles respectively. For parents with authoritarian style, they tend to set strict rules and high goals for children to obey and achieve without offering adequate emotional support. Permissive parents on the contrary, neither demanding results nor showing expectation and solicitude for their children. Authoritativeness then is a balance between over-control and freedom. Parents with this style provide children with proper support and moderate governance. Based on this theory, many scholars have developed and enriched other theories and scales concerning parenting styles. In Chinese researches, the parenting style evaluation scale (EMBU) revised by Yue Dongmei et al. is the most commonly used.

### 3. Previous studies

#### 3.1. Impact of Parental Styles on Students' Motivation

Many experiments have confirmed a correlation between parental parenting styles and learning motivation and pointed out a distinct variation from different age groups. This article delved into three different groups from primary school, secondary school and college.

##### 3.1.1. Research about Primary School.

Based on the previous theory of dividing motivation into extrinsic and implicit categories, Wu C.Y., a scholar at Ningbo University, China, proposed that there was relatively a lack of study between implicit motivation and parenting styles [11]. Therefore, the relationship between parental parenting styles and implicit and extrinsic motivation is examined separately for primary school students.

In study 1, Wu used a questionnaire survey to select elementary school students from grades 4 to 6 in Ningbo, Zhejiang and Weifang, Shandong as subjects, with a total of 523 effective participants. The Academic Regulation Questionnaire (SRQ-A) and Parental Authority Questionnaire (PAQ) were distributed to the subjects respectively to measure the level of extrinsic motivation and parental parenting styles. Through correlation and regression analysis, it could be found that there is a significant positive correlation between parental authoritarian parenting style and primary school students' extrinsic autonomous learning motivation. And parental authoritarian parenting style can significantly predict extrinsic learning motivation positively; However, a significant negative correlation between permissive parenting style and primary school students' extrinsic learning motivation is evident. However, the predictive effect of permissive parenting style on extrinsic learning motivation is not significant.

In study 2, Wu applied GO/NO Association Task (GNAT) to measure implicit learning motivation, the experimental subjects were 138 sixth-grade students from elementary school. The experimental data was collected and organized by using E-Prime2.0 software. In order to avoid the impact of arbitrary responses from participants, experimental data with an error rate of over 30% in each test task and an average error rate of over 40% in the four test tasks were deleted. Data with a response time less than 300ms and data with a response sensitivity index less than or equal to 0 have also been deleted. Hence the final effective experimental sample was 94. Measurement on Parenting Styles is the same with Research 1. The GNAT program consists of four exercises and four tests, and the implicit learning motivation data is recorded by the computer. The calculation method is based on a paper of Nosek and Banaji to calculate the response sensitivity indicators ( $d'$ ) and reaction time indicator (D) for each of the four testing tasks separately. Results turned out that there is a significant implicit effect on the autonomous learning motivation of primary school students. But the correlation analysis results indicated that the correlation between the response sensitivity indicators ( $d'$ ) of implicit autonomous learning motivation and parental authoritarian, authoritarian, and permissive parenting styles is not significant, nor is the reaction time indicator (D). Finally, Wu also studied the relationship between extrinsic self-directed learning motivation, parental parenting style, academic engagement, and academic achievement in primary school students. Results found that self-directed learning motivation, as a cognitive approach, played a mediating role in the effect of parenting styles on primary school students' academic engagement and achievement. And it is not only influenced by parenting styles, but also significantly predicts students' academic engagement and achievement.

In study 3, Wu examined whether parenting styles influence primary school students' academic engagement and achievement through the mediating variable of explicit autonomous learning motivation. And it turned out that learning motivation indeed plays a mediating role between other two variables.

Overall, the research findings are as follows: (1) The authoritarian parenting style is positively correlated with explicit autonomous learning motivation, and can significantly predict the explicit autonomous learning motivation of elementary school students; while there is a significant negative

connection between permissive parenting style and explicit autonomous learning motivation; However, no significant correlation between authoritarian parenting style and explicit autonomous learning motivation could be found. (2) There is no significant correlation between implicit autonomous learning motivation of primary school students and parenting styles. (3) The permissive parenting style of parents can directly affect students' academic achievement, or indirectly influence them through explicit autonomous learning motivation.

### **3.1.2. Research on Junior High School.**

Based on existing research, it has been explained that there are pairwise relationships between parenting styles, academic pressure, and learning motivation. A paper aimed at figuring out how academic pressure functions in the relationship between parenting styles and learning motivation [1]. It is relatively innovative when referring to both junior high testees and the mediating variable academic pressure.

In study 1, Chen postulated there would be a significant correlation between parenting styles, academic pressure and learning motivation; and academic pressure played a mediating role in parenting style and learning motivation. The research was conducted at one of the middle schools in Chengde, Hebei, from where 450 students were randomly selected and distributed questionnaires. The questionnaires used include the Chinese version of the Parenting Style Questionnaire revised by Yue Dongmei et al., (based on the EMBU developed by Perris et al.), the Academic Stress Source Scale for Middle School Students developed by Chen Xu, and the Learning Motivation Scale developed by Taiwanese scholar Yu Anbang.

At last, 410 valid responses were retained. After analyzing the data, Chen concluded that: (1) The learning motivation level of junior high school students reaches above average, with internal learning motivation higher than external one. (2) The relationship between parental parenting style, academic pressure, and external and internal learning motivation is a significant correlation. (3) In regressive analysis, the emotional warmth, understanding dimension, over intervention, over protection dimension, and academic pressure of maternal parenting style can significantly predict the effect on the external motivation dimension of learning motivation; while the emotional warmth, understanding dimension, over intervention and over protection dimension of maternal parenting style have a significant predictive effect on academic pressure.

To continue deep in the mediation effect test, this study took maternal parenting style's emotional warmth, understanding dimension, over-intervention, and over-protection dimension as independent variables X, academic pressure as mediator variable M, and external motivation as dependent variable Y. Then choosing SPSS 25.0 and process3.5 plugins and Bootstrap test to verify. The result conforms to the hypothesis: academic pressure has a mediating effect between parenting styles and learning motivation.

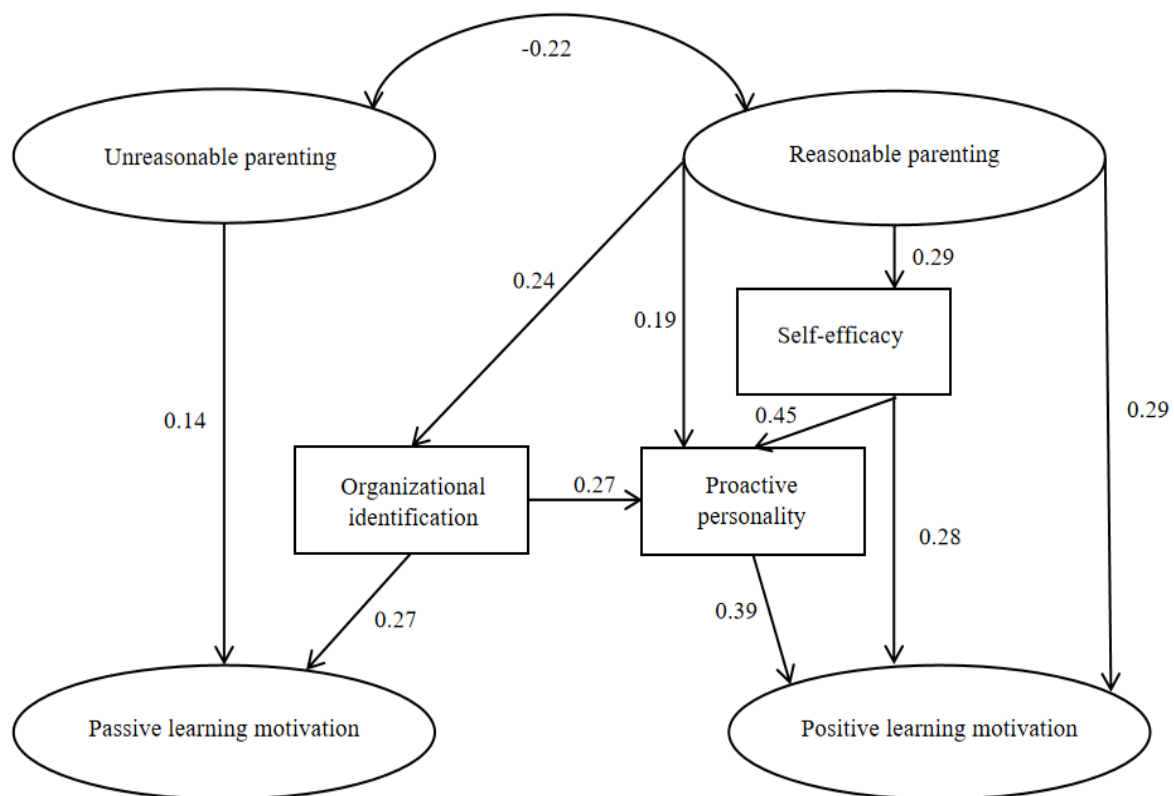
In study 2, Chen also conducted interviews with 12 students on purpose from the high score range of 3.8-5.0 in the dimension of external motivation in the previous sample. The interviews established a theoretical framework based on three-level coding and were combined with raw materials to further explore the relationship between core information, ultimately verifying the results of quantitative research in Study 1 once again.

### **3.1.3. Research on College Students.**

Compared with primary and secondary school, the college is considerably different for students. They are generally required to live in the school far from home, so their academic performance would be affected by more complex factors such as learning strategies, academic requirements, learning environment and so forth. Would parenting styles play a same role in university students' learning motivation? In view of lacking empirical research on the learning motivation of college students, an article aims at college students as research subjects to explore parenting styles' influence on their learning motivation, and the medium effect of proactive personality, self-efficacy, and organizational identity [12].

In Zhu's research, the study also used a combination of questionnaire and interview methods, with all participants chosen from Jiangxi University of Traditional Chinese Medicine. In the pre-test experiment, 513 students were selected, and one year later, 296 of them underwent a post-test. The questionnaires include: (1) A Chinese version of the Simplified Parenting Style Scale developed by Jiang jiang and Lu Zhengrong et al. in 2010. The scale was further revised based on the Simplified Parenting Style Questionnaire (s-EMBU) developed by Arrindell in 1999. (2) A Chinese version of the Learning Motivation Scale developed by Shi Liping, Xin Ziqiang, and others in 2006 which was revised based on the Working Preference Inventory developed by Amabile, Hill, and others in 1994. (3) The Proactive Personality Inventory, a 10-item, single dimensional proactive personality scale of Seibert et al. in 1999, based on a 17-item self-reported Proactive Personality Scale (PPS) developed by Bateman, Crant et al. in 1993. (4) The Self Efficacy Scale, a revised version of a General Self Efficacy Scale created by Schwarzer in 1995 by Wang Caikang et al. in 2001. (5) The Organizational Identity Scale, a one-dimensional scale developed by Mael, Ashforth, and others in 1992.

In the pre-test experiment, after conducting correlation analysis on all variables of all participants, it was found that there was a significant pairwise correlation between the variables. A significant positive correlation was found between learning motivation and parenting styles among college students and a significant negative correlation with unreasonable parenting styles. Among them, autonomous learning motivation is significantly negatively correlated with unreasonable parenting styles. Due to the evidence of pairwise correlation, it is eligible to undergo multiple mediation model testing. So, the next step, this study used structural equation modeling, choosing parenting styles as an independent variable and learning motivation as a dependent variable, to study the mediation effects in proactive personality, self-efficacy, and organizational identity. The model fitting results indicate that the fitting index of the model was satisfying (see Figur)[12]. Therefore, the parenting styles can not only directly predict students' learning motivation positively, but also indirectly predict learning motivation (through mediating effects of proactive personality, self-efficacy, and organizational identity).



**Figure 1.** The relationship between variables in the integrated model [12]

The post-test experiment is the interview part. Since it was conducted in 2020, during the COVID-19 pandemic. Consequently, the indicators of variables have changed to a certain extent, with some ascending while some descended. But thankfully it still verified the results of the pre-test experiment.

#### **3.1.4. Summary.**

All the above three studies were conducted between 2018 and 2021 in China, each with approximately 450-550 participants. Additionally, as an empirical study, all of them were conducted at least two experiments and used correlation analysis and regressive analysis. Although they carried out different questionnaires and research designs on students of diverse types in different regions of China, the results were consistent. The conclusion can be summarized as follows: Numerous evidence indicate that parenting styles have a wide-ranging and profound impact on children's learning. Whether in primary, secondary, or university, the positive parenting style affects students' learning motivation positively, in both direct and indirect paths.

### **3.2. Relationship between Parental Styles and Students' self-efficacy**

Considering another essential variable self-efficacy mentioned above, it is clear that good learning motivation and learning efficacy are important mental elements that promote students' learning outcomes. Next, this article will explore how parental parenting styles affect self-efficacy and other potential variables from two studies.

#### **3.2.1. Research on Middle School.**

Currently, there are many studies on the influence of parenting styles on the middle school students' self-efficacy. However, relevant studies have shown that such an influence may also be achieved through other personal characteristic variables. Taking a Chinese study as an example, the scholars Zhang J.K. & Ke B.T., explored the relationship between parenting styles and the students' self-efficacy at middle school, as well as the mediating role of regulatory orientation between these two variables [13].

Regarding the participants, the study employed a cluster random sampling method to select 1600 students from eight middle schools in Quanzhou City, Fujian Province. After distributing questionnaires to them, 1524 valid responses were finally collected, with their grades ranging from junior one to senior three and the average age of 15.55 years old. As for questionnaires: a Chinese version of the Simplified Parenting Style Scale(s-EMBU-C) developed by Jiang jiang et al., an Academic Self-Efficacy Scale suitable for middle school students and reversed by Liang Yusong, a Regulatory Focus questionnaire created by Lockwood and Jordan in 2002 were used.

The results of correlation analysis indicate that positive parenting styles are significantly positively correlated with regulatory focus and self-efficacy on learning ability and behavior. Plus, there exists a significant positive related relationship between self-efficacy and the two dimensions of regulatory focus (promotion focus & prevention focus). Moreover, after regressive analysis, it was evident that regulatory focus plays a mediating effect between parenting styles and academic self-efficacy. Specifically, positive parenting influences academic self-efficacy through the partial mediating effect of regulatory focus; while negative parenting affects academic self-efficacy through a full mediating effect of regulatory focus. Besides, the direct effect indicates that both positive and negative parenting styles have a significant impact on the academic self-efficacy of middle school students.

#### **3.2.2. Research over a Mixed Grade.**

Apart from being directly and indirectly influenced by parenting styles, self-efficacy can also serve as a mediating variable, functioning between parenting styles and other variables. Another Chinese paper focused on self-efficacy to figure out the relationship within styles of parenting and academic performance [14].

The author believes that the development of adolescents in different ages exhibits different characteristics in cognition and sociality. And it is necessary to compare and analyze how parenting

styles affect academic self-efficacy and academic performance among students from different age groups. Therefore, 4700 students ranging from high school (junior and senior), vocational school (junior and senior) to undergraduate in China were included in the study, with the valid number of 4411. To distinct parenting styles, a Parenting Style questionnaire developed by Gong Yihua in 2005 was employed. An Academic Self-Efficacy Scale by Liang Yusong was used to measure self-efficacy. And the academic performance is based on the average of the student's grades in three major subjects on their final exams. For middle and high school students, the grades of Chinese, mathematics, and English were selected, while the grades of three professional courses were selected for vocational, vocational, and undergraduate students.

Through Pearson Correlation analysis, results indicated that styles of authoritarian, indulgence, and neglect, are negatively correlated with academic self-efficacy, while trust and encouragement, emotional warmth, are positively correlated with self-efficacy. Additionally, there is a positive correlation between students' self-efficacy and academic performance.

To explore the impact of different variables on academic self-efficacy, a hierarchical regression analysis was conducted. Parenting styles including authoritarian, trust-encouraging, and emotional warmth can positively predict academic self-efficacy while indulgent and neglected parenting negatively predicts academic self-efficacy. Next, another hierarchical regression analysis was applied to explore the differences in the effect of diverse variables on the academic self-efficacy of different learning stages. For junior high school students, the trust-encouraging and emotional-warmth parenting styles positively predict their academic self-efficacy. For high school students and senior vocational students, parenting styles such as authoritarian, trust-encouraging and emotional-warmth positively predict academic self-efficacy, while parenting styles of authoritarian and trust-encouraging positively predict academic self-efficacy of college students. Lastly, non-parametric percentile bootstrapping method to test the significance of the mediating effect, it was confirmed that self-efficacy plays a mediating role between parenting styles and academic performance. Authoritarian, trust-encouraging, and emotional-warmth parenting styles can positively predict learning outcomes and academic self-efficacy; while indulgent and neglected parenting styles negatively predict academic self-efficacy.

### **3.2.3. Summary.**

Both two studies employed the same Self-Efficacy Scale and were conducted in China in the recent years. Though different measurement of parenting styles and research variables, they still drew a roughly similar conclusion: positive parenting styles are not only closely related to self-efficacy, but also significantly predict self-efficacy positively. It is worth noticing that authoritarian style is normally regarded as negative parenting, but the latter study has proved its can also possess a positive influence towards the self-efficacy of students older than a junior high year. Further researches are needed to figure out the hidden reasons for this phenomenon.

## **4. Conclusion**

From the studies above, it can be seen that none of them have solely studied how parenting styles affect learning motivation or learning self-efficacy, but rather, they integrated various latent variables, mediating variables, etc. to study together. It has indicated that parenting styles are considerably complicated. As for the similarities, all five studies demonstrated that parenting styles are significantly and positively related to students' learning motivation and academic self-efficacy. And positive parenting styles contribute to higher learning motivation and better self-efficacy. For the distinction, the influence of parenting styles on students slightly varies from different grades. It is notable that under certain situations, negative parenting styles like authoritarian style can also trigger higher levels of learning self-efficacy, especially for the students over middle school.

In conclusion, parenting styles are undeniably important to children's learning. To better encourage their learning motivation and self-efficacy, parents are suggested to adopt a positive parenting mode

to teach and raise their children. For instance, set a positive example in daily life, create a trusting and safe environment, show carefulness and respect to children's feelings or thoughts, provide them with stable emotional support etc.

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