

# A Review of How Parental Involvement Influences Student Academic Achievement

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## Abstract:

Parental involvement is a key factor influencing students' academic performance and is of great significance for improving educational quality. By reviewing relevant domestic and international literature and drawing on both classical research and meta-analytic evidence, this paper analyzes the overall connection linking parental engagement to scholastic performance, the various forms of parental participation and their differential effects, as well as the universality and differences of parental involvement in different educational stages and cultural backgrounds. The review confirms that there is a general positive correlation between parental involvement and students' academic achievements, but the effect is moderated by the type of involvement, educational stage and cultural background. The paper also focuses on analyzing the differentiated ways of participation between involved parents and controlling parents in the two subjects of mathematics and reading and analyzing the underlying reasons. Finally, it points out the shortcomings of current research in terms of interdisciplinary coverage and cultural mechanism, and proposes the direction of strengthening longitudinal tracking and research on home-school cooperation in digital contexts, in order to provide theoretical references and practical guidance for home-school collaborative intervention.

**Keywords:** Parental Involvement, Academic Performance, Interdisciplinary Comparison

## 1. Introduction

In recent years, student academic achievement has become a primary concern for families and schools, serving as a crucial indicator of educational quality. However, it is influenced by multiple factors, one of the key ones being family involvement. Research

in the fields of education, psychology, and sociology has consistently shown that family involvement serves as a notable predictor for student academic success. Parental involvement encompasses not only learning support behaviors at home, such as checking homework and shared reading, but also active communication and cooperation with schools. Although

parental involvement is generally believed to positively impact academic achievement, subsequent studies have revealed inconsistent findings. This inconsistency may primarily relate to factors such as the type of parental involvement, cultural context, and educational stage. Therefore, building upon existing meta-analyses, further systematic review of recent empirical evidence—particularly focusing on its underlying mechanisms and subject-specific variations—holds significant theoretical importance and practical value for educational practice. It provides valuable reference for collaborative interventions between schools and families. This review aims to integrate empirical research from recent years to develop a more holistic understanding of the pathways through which parental involvement operates as well as its manifestations across different contexts.

## 2. The Relationship between Parental Involvement and Academic Performance

### 2.1 Types of Parental Involvement

Parental participation can be broadly divided into Home-based involvement and School-based involvement. In order to highlight the differentiated effect of parent participation, it is necessary to have further elaboration on the classification to pave the way.

The first is relational parental involvement, which is mainly reflected in the fact that parents are more emotional and academically accompanying and encouraging, such as providing learning motivation, joint reading activities, and giving positive feedback to children. At the same time, its core function is not only emotional support, but also promoting the formation of learning motivation and self-efficacy. Research shows that this type of involvement can significantly improve students' interest in learning, academic achievement and psychological safety, and promote a positive parent-child relationship, especially in the field of reading and language learning [1].

The second is controlling participation, which is more manifested by parents managing their children's learning by supervising, checking homework, setting rules or disciplinary behaviour, emphasising the management and intervention of parents in the learning process. Moderate monitoring of students' performance still has a positive effect on academic performance, which can bring a certain improvement in students' academic performance in the short term. However, in this kind of involvement for a long time, it is more likely to weaken students' autonomy and intrinsic motivation, thus affecting the continuity of

learning [2]. Especially in a cultural environment with heavy academic pressure, excessive intervention by parents may lead to anxiousness and resistances, so as to the point of damaging the parent-child relationship, so this kind of involvement needs to be used cautiously.

Cognitive/academic involvement is similar to controlling involvement, such as parents' guidance on academic knowledge, learning strategies and subject skills. For example, provide problem-solving methods, discuss learning strategies or assist in completing learning projects [3]. However, it is slightly different from controlled participation. Academic participation emphasises strategic and cognitive development rather than simple supervision, and key aim is to improve students' understanding ability and subject learning effectiveness.

In addition, there is also School-based home-school participation, which is more for parents to directly participate in educational activities in the school environment, which can enhance home-school trust and cooperation, such as participating in parent-teacher meetings, volunteer activities, classroom observation or school decision-making [4,5]. This kind of involvement puts the emphasis on the participation of parents at the institutional level, which is conducive to enhancing home-school interaction and the integration of educational resources, but its direct impact on the academic performance of specific subjects is usually lower than relational, controlling and cognitive/academic involvement.

### 2.2 Classical Research and Meta-analysis Evidence

In research on the relationship between parental involvement and student academic achievement, both classical studies and meta-analytic evidence consistently point to a clear conclusion: Parental involvement has a significant positive correlation with student academic achievement. The specific mechanisms of action and effectiveness differ depending on the type of involvement, educational stage, and cultural context. The relationship between parental involvement and academic performance is influenced by the type of involvement. Fan & Chen found a moderate positive correlation between parental participation and academic achievement and highlighted that the type of involvement moderates this effect: home-based supervision and direct intervention showed weaker effects, while implicit approaches such as conveying high educational expectations yielded more stable results [6]. This study emphasized the multidimensional nature inherent in parental engagement and the differential impacts of its various dimensions on academic performance, laying a theoretical and quantitative foundation for the field. Research also

indicates that academic achievement is influenced by cultural context; for instance, East Asian families tend to emphasize supervision, while American families stress autonomy [7,8]. Moreover, an expanding corpus of studies finds that the quality of involvement is far more critical than its form. Jeynes clearly distinguished the efficacy of different involvement approaches, noting that voluntary parental engagement (e.g., joint reading, communication between home and school) is more effective than school-initiated, formal participation (e.g., parent-teacher meetings), underscoring that “quality matters more than form.” [4]. In Jeynes, parental expectations were identified as the most stable and significant predictor across cultural, age, and ethnic groups, with particularly stronger effects in the U.S. context. These meta-analyses shift the research focus from “whether it is effective” to “how to engage more effectively.” Additionally, the educational stage is an important moderating variable [9]. Hill & Tyson focusing on the secondary school stage, pointed out that adolescents benefit more from “academic socialization” support—such as guidance on academic goals, learning strategies, and future planning—rather than direct tutoring or homework supervision, which may even be counterproductive. This suggests that parental involvement should be adapted to students’ developmental stages [1]. This conclusion highlights the crucial role of developmentally appropriate involvement strategies in sustaining familial influence. Developmentally appropriate involvement strategies mean adjusting the ways parents participate according to the characteristics of students at different age stages.

## **2.3 The Universality and Differences of Parental Involvement**

### **2.3.1 Universality and Differences Across Various Educational Stages**

The relevant literature shows that the degree of parental involvement does not decrease as students grow older, but it shows significant differences across different educational stages [10].

During the early childhood and primary education stage (aged 3-12), parental involvement is mainly reflected in behavioral interventions, and has the most direct and significant impact on students’ academic performance. Li Anran et al. found through the analysis of national representative data from early childhood classes that the decrease in children’s performance is positively correlated with parents’ expectations for improvement, active participation in extracurricular activities, and the improvement of school participation [11]. Shufen X and Yining LIU proposed that different dimensions of parental involvement have different effects on predicting primary school

students’ academic performance, personal involvement has a positive effect, cognitive participation shows an “inverted U” relationship with academic performance, while the predictive effect of behavioral participation is not significant [12].

In the junior and senior high school education stage (aged 12-18), the degree of parental involvement gradually decreases, but parents still continue to participate in matters related to students’ academic studies. Li Jiazhe and Hu Yongmei pointed out that for junior high school students, the frequency of parents’ participation in their children’s learning is not necessarily the higher the better. Instead, there is an “inverted U-shaped” relationship between the frequency of parents’ participation in studies and students’ academic performance. Encouraging parents of junior school students to control the participation frequency and giving students more spaces in learning is conducive to cultivating students’ sense of responsibility for learning and self-management ability [13]. As students grow older and reach the high school stage, Hanif F et al. analyzed and indicated that the moral and economic participation of parents does have a positive correlation with the academic performance of high school students. At the same time, the decline in academic performance may also relate to parents’ limited social participation within the family [14]. At the university level, college students have become physically and psychologically mature. During this period, parental participation primarily has an indirect impact on students’ academic performance (such as GPA). There is insufficient evidence to suggest that college students’ academic performance is directly impacted by parental participation. Wang Shutao and Li Jiali found through a survey that family socioeconomic status indirectly affects college students’ academic performance through parents’ educational expectations and material support, while emotional support from low-income families is also crucial [15].

### **2.3.2 Universality and Differences under Different Cultural Backgrounds**

Parental involvement has not only attracted attention across various educational stages but also in countries with different cultural backgrounds. According to studies by Sandra Wilder, parental participation has a consistent effect on students’ academic performance across ethnic groups [8]. In the civilizations of East Asia, including China, Singapore, and South Korea, more emphasis is placed on educational achievements, so greater attention is paid to academic management and supervision, which shows a stronger positive correlation with students’ academic performance. In contrast, in Western cultures (such as the United States and European countries), more emphasis is

placed on students' autonomy rather than direct intervention in students' learning content, and students' academic performance is promoted by cultivating their interest in learning [7].

In summary, the effect of parental involvement on students' academic performance is universal across educational stages and cultural backgrounds. At the same time, the forms and degrees of impact of parental involvement have different between different ethnic backgrounds and educational stages. However, the connotation and strategies of "effective involvement" need to be adjusted according to the students' developmental stages and the different cultural backgrounds in which the students are located to influence students' academic performance.

### 3. Subject Differentiation: The Role of Parent Involvement in Different Subjects

#### 3.1 Parental Involvement in Mathematics Learning

Research indicates that supportive parental involvement (e. g., emotional support, encouragement of autonomy, and responsiveness to needs) shows a significant positive correlation with children's mathematics performance. A meta-analysis by Wang & Wei found that parental expectations and supportive behaviors have a particularly prominent impact on mathematics achievement [16]. Grounded in Self-Determination Theory, Silinskas and Kikas demonstrated that supportive involvement can enhance children's psychological needs and intrinsic motivation, thereby increasing their task persistence in mathematics learning [17]. Effective parental involvement should focus on enhancing parents' self-efficacy rather than relying solely on external initiatives. Based on the revised Parental Involvement Process (R-PIP) model, Liu and Leighton conducted an empirical study, revealing that parental self-efficacy has the most direct positive effect on mathematics performance, while school climate and teacher invitations can further promote supportive behaviors by enhancing this sense of efficacy. This research also suggests that certain forms of direct involvement (e. g., frequent help with homework), if conducted inappropriately, can be counterproductive, again demonstrating that the quality of involvement outweighs its frequency [18]. Controlling parental involvement often has a short-term negative impact on mathematics performance but may lead to some improvement over the long term. The study by Silinskas and Kikas showed that elevated levels of parental control correlated with children reporting a stronger perception

of being controlled, which correlated with lower mathematics achievement and task persistence. However, it also indicated that controlling behaviors might "transform" into supportive behaviors over time: parental control during sixth grade predicted increased levels of supportive behavior in ninth grade [17]. This can be attributed to differing perceptions of control between childhood and adolescence. Adolescents strongly demand independence and autonomy, leading to a subjective decline in their perception of parental control. Furthermore, as mathematics becomes more challenging in secondary school, many parents find themselves unable to provide direct tutoring. Consequently, their actual controlling behaviors tend to decrease, shifting towards other supportive approaches.

#### 3.2 Parental Involvement in Reading

A survey of the literature reveals that there aren't many research directly examining how parental participation in their children's language and reading activities affects their academic achievement. The majority of the work focuses on how supportive parental involvement affects reading achievement, including parents' involvement in games, linguistic contact, and family reading activities. In the early days, many studies pointed out that parental involvement, including regularly listening to children's reading aloud at home, reading aloud to children at home, supervising children's learning at home, and conducting encouraging and interactive family reading activities, has a relatively obvious promoting effect on students' reading performance. However, Xu Min et al. separated parental participation into two categories: involvement in the family and involvement in the school. According to the analysis, reading performance is not significantly impacted by these two forms of parental participation, instead, they indirectly have a positive impact on reading performance entirely by improving students' self-regulated learning ability [19]. Midraj et al. analyzed that among various forms of parental involvement, high-quality interactions such as discussing school activities with children can not only effectively promote students' English reading performance but also enhance cross-language abilities, but it also pointed out that supervising or checking homework has a significant negative correlation with reading performance, which is different from the earliest findings [20]. Guo Xiaolin et al. found that in the Chinese context, parental involvement and parental expectations, as mediating variables for the impact of family income and parents' educational level on reading performance, indirectly have a positive impact on reading performance. Specifically, family income and parents' educational level mainly improve parental expectations, which in turn lead to more

active participation behaviors and ultimately improve students' academic performance [21]. De S N also stated that parental involvement, as a mediating variable, is benefits young children's reading and writing performance, including young children's vocabulary, language expression ability, and literacy ability [22]. In conclusion, supportive parental involvement, such as accompanying students in story reading, reading books for students, and providing expectations, has a favorable effect on improving students' reading performance, as well as their vocabulary and language ability, both directly and indirectly.

### **3.3 Interdisciplinary Comparative Analysis: Direct and Indirect Mechanisms of Parental Involvement**

Parental involvement shows a differentiated influence path in different disciplines. This difference is mainly reflected in the "directness" and "indirectness" of the parent involvement mechanism, and there are systematic differences between reading/Chinese learning and mathematics learning in terms of knowledge attributes, parent roles and paths.

#### **3.3.1 Differences in the nature of knowledge**

The essence of reading and language learning lies in the formation of language understanding and expression ability, which is highly dependent on contextual interaction and language input. Through reading, discussion and language communication with their parents, children not only acquire vocabulary and semantic information, but also master reading strategies and language logic implicitly.

In contrast, mathematics learning is a more abstract and logical cognitive activity, and its learning effectiveness depends on students' active processing in conceptual understanding, problem construction and strategic thinking. Therefore, the attribute of the subject determines the effect mode of parental involvement: reading tends to directly promote ability building through daily communication, while mathematics needs to play an indirect role through psychological motivation and strategic transformation.

#### **3.3.2 Differences in the roles of parents**

In the field of reading, parents often play the role of "language partners" and "role models". Parents participate in children's language learning through co-reading, storytelling, daily dialogue, etc., and this companionship itself is part of the learning process[23]. Parents' positive response, semantic guidance and emotional feedback directly affect children's language understanding and reading interest.

In mathematics learning, parents need to be "learning motivators" and "strategy guides" rather than "problem

solvers". They need to help students build a sense of self-efficacy and learning confidence through encouragement, guidance and strategic tips [16]. The meta-analysis of Jeynes shows that parents' high expectations and emotional support can significantly enhance students' motivation for learning mathematics, but if parents intervene too deeply and replace their children to solve problems, it will weaken their independence and learning drive [24,25]. Therefore, effective parental involvement in mathematics learning should focus on psychological motivation and strategic support, rather than direct intervention.

#### **3.3.3 Differences in the path of action: direct mechanism and indirect mechanism**

In reading/Chinese subjects, the participation behaviour of parents directly constitutes the learning activity itself. Co-reading, vocabulary exchange and language interaction are not only external educational behaviours, but also direct carriers of internal language acquisition. This "direct mechanism" means that there is a short-path positive relationship between parents' behaviour and students' learning outcomes, and parents' participation can be instantly transformed into the improvement of children's language ability and reading comprehension. In contrast, the participation of parents in the field of mathematics is more reflected as an "indirect mechanism". Parents' emotional support, expectation transmission and encouragement behaviour first act on the psychological level of students, stimulating their learning motivation and self-efficacy; then, these inherent psychological factors indirectly promote the improvement of academic performance by promoting the use of strategic learning and problem-solving ability[2]. Therefore, the effect of parental participation in mathematics learning is often delayed and indirect, and its effectiveness depends on whether students can transform psychological motivation into cognitive strategies and action practises.

#### **3.3.4 Comprehensive comparison and revelation**

In general, parental involvement in the field of reading presents a direct path of "emotion-behavioural-cognition" integration, emphasising language interaction and emotional connection; in the field of mathematics, it reflects the indirect path of "emotion-motivation-strategy-achievement", focussing on psychological motivation and cognitive construction. The difference between the two shows that the effectiveness of parental involvement depends on the match between the nature of the discipline and the way of participation. When promoting home-school cooperation, educators and policymakers should recognise the differences in the characteristics of disciplines: strengthen co-reading and interaction in language subjects, and

advocate strategic guidance and emotional motivation in mathematics learning, so as to maximise the accuracy and effectiveness of the subjects in parental involvement.

## Conclusion

### 4.1 Overall Conclusions

To summarize, through the review of relevant literature, it is reconfirmed that parental involvement directly or indirectly promotes students' academic performance, and this phenomenon is widespread across different age groups and cultures. The results of various parental participation strategies vary: supportive involvement plays an obvious role in improving academic achievements; controlling involvement needs to be used with caution; moderate involvement can enhance students' academic performance; and cognitive involvement focuses on improving students' comprehension ability and learning effectiveness.

Meanwhile, variations exist across academic subjects. This paper mainly analyzes the differences in the impact of parental involvement between mathematics and Chinese. In the subject of mathematics, parental involvement is more conducive to promoting students' mathematical comprehension ability, logical thinking, and strategy application ability. In contrast, in Chinese reading, parental involvement promotes the improvement of students' reading performance and academic performance directly through specific and direct activities.

### 4.2 Existing Research Gaps and Future Research Directions

This paper mainly studies the differences in parental involvement between two major subjects, namely mathematics learning and Chinese reading. However, research on parental involvement in other specific subjects is still insufficient. Therefore, future research needs to strengthen interdisciplinary comparisons and longitudinal tracking. The trajectory of parental involvement from primary school to junior high school may reveal the specific effects of subjects and differences in development stages. However, the current body of research does not offer a thorough explanation of the precise connections among subject differences, cultural background, and parental participation. Future research should further explore participation patterns with local characteristics, such as "parental supervision during study - extracurricular tutoring supervision". Moreover, with the popularization of information-based learning, home-school cooperation in digital contexts deserves special attention. Furthermore, future research should adopt multi-dimensional evaluation indicators to

fully demonstrate the multi-dimensional effects of parental participation on the growth of students, thereby providing practical guidance for educational practitioners.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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