



**THE IMPACT OF HOME – SCHOOL COMMUNICATION
QUALITY ON STUDENTS’ ACADEMIC PERFORMANCE: A
CASE STUDY OF LANGFANG NO.9 MIDDLE SCHOOL**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
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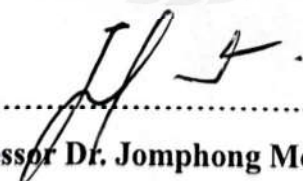
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This Independent Study Has Been Approved as a Partial Fulfillment of the
Requirements for the Degree of Master of Business Administration

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ABSTRACT

With the deepening of educational reform, students’ academic performance depends not only on teaching quality and individual effort but also on family involvement and home–school cooperation. While previous research confirms that home–school cooperation benefits academic performance, empirical evidence on which specific dimensions of communication quality matter most remains limited, which this study addressed.

The objectives of this study were to examine the relationship between the five dimensions of home–school communication quality — 1) communication frequency; 2) communication content effectiveness; 3) communication interaction; 4) communication channel convenience; and 5) parental participation — and students’ academic performance. Students and parents of Langfang No.9 Middle School were taken as the research sample.

A quantitative questionnaire survey using a five-point Likert scale collected data from students and parents at Langfang No.9 Middle School. Of the 1,200 questionnaires distributed, 1,089 were returned, and 1,048 were valid after excluding invalid responses (96.2% effective response rate). Correlation and multiple regression analyses in SPSS showed that all five communication dimensions were significantly and positively related to academic performance, jointly explaining 65.0% of the variance ($R^2 = 0.650$, $p < 0.01$). Communication frequency ($\beta = 0.298$) and parental participation ($\beta = 0.271$) were the strongest predictors, followed by communication interaction ($\beta = 0.224$), communication content effectiveness ($\beta = 0.186$), and communication channel convenience ($\beta = 0.149$). The study recommends that schools maintain frequent, regular communication with parents, provide convenient communication channels, and encourage parental participation to enhance students’ academic performance.

Keywords: home–school communication quality, academic performance, communication frequency, communication interaction, parental participation

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LI JINTANG



DECLARATION

I, Lin Jintang, hereby declare that this Independent Study entitled “The Impact of Home – School Communication Quality on Students’ Academic Performance: A Case Study of Langfang No.9 Middle School” is an original work and has never been submitted to any academic institution for a degree.

(Li jintang)

15,MAR 2025



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Chapter 1 Introduction

1.1 Background of the Study

In recent years, educational reforms have increasingly emphasized improving students' academic performance and enhancing the overall quality of education. Students' academic achievement not only influences their individual development but also reflects the effectiveness of the education system as a whole. Traditionally, students' academic performance has been considered mainly a result of teaching quality and students' personal effort. However, with the advancement of educational research, scholars have gradually recognized that students' academic outcomes are influenced by multiple factors, including family environment and parental involvement. Previous studies have indicated that parental involvement is positively associated with students' academic achievement (Fan & Chen, 2001). Therefore, strengthening the cooperation between schools and families has become an important issue in both educational research and practice.

At the primary and secondary school levels, students are in a crucial stage of developing learning habits and academic abilities. During this period, students' learning attitudes, behaviors, and motivations are still developing, and the family environment plays an important role in shaping their academic progress. Home - school partnership is widely considered an effective approach to supporting students' learning, and home - school communication serves as a key mechanism for facilitating such collaboration. Through effective communication, teachers can provide parents with timely feedback regarding students' academic performance and classroom behavior, while parents can gain a clearer understanding of school expectations and their children's learning progress. As a result, parents can provide more appropriate support for students' learning at home. Previous research has also suggested that parental involvement in education can positively influence students' academic development (Hill & Tyson, 2009).

In educational practice, home - school communication can take various forms. Traditional communication methods often include parent - teacher meetings, telephone communication, and home visits conducted by teachers. Among these methods, home visits represent a direct form of communication that allows teachers to gain deeper insights into students' family environments and learning conditions. At the same time, home visits provide parents with opportunities to communicate directly with teachers about their children's academic progress and learning challenges. Such face-to-face communication helps strengthen the connection between schools and families and contributes to the creation of a supportive learning environment for students.

With the rapid development of information technology, the forms of home – school communication have gradually evolved. In recent years, online meetings, virtual parent conferences, and various digital communication platforms have become increasingly common in school – parent interactions. These digital communication tools not only improve communication efficiency but also enable parents to obtain timely information about their children’s academic performance. Studies have shown that when teachers and parents maintain more frequent and effective communication, students tend to demonstrate improvements in classroom behavior and learning engagement, which may ultimately contribute to better academic outcomes (Kraft & Dougherty, 2013).

Although various forms of home – school communication are widely used in educational practice, the quality of communication may vary across schools. Differences in communication frequency, communication content, communication interaction, and communication channels may influence the effectiveness of information exchange between schools and families. In addition, the level of parental participation in school communication activities may also affect the outcomes of home – school communication. Therefore, examining the relationship between home – school communication quality and students’ academic performance is of significant importance. In this study, home – school communication quality was examined through five dimensions, including communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation. Taking Langfang No.9 Middle School as a case study, this research employed a quantitative approach to analyze the relationship between these factors and students’ academic performance.

1.2 Problems of the Study

Based on the discussion above, this study examines home–school communication quality through five dimensions, namely communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation. Communication frequency and content effectiveness together determine how much information is exchanged between teachers and parents and how useful it is, communication interaction reflects whether this exchange is genuinely two-way rather than one-directional, communication channel convenience affects how easily teachers and parents can maintain contact, and parental participation reflects the extent to which parents translate the information they receive into concrete support for their children’s learning at home. Because empirical evidence on how each of these

dimensions specifically relates to students' academic performance remains relatively limited, this study proposed the following five research questions:

1. What is the relationship between the frequency of home-school communication and students' academic performance?
2. What is the relationship between the effectiveness of home-school communication content and students' academic performance?
3. What is the relationship between the level of interaction in home-school communication and students' academic performance?
4. What is the relationship between the convenience of home-school communication channels and students' academic performance?
5. What is the relationship between parental participation and students' academic performance?

1.3 Objectives of the Study

- 1 To examine the effect of frequency of home-school communication on students' academic performance.
- 2 To examine the effect of the effectiveness of home-school communication content on students' academic performance.
- 3 To examine the effect of interactivity in home-school communication on students' academic performance.
- 4 To examine the effect of accessibility to home-school communication channels on students' academic performance.
- 5 To examine the effect of parental participation on students' academic performance.

1.4 Scope of the Study

This research examined the relationship between home – school communication quality and students' academic performance in primary and secondary education. To provide a theoretical foundation for the study, relevant academic literature on home – school communication and student academic achievement was reviewed through academic databases such as Google Scholar. Based on the insights gained from the literature, home – school communication quality in this study is described through five dimensions: communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation.

A structured questionnaire was then developed to measure the variables related to home – school communication and students' academic performance. Langfang No.9

Middle School was selected as the research site for this study. The participants included students and their parents from this school. The survey questionnaire was distributed through an online survey platform. After the questionnaires were collected, valid responses were screened and organized for further analysis. These data provided the main empirical basis for examining how different aspects of home – school communication relate to students’ academic performance.

A quantitative research approach was adopted to analyze the collected data. Several statistical techniques were applied to interpret the results, including descriptive statistics, correlation analysis, and regression analysis. These analyses were conducted using statistical software in order to examine the relationships between the five dimensions of home – school communication quality and students’ academic performance.

1.5 Significance of the Study

Theoretical Significance

Students’ academic performance has long been an important topic in educational research. Previous studies have commonly examined factors influencing students’ academic outcomes from perspectives such as teaching quality, students’ individual abilities, and family educational background. However, with the continuous development of educational perspectives, increasing attention has been given to the interaction between schools and families in supporting students’ learning. In this context, home – school communication has gradually been recognized as an important approach that connects school education with family education and plays a meaningful role in students’ learning processes. Therefore, examining the factors that influence students’ academic performance from the perspective of home – school communication quality may contribute to enriching research in this field.

This study approaches the issue from the perspective of home – school communication quality and categorizes it into five dimensions: communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation. A quantitative research approach was used to examine the relationship between these factors and students’ academic performance. By analyzing these dimensions systematically, the study attempted to provide a clearer understanding of how home – school communication influences students’ academic development. This multi-dimensional perspective extends existing discussions on home – school cooperation and parental involvement, while also offering new insights and references for future research.

Practical Significance

From a practical perspective, home – school communication also plays an important role in students' academic development. Although school education is a key factor in students' learning processes, the family environment can also influence students' learning attitudes and study habits. When schools and families maintain effective communication, parents are more likely to understand their children's academic progress and provide appropriate guidance and support at home. Such cooperation between schools and families can help create a more supportive learning environment for students.

In addition, the findings of this study provide useful insights for schools and teachers when developing strategies for home – school communication. By examining the relationship between different dimensions of communication quality and students' academic performance, schools gain a better understanding of current communication practices and consider possible improvements in areas such as communication frequency, communication content, and communication methods. Teachers also benefit from strengthening communication with parents, as more effective interaction can help them gain a deeper understanding of students' learning situations. For parents, the study also highlights the importance of active participation in school-related communication, which may help them better support their children's learning and contribute to students' academic development.

1.6 Definition of Terms

In order to ensure clarity and consistency throughout this study, the key terms involved in this study are defined as follows.

Home–School Communication Quality — In this study, home–school communication quality refers to the overall effectiveness of the information exchange and interaction between schools and families. It serves as the independent variable of this study and is measured through a five-dimension framework consisting of communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation.

Students' Academic Performance — Students' academic performance refers to students' learning outcomes as reflected in school examinations. In this study, it serves as the dependent variable and is operationalized as students' total examination scores, which provide a direct and quantifiable indicator of academic achievement.

Communication Frequency — Communication frequency refers to how often teachers and parents contact each other regarding students' learning and school life.

Regular and stable contact enables parents to keep track of their children' academic progress in a timely manner and to respond to problems as soon as they arise.

Communication Content Effectiveness — Communication content effectiveness refers to the clarity, relevance, and practical value of the information exchanged between teachers and parents. When the content of communication is clear and closely related to students' actual situations, parents are able to understand their children' learning conditions accurately and take appropriate supportive actions.

Communication Interaction — Communication interaction refers to the extent to which communication between teachers and parents is two-way rather than onedirectional. It emphasizes mutual dialogue, timely feedback, and reciprocal engagement, through which schools and families can jointly discuss and address issues related to students' development.

Communication Channel Convenience — Communication channel convenience refers to the accessibility and ease of use of the platforms and methods through which home-school communication takes place, such as telephone calls, instant messaging applications, and parent meetings. Convenient channels reduce communication barriers and encourage more frequent and effective exchanges between teachers and parents.

Parental Participation — Parental participation refers to the degree to which parents are actively involved in school-related communication and in supporting their children' learning at home. A higher level of parental participation generally reflects closer cooperation between families and schools and provides students with more consistent educational support.

Chapter 2 Literature Review

2.1 Students' Academic Performance

Students' academic performance has long been a central topic in educational research and is widely used as an important indicator for evaluating educational outcomes and learning effectiveness. Academic performance generally reflects students' achievements in terms of knowledge acquisition, learning abilities, and overall academic progress. In educational studies, students' academic outcomes are not only related to their individual abilities but are also influenced by multiple factors such as family environment, school education, and social context. As a result, identifying the factors that influence students' academic performance has become an important focus in the field of education. Over time, researchers have examined academic achievement from various perspectives in order to better understand how students' learning outcomes are shaped.

Early studies on academic performance primarily focused on school-related factors. Many researchers suggested that teaching quality, curriculum design, and instructional strategies play significant roles in shaping students' learning outcomes. When teachers adopt effective teaching approaches and provide supportive learning environments, students are more likely to demonstrate stronger academic performance. In addition to school factors, individual characteristics of students have also been widely discussed in the literature. Factors such as learning motivation, learning attitudes, and cognitive abilities are often considered key elements influencing students' academic success. Studies have shown that students who demonstrate higher levels of motivation and engagement in learning activities tend to achieve better academic results.

As educational research has developed, scholars have increasingly recognized the importance of family factors in students' academic development. The family environment is widely regarded as one of the most influential social contexts affecting students' growth. Parents' educational expectations, parenting styles, and the overall learning atmosphere within the family may significantly influence students' academic performance. For instance, when families provide supportive learning environments and encourage academic efforts, students are more likely to develop positive learning habits. In addition, parental attention to children's learning and the availability of educational resources within the family are also considered important contributors to students' academic outcomes.

Within the field of home – school collaboration, researchers have further emphasized the importance of cooperation between families and schools in supporting

students' academic development. Epstein (2011) proposed the theory of school – family – community partnerships, suggesting that students benefit when families and schools work together to support education. When schools maintain effective communication with families and encourage parental involvement, students are more likely to receive consistent support from both home and school environments. Similarly, Hill and Tyson (2009), through a comprehensive review of previous studies, found that parental involvement in educational activities is positively associated with students' academic performance and learning attitudes. These findings suggest that collaboration between families and schools plays a meaningful role in students' educational development.

Overall, existing studies indicate that students' academic performance is influenced by a combination of factors, including school-related factors, individual characteristics, and family environments. With the growing recognition of the importance of family – school collaboration, scholars have increasingly explored the role of communication between schools and families in shaping students' learning outcomes. Although previous research has demonstrated that home – school cooperation can positively influence students' academic performance, the specific mechanisms through which communication affects academic outcomes remain a topic of ongoing discussion. Therefore, it is necessary to further examine the relationship between home – school communication and students' academic performance. Based on the existing literature, this study investigated home – school communication quality from five dimensions — communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation—in order to better understand how communication between schools and families contributes to students' academic achievement.

2.2 Communication Frequency

Communication frequency between schools and families is widely regarded as one of the key indicators used to evaluate the level of home–school communication. In educational practice, communication frequency generally refers to how often teachers and parents exchange information about students' learning progress and school experiences. As the concept of home–school collaboration has developed, scholars have increasingly emphasized the importance of maintaining regular communication between schools and families. Earlier educational studies mainly focused on factors within schools, such as teaching quality and curriculum design, when explaining

students' academic performance. However, more recent research suggests that students' learning outcomes are influenced not only by school environments but also by family involvement and support. When schools communicate with parents regularly, parents are more likely to stay informed about their children's academic progress and provide appropriate support at home. Therefore, communication frequency has gradually become an important dimension in studies examining home–school relationships.

From the perspective of parental involvement theory, communication frequency plays a significant role in encouraging parents to participate in their children's education. Hoover-Dempsey (2005) proposed that school-initiated communication is one of the major factors influencing parents' willingness to become involved in students' learning activities. When teachers provide parents with regular feedback about students' academic progress, parents tend to develop a stronger awareness of their role in supporting their children's education. Through continuous communication, parents can better understand their children's learning needs and take appropriate actions at home, such as supervising homework or encouraging study habits. Moreover, frequent communication may strengthen parents' trust in schools and teachers, which in turn can enhance cooperation between families and educational institutions.

In addition to theoretical perspectives, a number of empirical studies have examined the relationship between communication frequency and students' academic outcomes. Deslandes and Bertrand (2005) found that when schools maintain frequent contact with parents, parents are more likely to engage in activities that support their children's learning. Such involvement can include monitoring homework, discussing school experiences with children, and maintaining communication with teachers. These forms of parental engagement may contribute to improved learning motivation and better academic behavior among students. Similarly, Jeynes (2012), through a metaanalysis of numerous studies on parental involvement, concluded that consistent communication between schools and families is associated with higher levels of academic achievement and more positive learning attitudes among students.

Other researchers have further explored the indirect mechanisms through which communication frequency may influence students' learning outcomes. Castro et al. (2015), in a large-scale meta-analysis of parental involvement studies, suggested that communication frequency between schools and parents often serves as a catalyst that encourages greater parental engagement. When parents are regularly informed about their children's academic performance and classroom behavior, they are more likely to become actively involved in the educational process. This increased involvement can create a supportive learning environment at home, which may enhance students'

academic motivation and persistence. In this sense, communication frequency can be viewed not only as a direct component of home–school communication but also as an important factor that facilitates parental participation in education.

With the rapid development of information technology, the ways in which schools communicate with parents have also changed significantly. In the past, communication between teachers and parents mainly occurred through traditional methods such as parent–teacher meetings, telephone calls, and home visits. Although these methods were effective to some extent, they often limited the frequency of communication due to time and logistical constraints. In recent years, digital communication tools such as online school platforms, email, and mobile messaging applications have become increasingly common in educational settings. These technologies allow teachers to share information about students' academic progress more efficiently and enable parents to access updates about their children's learning at any time. As a result, the use of digital communication tools may increase the frequency of interactions between schools and families, thereby strengthening the connection between the two.

Despite the potential benefits of frequent communication, some scholars argue that increasing communication frequency alone may not necessarily lead to improved academic outcomes. Hornby and Lafaele (2011) pointed out that several factors may influence the effectiveness of home–school communication, including parents' educational backgrounds, teachers' communication skills, and broader social conditions. For example, some parents may have limited time to engage with schools due to work commitments, while others may feel uncertain about how to support their children's learning. In such cases, even if communication occurs frequently, its effectiveness may still be limited. Furthermore, if the communication focuses only on administrative information rather than meaningful discussions about students' learning needs, the impact on students' academic performance may remain minimal.

Therefore, while communication frequency is an important dimension of home–school communication, it should not be considered in isolation. The quality of communication, the relevance of the information shared, and the level of interaction between teachers and parents are also crucial factors in determining whether communication can effectively support students' learning development. Considering these perspectives, this study treats communication frequency as one of the key dimensions of home–school communication quality and further examines its relationship with students' academic performance. By analyzing the role of communication frequency together with other communication-related factors, the study

aimd to provide a more comprehensive understanding of how home–school communication influences students’ academic outcomes.

2.3 Communication Content Effectiveness

Communication content effectiveness is commonly regarded as an important component of home–school communication quality. In studies of home–school collaboration, communication content effectiveness generally refers to the relevance, accuracy, and practical value of the information that schools share with parents regarding students’ learning and development. In educational practice, communication between schools and families is not merely a process of information transmission but also an important way for teachers and parents to jointly understand students’ learning situations and address educational challenges. When home–school communication focuses on students’ learning issues and provides parents with relevant and meaningful information, parents are more likely to understand students’ learning needs and provide appropriate support at home. Therefore, the effectiveness of communication content plays a crucial role in determining the overall impact of home–school communication on students’ learning development.

From a theoretical perspective, the effectiveness of communication content is closely related to parental involvement in children’s education. Hoover-Dempsey et al. (2005) suggested that when schools provide parents with clear and specific information, parents are more likely to become involved in their children’s learning activities. According to their parental involvement model, parents’ participation in education is often influenced by the type and quality of information they receive from schools. When parents are informed about students’ academic performance, learning difficulties, and learning progress, they are better able to understand their children’s educational needs and take appropriate actions to support learning at home. For example, parents may adjust study schedules or help children develop better study habits based on the information provided by teachers. Consequently, effective communication content not only reflects students’ learning conditions but also provides parents with practical guidance for supporting their children’s education.

Within the framework of home–school collaboration, several researchers have emphasized the importance of communication content in strengthening cooperation between families and schools. Christenson and Sheridan (2001) argued that communication between schools and families should not only be regular but also meaningful and informative. When teachers provide parents with detailed and accurate information about students’ learning conditions, parents are more likely to understand

the goals of school education and become actively involved in supporting their children's academic development. At the same time, this exchange of information allows teachers to gain a better understanding of students' home learning environments, which may help teachers adopt more effective instructional strategies. In this sense, the effectiveness of communication content influences both parental involvement and the overall effectiveness of educational practices.

Empirical research has also explored the relationship between communication content and students' academic performance. Hill and Tyson (2009), through a comprehensive review of previous studies, found that parental involvement plays a significant role in promoting students' academic development, and such involvement is often supported by meaningful information provided by schools. When parents receive specific information about students' academic progress and practical suggestions for supporting learning, they are more likely to engage in educational activities at home. Similarly, Topor et al. (2010) reported that when parents are informed about students' academic progress and learning difficulties, they tend to show greater interest in their children's educational experiences and provide more effective learning support at home. As a result, communication content that is both informative and practical can contribute to improved academic outcomes.

However, in real educational settings, the effectiveness of communication content may still be influenced by several factors. Some studies suggest that if home-school communication is limited to general information, such as simply reporting students' grades or classroom behavior, its impact on students' learning development may be relatively limited. Goodall and Montgomery (2014) argued that when schools provide parents with practical advice on how to support learning, parents are more likely to participate actively in their children's education and create supportive learning environments at home. At the same time, Hornby and Lafaele (2011) pointed out that various factors, including family background, teachers' communication skills, and broader social conditions, may influence the effectiveness of home-school communication. For instance, some parents may find it difficult to fully understand information provided by schools due to differences in educational background, while teachers may sometimes lack sufficient time to provide detailed explanations. Therefore, when examining the influence of home-school communication on students' academic performance, it is necessary to consider not only communication frequency but also the quality and effectiveness of communication content. Based on these perspectives, this study considers communication content effectiveness as an important dimension of

home–school communication quality and further explores its relationship with students’ academic performance.

2.4 Communication Interaction

In studies of home–school communication, communication interaction is often considered an important dimension in evaluating the quality of communication between schools and families. Communication interaction mainly refers to whether teachers and parents engage in two-way communication rather than one-way information delivery from schools to parents. In traditional educational settings, communication between schools and families often occurs in the form of teachers reporting students’ academic progress to parents, such as during parent–teacher meetings or through academic reports. However, this type of one-directional communication may not effectively establish a collaborative relationship between schools and families. As educational perspectives have evolved, researchers have increasingly emphasized the importance of interactive communication in home–school collaboration. Interactive communication not only facilitates information exchange but also strengthens the relationship between teachers and parents, allowing both parties to work together in supporting students’ learning development.

From a theoretical perspective, communication interaction is closely related to the concept of home–school partnership. Christenson and Sheridan (2001) suggested that strong connections between families and schools are essential for supporting students’ academic development, and such connections are often built through ongoing interaction and communication. When teachers and parents are able to communicate openly and exchange ideas regarding students’ learning progress, they are more likely to develop shared educational goals and mutual understanding. This collaborative relationship may help reduce misunderstandings between families and schools and promote a supportive learning environment for students.

Within the framework of home–school collaboration, several researchers have highlighted the role of interactive communication in enhancing cooperation between teachers and parents. Kim and Sheridan (2015) noted that effective home–school partnerships rely not only on parents’ participation in school activities but also on continuous interaction between teachers and families. Through interactive communication, teachers and parents are able to discuss students’ learning challenges and jointly explore possible solutions. For example, teachers may provide suggestions regarding learning strategies, while parents may share observations about students’ study habits at home. Such collaborative communication enables teachers to better

understand students' learning environments and adjust their teaching approaches accordingly.

Empirical studies have also examined the relationship between communication interaction and students' academic outcomes. Hill and Tyson (2009), through a comprehensive review of previous research, found that students tend to show higher levels of motivation and engagement when their parents actively communicate with teachers about educational matters. Interactive communication may help parents gain a clearer understanding of their children's academic needs, which can encourage them to provide more effective support at home. Similarly, Topor et al. (2010) reported that when parents and teachers engage in collaborative communication, students are more likely to benefit from consistent support from both school and family environments, which may positively influence their academic performance.

Despite these benefits, communication interaction in real educational contexts may still face certain challenges. Some researchers have pointed out that when communication between schools and families remains one-directional, parents may have limited opportunities to express their views or participate in discussions about students' learning. Hornby and Lafaele (2011) identified several barriers to effective parental involvement, including family background differences, teachers' communication skills, and broader social conditions. For example, some parents may have limited time to communicate with teachers due to work commitments, while some teachers may lack effective strategies for interactive communication. Therefore, when examining the influence of home-school communication on students' academic performance, it is important to consider not only communication frequency and communication content but also the level of interaction between teachers and parents. In this study, communication interaction is regarded as an important dimension of home-school communication quality, and its relationship with students' academic performance will be further examined.

2.5 Communication Channel Convenience

Communication channel convenience is considered an important factor influencing the effectiveness of home-school communication. It generally refers to the accessibility and efficiency of the communication tools used by schools and parents to exchange information. In traditional educational settings, communication between teachers and parents mainly occurs through parent-teacher meetings, telephone calls, or home visits. Although these methods allow teachers and parents to share information about students' academic progress, they are often limited by time and geographical constraints. For

example, some parents may find it difficult to attend face-to-face meetings due to work commitments or distance. As a result, the convenience of communication channels has gradually become an important issue in research on home–school communication. When schools provide more accessible communication channels, parents are more likely to participate in communication activities and stay informed about their children’s learning progress.

From a theoretical perspective, communication channels serve as a key link connecting schools and families. Christenson and Sheridan (2001) emphasized that effective connections between schools and families are essential for supporting students’ learning and development, and communication channels play a crucial role in establishing such connections. When schools offer diverse and convenient communication tools, parents are more able to access information related to students’ academic progress and school activities. Through these channels, teachers can provide timely updates about students’ learning performance, while parents can share information about students’ study habits and learning situations at home. Such information exchange may help teachers gain a more comprehensive understanding of students’ learning environments and enable parents to better support their children’s education.

With the development of information technology, communication channels used in home–school communication have gradually expanded beyond traditional methods. In recent years, digital communication platforms have been increasingly adopted in educational contexts. Email, online learning systems, and mobile communication applications are now widely used by schools to maintain contact with parents. Kim and Sheridan (2015) suggested that digital platforms can facilitate more efficient communication between teachers and families, enabling parents to become more involved in their children’s education. These technologies allow teachers to share academic updates, announcements, and learning materials quickly, while parents can access this information at their convenience.

In practice, many schools have also started using online meeting platforms to communicate with parents. In China, platforms such as DingTalk and Tencent Meeting are frequently used for online parent meetings and school–family discussions. These platforms allow parents to participate in meetings without being physically present at school. Similarly, in many international educational settings, online conferencing tools such as Zoom and Google Meet are widely used to organize parent–teacher meetings and academic discussions. These tools support video communication, document sharing, and real-time interaction, which can significantly improve the efficiency of home–

school communication. Hill and Tyson (2009) found that when schools provide convenient communication channels, parents are more likely to participate in school-related activities and provide support for their children's learning at home.

Despite the advantages of digital communication channels, several factors may still influence their effectiveness in educational practice. Hornby and Lafaele (2011) pointed out that barriers to parental involvement may arise from differences in family background, technological access, and communication skills. For instance, some parents may have limited experience using digital tools, while others may lack access to reliable internet services. In addition, schools may face challenges in organizing communication systems effectively. Therefore, when examining the influence of home-school communication on students' academic performance, it is important to consider not only communication frequency and communication content but also the convenience and accessibility of communication channels. In this study, communication channel convenience is regarded as one of the key dimensions of home-school communication quality, and its relationship with students' academic performance will be further investigated.

2.6 Parental Participation

Parental participation is widely recognized as an important factor influencing students' academic development in studies of home-school collaboration. Parental participation generally refers to the extent to which parents are involved in their children's educational activities and pay attention to their academic progress. Students' learning outcomes are shaped not only by school education but also by the support they receive from their families. When parents actively participate in their children's education and maintain communication with schools, students are more likely to develop positive learning habits and achieve better academic results. As educational research has developed, scholars have increasingly emphasized the role of family involvement in supporting students' learning and development.

From a theoretical perspective, parental participation plays a crucial role in the collaboration between families and schools. Epstein (2011) proposed that families, schools, and communities should work together to support students' education through collaborative partnerships. Within this framework, parental participation is considered a key component of effective home-school cooperation. When parents maintain communication with teachers and become involved in school-related activities, students are more likely to receive consistent support from both home and school environments. Parental participation may take various forms, including attending school meetings,

communicating with teachers, supervising homework, and encouraging children's learning at home.

Several researchers have further highlighted the importance of parental participation in students' academic development. Hill and Tyson (2009) suggested that parental involvement in educational activities can positively influence students' academic performance and learning attitudes. When parents show interest in their children's learning and maintain communication with teachers, students often demonstrate higher levels of motivation and engagement in schoolwork. In addition to participating in school activities, parents' support at home—such as helping students develop study plans or providing emotional encouragement—may also contribute to students' learning outcomes.

Empirical research has provided further evidence supporting the relationship between parental participation and students' academic achievement. Jeynes (2012), through a comprehensive review of previous studies, found that parental involvement is significantly associated with improved academic performance and more positive learning attitudes among students. Similarly, Topor et al. (2010) reported that when parents actively engage in their children's education and maintain communication with schools, students tend to show better academic progress. These findings suggest that parental participation may influence students' learning outcomes both directly and indirectly, for example by improving students' motivation, learning behavior, and academic engagement.

Despite its benefits, parental participation in education may still be influenced by several factors in real educational contexts. Hornby and Lafaele (2011) noted that barriers to parental involvement may arise from differences in family background, educational resources, and parents' available time. Some parents may find it difficult to participate in school activities due to work commitments, while others may lack the experience or confidence needed to support their children's learning effectively. In addition, differences in educational expectations between teachers and parents may sometimes create communication challenges. Therefore, when examining the relationship between home-school communication and students' academic performance, it is important to consider parental participation alongside other factors such as communication frequency, communication content, and communication channels. In this study, parental participation is treated as an important dimension of home-school communication quality, and its relationship with students' academic performance will be further explored.

2.7 Conceptual Framework

Therefore, this study developed a conceptual framework to examine the relationship between home–school communication quality and students’ academic performance. Based on the literature review, five key dimensions of home–school communication quality were identified, including communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation.

By analyzing the relationships between these five dimensions and students’ academic outcomes, this study aimed to provide a clearer understanding of how different aspects of home–school communication quality contribute to students’ learning development. The conceptual framework presented in Figure 2.1 illustrates the proposed relationships among these variables and serves as the theoretical basis for the empirical analysis conducted in this research.

As shown in Figure 2.1, the five communication quality dimensions discussed in the preceding sections are positioned as independent variables on the left side of the framework, while students’ academic performance is placed on the right side as the single dependent variable. Each arrow linking one of the five dimensions to academic performance corresponds to a hypothesized path, labeled H1 to H5 in the order of communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation. This arrangement reflects a parallel rather than sequential structure: the five dimensions are treated as conceptually distinct but simultaneously operating influences, rather than as steps in a single causal chain. Presenting the dimensions this way makes explicit that no single aspect of home–school communication is assumed to act alone; instead, frequency, content, interaction, channel convenience, and parental participation are expected to jointly, and to varying degrees, shape students’ academic outcomes. The framework in Figure 2.1 therefore provides the structural basis for the hypotheses formally stated in Chapter 3 and for the correlation and regression analyses reported in Chapter 4.

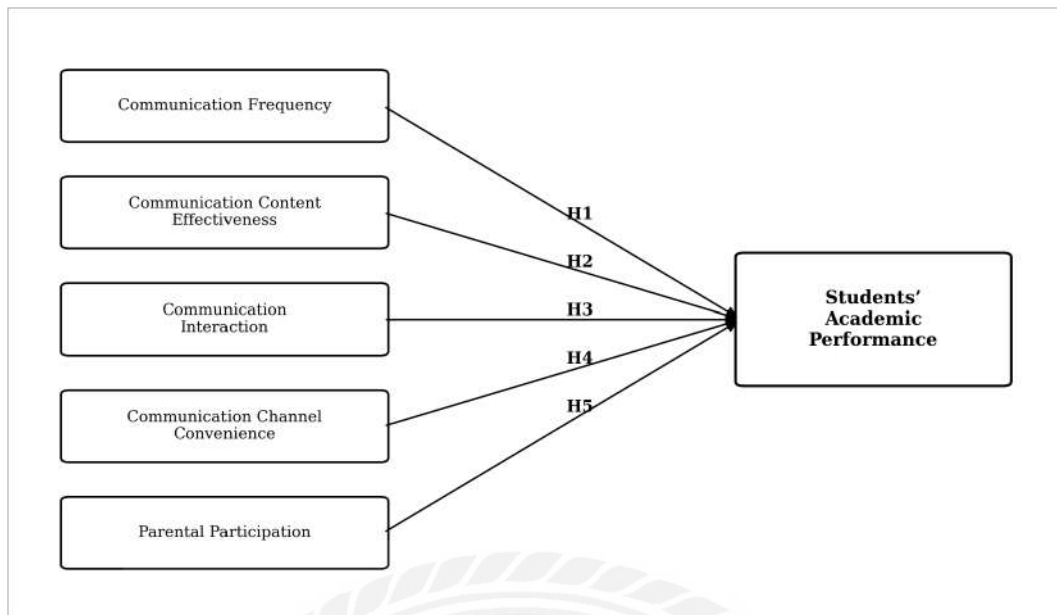
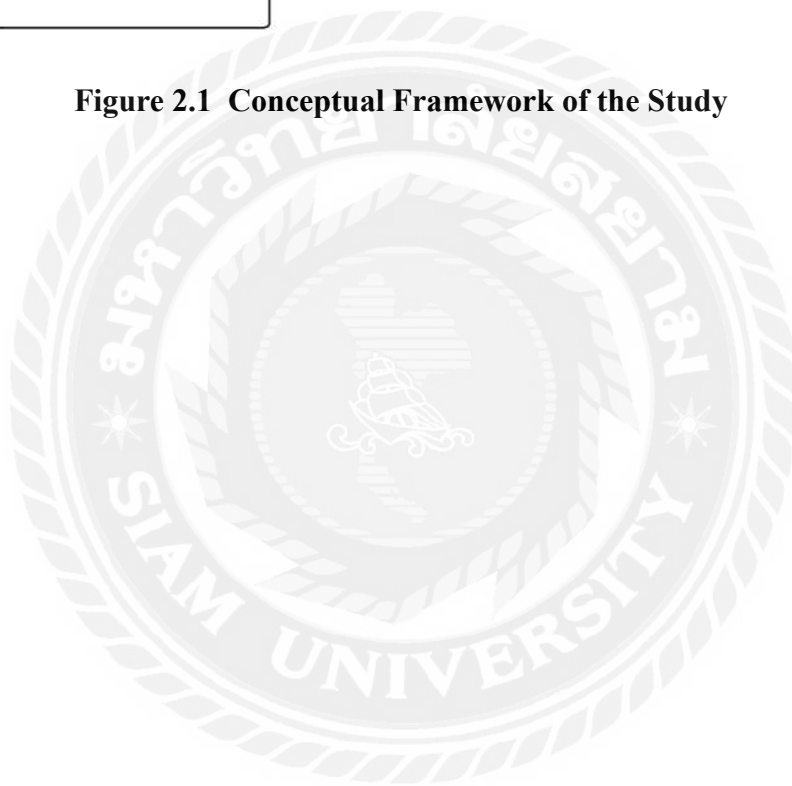


Figure 2.1 Conceptual Framework of the Study



Chapter 3 Research Methods

3.1 Research design

This study adopted a quantitative research design to examine the impact of home – school communication quality on students’ academic performance. Quantitative research methods allow researchers to collect measurable data and analyze relationships among variables through statistical techniques. By applying this approach, the study aimed to objectively evaluate how different dimensions of home – school communication influence students’ academic outcomes.

The research focused on five dimensions of home – school communication quality, including communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation. These five factors were treated as independent variables, while students’ academic performance was considered the dependent variable. Through statistical analysis of these variables, the study attempted to explore the extent to which home – school communication practices contribute to students’ academic development.

Through the use of a structured questionnaire and quantitative analysis methods, the research aimed to systematically examine the relationships between home – school communication quality and students’ academic performance. The data collected from the questionnaire were analyzed using statistical software to identify correlations and test the proposed research hypotheses. This research design therefore provided a reliable methodological foundation for understanding how effective communication between schools and families may contribute to students’ academic achievement.

3.2 Population and Sample

This study took students and their parents at Langfang No.9 Middle School as the research population. Langfang No.9 Middle School is a public junior high school located in Langfang City, Hebei Province, China, currently enrolling students across Grade 7, Grade 8, and Grade 9. At the time of the survey, the school had a total of 22 classes, with Grade 7 and Grade 8 each comprising eight parallel classes and Grade 9 comprising six classes. Class sizes ranged from approximately 42 to 54 students, resulting in a total student enrollment of approximately 1,076 students.

Given the size of the school and the feasibility of online data collection, the questionnaire was distributed to all parents of enrolled students through the school’s official WeChat parent groups, which are maintained at the class level and coordinated by each homeroom teacher.

3.3 Hypothesis

H1: Communication frequency has a significant positive effect on students' academic performance.

H2: Communication content effectiveness has a significant positive effect on students' academic performance.

H3: Communication interaction has a significant positive effect on students' academic performance.

H4: Communication channel convenience has a significant positive effect on students' academic performance.

H5: Parental participation has a significant positive effect on students' academic performance.

3.4 Research Instrument

To investigate the relationship between home-school communication quality and students' academic performance, this study adopted a structured questionnaire as the primary data collection tool. Questionnaire surveys are commonly used in quantitative research because they allow researchers to gather standardized information from a relatively large number of respondents. Compared with other research methods, questionnaires are efficient in collecting measurable data and can provide a solid basis for statistical analysis. Through this approach, the study aims to examine how different aspects of home-school communication are associated with students' academic outcomes.

The design of the questionnaire was informed by previous studies on home-school communication, parental involvement, and students' academic achievement. Relevant literature was reviewed to ensure that the measurement items were theoretically grounded and suitable for empirical investigation. For example, the school-family-community partnership framework proposed by Epstein (2011) highlighted the importance of cooperation between schools and families in supporting students' learning and development. In addition, several studies have shown that effective communication between teachers and parents, as well as active parental involvement, are closely related to students' academic success (Hill & Tyson, 2009; Jeynes, 2012; Castro et al., 2015). Based on these theoretical foundations, the questionnaire items were adapted and refined to fit the context of middle school education.

The questionnaire used in this research consists of two main sections. The first section collects basic demographic information about the respondents, such as students' gender, grade level, and family educational background. These demographic variables

help describe the characteristics of the sample and provide useful contextual information for the subsequent analysis. Understanding the background of the respondents also helps ensure that the data collected represent the target population of the study. The questionnaire mainly consists of closed-ended questions, which allow respondents to provide consistent and comparable answers.

The second section focuses on measuring the main variables of the research. In this study, six variables were examined, including five independent variables and one dependent variable. The independent variables were communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation, while the dependent variable was students' academic performance. Each variable was measured using several items to capture different aspects of the construct. For example, communication frequency measures how often teachers and parents communicate about students' learning progress, while communication interaction focuses on whether communication between teachers and parents is two-way and responsive. Communication channel convenience refers to the accessibility of communication tools such as messaging platforms or online meeting systems, and parental participation reflects the extent to which parents are involved in their children's educational activities.

All measurement items in the questionnaire were evaluated using a five-point Likert scale, which ranges from 1 (strongly disagree) to 5 (strongly agree). This scale allowed respondents to indicate the degree of their agreement with each statement and helped convert subjective perceptions into quantitative data. Before the questionnaire was formally distributed, a small pilot test was conducted to ensure that the wording of the questions was clear and easy to understand. Based on the feedback received from the pilot participants, minor adjustments were made to improve the clarity of several items. The final questionnaire was then used for data collection, and the detailed measurement items for each variable are presented in Table 3.1

Table 3.1 Questionnaire Design

No.	Variable	Measurement Item
1	Communication Frequency	Teachers frequently communicate with parents about students' learning progress.

2	Communication Frequency	Parents receive regular updates about students' academic performance.
3	Communication Frequency	Teachers contact parents when students encounter learning difficulties.
4	Communication Frequency	Parents communicate with teachers several times during a semester.
5	Communication Frequency	There is regular communication between school and parents.
6	Communication Content Effectiveness	Teachers provide clear feedback about students' academic performance.
7	Communication Content Effectiveness	Information shared helps parents understand students' learning progress.
8	Communication Content Effectiveness	Teachers provide useful suggestions for improving students' learning.
9	Communication Content Effectiveness	Communication content focuses on students' academic development.
10	Communication Content Effectiveness	Teachers explain students' strengths and weaknesses clearly.
11	Communication Interaction	Communication between teachers and parents is two-way rather than oneway.
12	Communication Interaction	Parents are able to discuss students' learning problems with teachers.
13	Communication Interaction	Teachers listen to parents' opinions.
14	Communication Interaction	Parents feel comfortable communicating with teachers.

15	Communication Interaction	Teachers respond to parents' questions in a timely manner.
16	Communication Channel Convenience	The school provides convenient communication channels for parents.
17	Communication Channel Convenience	Platforms such as WeChat, DingTalk, or online meetings make communication easier.
18	Communication Channel Convenience	Parents can easily contact teachers through digital communication tools.
19	Communication Channel Convenience	The school uses multiple communication methods to interact with parents.
20	Communication Channel Convenience	Communication channels between teachers and parents are efficient.
21	Parental Participation	Parents regularly pay attention to students' academic performance.
22	Parental Participation	Parents help students with homework or learning tasks.
23	Parental Participation	Parents participate in school-related educational activities.
24	Parental Participation	Parents communicate with teachers about students' learning.
25	Parental Participation	Parents encourage students to study hard.
26	Academic Performance	I am satisfied with my academic performance.
27	Academic Performance	My academic performance has improved recently.
28	Academic Performance	I perform well in most school subjects.

29	Academic Performance	I feel confident about my academic ability.
30	Academic Performance	My academic performance meets expectations.

3.5 Data Collection

A total of 1,200 questionnaires were distributed, accounting for the fact that some families have multiple parents who are active in the communication groups. The distribution period lasted approximately two weeks, from early November to mid-November 2024. Parents were informed of the academic research purpose of the survey and were encouraged to respond honestly. Participation was entirely voluntary, and all responses were guaranteed to remain anonymous and confidential.

By the close of the collection period, a total of 1,089 questionnaires were been returned, representing a response rate of 90.8%. This relatively high response rate can be attributed to the distribution method adopted: because the questionnaires were delivered through class-level WeChat parent groups and coordinated by homeroom teachers, parents were more likely to notice, trust, and complete the survey within the collection window. Before the formal analysis, all returned questionnaires were carefully screened to ensure the quality of the data. Three criteria were used to identify invalid responses: questionnaires with incomplete responses, questionnaires missing more than 20% of the measurement items, and questionnaires showing an obvious uniform response pattern across all items (for example, selecting the same option for every statement), which usually indicates that the respondent did not read the items carefully. Based on these criteria, 41 questionnaires were identified as invalid and excluded from the dataset.

After removing these invalid responses, 1,048 valid questionnaires were retained for further analysis, yielding an effective response rate of 96.2% relative to the total returned. The valid sample comprises responses from the parents of 371 Grade 7 students (35.4%), 398 Grade 8 students (38.0%), and 279 Grade 9 students (26.6%). This distribution is broadly consistent with the class structure of the school, in which Grade 7 and Grade 8 each contain eight parallel classes while Grade 9 contains six classes, suggesting that the valid sample provides balanced coverage of the three grade levels and reflects the composition of the research population reasonably well.

The size of the valid sample were also adequate for the statistical techniques employed in this study. A sample of 1,048 cases far exceeded the conventional recommendations for questionnaire surveys of a population of this size, and it

comfortably satisfies the common requirements for multiple regression analysis involving five independent variables. In addition, the exclusion of careless and incomplete responses helped reduce measurement error and improves the reliability of the subsequent estimates. Taken together, the valid questionnaires collected from parents across the three grade levels form a solid and representative empirical basis for the subsequent statistical analysis.

3.6 Data Analysis

The quantitative data collected through the questionnaire were analyzed using statistical methods to examine the relationships between the variables in this study. Descriptive statistics, including mean, median, and standard deviation, were first used to summarize the data and provide an overall understanding of respondents' perceptions regarding home – school communication and academic performance.

To further explore the relationships among variables, correlation analysis was conducted to examine the strength and direction of the associations between the independent variables and the dependent variable. The independent variables in this study include communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation, while the dependent variable is students' academic performance.

In addition, regression analysis was applied to test the research hypotheses and determine the extent to which each dimension of home – school communication influences students' academic performance. Through regression analysis, the study was able to identify which factors have a significant impact on academic outcomes and assess the relative importance of each variable.

All quantitative data were analyzed using SPSS statistical software. The results of the analysis provide empirical evidence to support or reject the proposed hypotheses and offer a clearer understanding of how home – school communication contributes to students' academic development.

3.7 Reliability and Validity Analysis of the Scale

3.7.1 Reliability Analysis of the Scale

The reliability of a research instrument is essential to ensure that the measurement results are consistent and stable. In quantitative research, reliability reflects the degree to which a set of items consistently measures a particular construct. A reliable scale helps improve the accuracy and credibility of the research findings.

In this study, Cronbach's alpha coefficient (α) was used to evaluate the internal consistency of the questionnaire. Cronbach's alpha is one of the most commonly used

indicators of reliability in social science research. A higher value of Cronbach's alpha indicates a higher level of internal consistency among the measurement items. Generally, a value above 0.70 is considered acceptable, while values above 0.80 indicate good reliability.

The reliability analysis was conducted for all major constructs included in this study. These constructs consist of communication frequency, communication content effectiveness, communication interaction, communication channel convenience, parental participation, and students' academic performance. By calculating the Cronbach's alpha for each construct, the study aimed to assess whether the measurement items within each variable are consistent and reliable.

The results of the reliability analysis provide important evidence regarding the quality of the measurement scale. If the Cronbach's alpha values for all constructs meet the acceptable threshold, it indicates that the questionnaire items have good internal consistency and can be used for further statistical analysis. The results of the reliability analysis are presented in Table 3.2.

Table 3.2 Reliability Analysis

Variable	Number of Items	Cronbach's Alpha (α)	Reliability Level
Communication Frequency	5	0.852	Good
Communication Content Effectiveness	5	0.876	Good
Communication Interaction	5	0.861	Good
Communication Channel Convenience	5	0.838	Good
Parental Participation	5	0.889	Excellent

Academic Performance	5	0.845	Good
Overall Scale	30	0.912	Excellent

The Cronbach's alpha coefficients for the six constructs — communication frequency (0.852), communication content effectiveness (0.876), communication interaction (0.861), communication channel convenience (0.838), parental participation (0.889), and students' academic performance (0.845)—indicate a high level of internal consistency for the measurement scale used in this study. All constructs have Cronbach's alpha values above the commonly accepted threshold of 0.70, suggesting that the scale demonstrates good reliability.

Among these variables, parental participation shows the highest reliability ($\alpha = 0.889$), followed by communication content effectiveness ($\alpha = 0.876$), while communication channel convenience has the lowest value ($\alpha = 0.838$), which is still within an acceptable range. In addition, the overall scale achieves a Cronbach's alpha value of 0.912, indicating excellent internal consistency across all measurement items.

These results suggest that the questionnaire items used in this study are reliable and capable of consistently measuring the intended constructs. Therefore, the measurement scale is considered sufficiently reliable to support further statistical analyses, including correlation and regression analysis, and to examine the relationships between home – school communication quality and students' academic performance.

3.7.2 Validity Analysis of the Scale

Validity analysis is conducted to examine whether the measurement instrument accurately captures the constructs intended in the study. In this research, construct validity was assessed using factor analysis, which helped determine whether the questionnaire items were appropriately grouped under their respective variables.

To evaluate the suitability of the data for factor analysis, the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's Test of Sphericity were applied. The KMO statistic assesses the adequacy of the sample size and the degree of correlation among variables. A KMO value above 0.70 is generally considered acceptable, while values above 0.80 indicate good sampling adequacy. Bartlett's Test of Sphericity, on the other hand, examines whether the correlation matrix is significantly different from an identity matrix. A significant result ($p < 0.05$) suggests that the data are suitable for factor analysis.

In this study, the validity analysis was conducted for all constructs, including communication frequency, communication content effectiveness, communication interaction, communication channel convenience, parental participation, and students' academic performance. The results indicate that the dataset meets the required conditions for factor analysis, suggesting that the measurement items are appropriate for representing their respective constructs.

Overall, the validity analysis confirms that the questionnaire has acceptable construct validity and can be used for further statistical analysis. The detailed results of the KMO measure and Bartlett's Test are presented in Table 3.3.

Table 3.3 Validity Analysis

Measure	Value
KMO Measure of Sampling Adequacy	0.903
Bartlett's Test of Sphericity	
Approx. Chi-Square	15729.572
df	435
Sig.	0.000

Table 3.3 presents the results of the validity analysis conducted on the questionnaire data to assess construct validity and determine whether the measurement model is suitable for further statistical analysis.

The Kaiser – Meyer – Olkin (KMO) value is 0.903, indicating an excellent level of sampling adequacy. Since KMO values above 0.70 are generally considered acceptable, this result suggests that the dataset is highly suitable for factor analysis.

In addition, Bartlett's Test of Sphericity was performed to examine whether the correlation matrix significantly differs from an identity matrix. The approximate chisquare value is 15729.572, with 435 degrees of freedom (df), and the significance level (Sig.) is 0.000. As the p-value is less than 0.05, it indicates that there are significant correlations among the variables, confirming that the data are appropriate for factor analysis.

Overall, the results of the validity analysis demonstrate that the dataset meets the necessary conditions for further statistical evaluation. The high KMO value and significant Bartlett's test result indicate strong construct validity, suggesting that the

questionnaire is an effective instrument for measuring communication frequency, communication content effectiveness, communication interaction, communication channel convenience, parental participation, and students' academic performance.



Chapter 4 Findings and Discussion

4.1 Findings

This chapter reports what the data show. The analysis rested on academic performance records from Langfang No.9 Middle School, covering Grade 7, Grade 8, and Grade 9. Valid examination records were obtained for 1,048 students across the three grades, alongside questionnaire responses on home–school communication. Every record was anonymized before analysis; no student or parent was named at any point, and the performance figures were reported only in aggregate, by grade and by class. These figures serve as the dependent variable. The questionnaire data were processed in SPSS using descriptive statistics, correlation analysis, and regression analysis.

The chapter is organized in three moves. It first sketches the make-up of the sample, then describes how academic performance actually falls out across grades and classes—the real-world backdrop against which the communication variables are read—and finally tests how the five communication dimensions relate to that performance through correlation and regression.

4.1.1 Demographic Characteristics of Respondents

The questionnaire collected background information on the respondents, including the student's grade level, gender, and the educational background of parents. These characteristics help describe the composition of the sample and provide context for interpreting the subsequent analysis. Table 4.1 summarizes the distribution of students across the three grade levels covered in this study.

Table 4.1 Distribution of Respondents by Grade Level

Grade Level	Number of Students	Percentage
Grade 7	371	35.4%
Grade 8	398	38.0%
Grade 9	279	26.6%
Total	1,048	100%

As shown in Table 4.1, the sample is distributed across the three grade levels, with Grade 8 accounting for the largest proportion of respondents, followed by Grade 7 and Grade 9. This distribution reflects the actual class sizes at the school during the examination period. Because the three grades correspond to different stages of secondary education, examining them together allows the study to consider home–

school communication across a range of learning contexts rather than within a single year group.

In terms of class organization, Grade 7 and Grade 8 each comprised eight parallel classes, while Grade 9 comprised six classes. Class size ranged from approximately 42 to 54 students. This organizational structure is relevant to the analysis because home–school communication is typically coordinated at the class level, with each class teacher serving as the main point of contact between the school and families.

In addition to grade level, the questionnaire recorded the gender of the student and the highest educational level attained by either parent. Table 4.2 summarizes these two characteristics for the 1,048 valid cases.

Table 4.2 Distribution of Respondents by Gender and Parental Educational Background

Characteristic	Number of Students	Percentage
Gender		
Male	542	51.7%
Female	506	48.3%
Parents' Highest Educational Level		
Junior high school or below	228	21.8%
Senior high school or vocational school	341	32.5%
Junior college	266	25.4%
Bachelor's degree or above	213	20.3%
Total	1,048	100%

As shown in Table 4.2, the gender composition of the sample is close to balanced, with 542 male students (51.7%) and 506 female students (48.3%). The slight majority of male students is consistent with the enrolment structure of the school and indicates that neither gender is over-represented in the responses. With regard to parental educational background, the largest group of parents had completed senior high school or vocational school (341 cases, 32.5%), followed by junior college (266 cases, 25.4%), junior high school or below (228 cases, 21.8%), and bachelor's degree or above (213 cases, 20.3%). Parents educated to junior college level or higher therefore account for

479 cases (45.7%) of the sample, while the remaining 569 cases (54.3%) had completed senior high school or less.

Taken together with the grade distribution reported in Table 4.1, these figures indicate that the sample covers students of both genders across the three grade levels and includes families from a range of educational backgrounds. Because parental educational background may shape how parents interpret information from the school and how confident they feel in contacting teachers, the diversity of the sample on this dimension provides a suitable basis for examining home–school communication quality in the analysis that follows.

4.1.2 Distribution of Students' Academic Performance

Before testing the relationships between communication and performance, it is necessary to describe how students' academic performance is distributed in the sample. Academic performance in this study was measured by students' total examination scores, which combine results across all subjects in the relevant grade-level assessment. Table 4.3 reports the mean total score, standard deviation, and number of students for each grade. The data are drawn directly from the school's examination records.

Table 4.3 Descriptive Statistics of Total Scores by Grade

Grade	N	Mean Total Score	Std. Deviation
Grade 7	371	337.5	131.2
Grade 8	398	257.8	118.1
Grade 9	279	323.3	129.3

Table 4.3 shows that the average total score differs across the three grades. Grade 7 recorded the highest mean total score (337.5), followed closely by Grade 9 (323.3), while Grade 8 recorded a noticeably lower mean (257.8). The relatively large standard deviations in all three grades, ranging from about 118 to 131 points, indicate that academic performance varies substantially among students within each grade. This dispersion confirms that students differ widely in their learning outcomes, which provides a meaningful basis for examining the factors that may explain such differences.

The variation in performance is even more apparent when the data are broken down by class. Table 4.4 presents the mean total score and standard deviation for each class within the three grades. These figures reveal clear differences between parallel classes in the same grade, even though all classes followed the same curriculum and assessment.

Table 4.4 Mean Total Scores by Class

Grade	Classes	Range of Class Means	Class Mean
Grade 7	701–708	255.5 – 408.0	337.5
Grade 8	801–808	190.9 – 402.9	257.8
Grade 9	901–906	269.1 – 394.1	323.3

The spread between the strongest and weakest classes is wide in every grade. In Grade 7 the class means ran from 255.5 to 408.0; in Grade 8, from 190.9 to 402.9; in Grade 9, from 269.1 to 394.1. A gap of more than 120 points separating parallel classes is hard to overlook, since those classes sat the same papers and drew on the same teaching resources. Something other than the formal curriculum is doing work here, and the way schools and families communicate is one plausible candidate. It is this gap, more than any abstract argument, that motivates the analysis that follows.

4.1.3 Correlation Analysis

To examine how the five dimensions of home–school communication quality relate to students' academic performance, Pearson correlation analysis was conducted. Correlation analysis measures both the strength and the direction of the linear association between two variables, with coefficients ranging from -1 to $+1$. A coefficient closer to $+1$ indicates a stronger positive association, meaning that higher levels of a communication dimension tend to accompany higher academic performance. Table 4.5 reports the correlation coefficients of each communication quality dimension and students' academic performance.

Table 4.5 Correlations between Communication Quality Dimensions and Academic Performance

Communication Quality Dimension	r	Sig.	Relationship
Communication Frequency	0.613	< 0.01	Strong positive
Communication Content Effectiveness	0.547	< 0.01	Moderate positive
Communication Interaction	0.571	< 0.01	Moderate positive
Communication Channel Convenience	0.498	< 0.01	Moderate positive

Parental Participation	0.602	< 0.01	Strong positive
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As Table 4.5 indicates, all five communication quality dimensions are positively and significantly correlated with students' academic performance ($p < 0.01$). Among them, communication frequency ($r = 0.613$) and parental participation ($r = 0.602$) show the strongest associations, followed by communication interaction ($r = 0.571$), communication content effectiveness ($r = 0.547$), and communication channel convenience ($r = 0.498$). These results suggest that students tend to perform better academically when home-school communication is frequent and regular, when parents are actively involved in their children's learning, and when the communication that takes place is interactive and meaningful. The consistently positive correlations across all five dimensions provide preliminary support for the proposed relationships and justify further examination through regression analysis.

4.1.4 Regression Analysis

While correlation analysis identifies whether variables are associated, regression analysis allows the study to estimate the relative contribution of each communication dimension to students' academic performance and to test the research hypotheses. A multiple linear regression model was constructed with students' academic performance as the dependent variable and the five communication dimensions as independent variables. The model can be expressed as $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$, where Y denotes academic performance, X_1 to X_5 denote the five communication dimensions, β_0 is the constant, β_1 to β_5 are the regression coefficients, and ϵ is the error term.

Table 4.6 presents the standardized regression coefficients, t-values, and significance levels for each independent variable. The standardized coefficients (β) allow the relative influence of the five dimensions to be compared directly, since they are expressed on a common scale.

Table 4.6 Regression Analysis Results of the Five Communication Quality Dimensions

Independent Variable	Beta (β)	t-value	Sig.
Communication Frequency	0.298	13.883	0.000
Parental Participation	0.271	12.469	0.000
Communication Interaction	0.224	10.574	0.000

Communication Content Effectiveness	0.186	9.058	0.000
Communication Channel Convenience	0.149	7.285	0.000

The regression analysis results in Table 4.6 show that all five communication dimensions have statistically significant positive effects on students' academic performance ($p < 0.01$). Communication frequency has the strongest effect ($\beta = 0.298$), followed by parental participation ($\beta = 0.271$), communication interaction ($\beta = 0.224$), communication content effectiveness ($\beta = 0.186$), and communication channel convenience ($\beta = 0.149$). This ordering indicates that, although every dimension contributes to academic performance, the regularity of home-school communication and the degree of parental involvement play the most decisive roles. The overall model is statistically significant and explains a substantial share of the variance in academic performance ($R^2 = 0.650$, adjusted $R^2 = 0.648$), meaning that the five communication dimensions together account for approximately two-thirds of the variation in students' total scores in this sample.

On the basis of these results, the five research hypotheses (H1 to H5) are all supported. Each dimension of home-school communication quality has a significant positive effect on students' academic performance, with communication frequency and parental participation emerging as the most influential factors. The substantial betweenclass variation in performance documented in Section 4.1.2 is therefore consistent with the regression findings: classes in which home-school communication is more frequent, more interactive, and supported by stronger parental participation tend to achieve higher overall results.

4.2 Discussion

This section interprets the findings reported above and relates them to the existing literature on home-school communication and parental involvement. In line with the five research hypotheses, the discussion is organized around the five communication dimensions: each of the following subsections examines one dimension in turn, and Section 4.3 provides an overall summary of the discussion.

4.2.1 Communication Frequency

The analysis identified communication frequency as the strongest predictor of students' academic performance among the five dimensions ($r = 0.613$; $\beta = 0.298$), providing clear support for Hypothesis H1. This finding is consistent with the wide between-class differences observed in the performance data, where some classes outscored others by more than 150 points despite sharing the same curriculum. When teachers communicate with parents regularly, families remain informed about their

children's progress and can intervene promptly when difficulties arise. Frequent contact also keeps learning visible at home: parents who hear from the school often are more likely to supervise homework, discuss school matters with their children, and reinforce learning outside the classroom.

The prominence of communication frequency fits what earlier studies have reported. Deslandes and Bertrand (2005) showed that contact initiated by the school draws parents into their children's learning, and the experimental evidence of Kraft and Dougherty (2013), in which simply increasing teacher–family communication raised homework completion and classroom engagement, points in the same direction. Taken together, these results help explain why frequency carried the largest weight in the present analysis: regular contact is the channel through which all the other qualities of communication reach the family.

4.2.2 Communication Content Effectiveness

Communication content effectiveness also had a significant positive effect on students' academic performance ($r = 0.547$; $\beta = 0.186$), supporting Hypothesis H2. This result indicates that it is not only how often schools and families communicate that matters, but also what is actually communicated. When teachers provide clear, specific, and practical information about students' learning, parents are better equipped to understand their children's needs and to offer appropriate support at home. By contrast, vague or purely administrative messages give parents little to act on, even when they arrive frequently.

This interpretation is consistent with the literature. Patall et al. (2008), reviewing studies of parental help with homework, found that involvement is most useful when parents know specifically how to support the work rather than simply being told that a problem exists. The moderate effect of content effectiveness found here suggests that effective content is what turns contact into usable guidance: frequency brings the message to the family, but content determines whether the family can do anything with it.

4.2.3 Communication Interaction

Communication interaction made a significant positive contribution to academic performance as well ($r = 0.571$; $\beta = 0.224$), supporting Hypothesis H3. Two-way communication appears to matter beyond the simple delivery of information. When a school does more than report grades—when teachers and parents trade observations and work through a problem together—the teacher gains a sense of what the student's home

life is like, and the parent learns what the school actually expects. Such reciprocal exchange builds the mutual understanding on which coordinated support depends.

Christenson and Sheridan (2001) and Topor et al. (2010) made much the same point, arguing that reciprocal exchange is what holds a home–school partnership together. The present finding, in which interaction ranked third among the five dimensions, reinforces this view: one-directional notification can keep parents informed, but only genuine dialogue allows schools and families to align their efforts around the individual student.

4.2.4 Communication Channel Convenience

Communication channel convenience recorded the smallest, though still significant, effect on academic performance ($r = 0.498$; $\beta = 0.149$), supporting Hypothesis H4. This suggests that the accessibility of communication tools functions as an enabling condition rather than a primary driver. Convenient channels, such as messaging applications and online meeting platforms, lower the practical barriers to contact and make it easier for busy parents to stay informed and involved. However, the comparatively modest coefficient implies that convenient channels are most beneficial when they are used to carry frequent, interactive, and meaningful communication, rather than being valuable in themselves.

This reading sits well with the wider literature. Kim and Sheridan (2015) noted that digital platforms can make home–school communication more efficient, while Hornby and Lafaele (2011) warned that uneven access to such tools, and uneven comfort using them, can blunt their effect. Convenient channels, then, look less like a cause of better results in themselves and more like the conditions under which the other dimensions can operate—useful when they carry substantive exchange, of limited value when they do not.

4.2.5 Parental Participation

Parental participation emerged as the second strongest predictor of students' academic performance ($r = 0.602$; $\beta = 0.271$), providing support for Hypothesis H5. Parents who take an active part in school-related communication and in their children's learning at home—supervising homework, attending meetings, and maintaining ongoing dialogue with teachers—create a family environment in which schoolwork is taken seriously and effort is consistently reinforced. In such families, the messages students receive at home and at school point in the same direction.

This finding is in line with a substantial body of research. Hill and Tyson (2009) and Jeynes (2012) both found sustained parental involvement to be linked with stronger achievement, and the meta-analysis of Fan and Chen (2001) reached a similar

conclusion. It is also worth noting that participation and communication frequency are difficult to separate in practice: regular contact from the school tends to pull parents further into their children's schooling, and parents who are already engaged usually push for more contact in return. Where this loop takes hold, students benefit from home and school support that reinforces each other.

4.3 Summary

Taken together, the results provide consistent evidence that the quality of home-school communication is closely bound up with how well students perform at Langfang No.9 Middle School. All five research hypotheses (H1 to H5) were supported: every dimension of communication quality was positively and significantly related to academic performance, and the five dimensions jointly explained approximately two-thirds of the variation in students' total scores ($R^2 = 0.650$, adjusted $R^2 = 0.648$). Communication frequency and parental participation stood out as the most influential factors, with communication interaction, content effectiveness, and channel convenience following behind. These results are in keeping with the existing body of work—meta-analyses and reviews by Fan and Chen (2001), Castro et al. (2015), Wilder (2014), and Boonk et al. (2018) have repeatedly linked parental involvement and home-school cooperation with achievement—while the present study draws its evidence from the actual examination records of one school across three grade levels, where a gap of more than 150 points between the strongest and weakest classes lent the question a concrete, local urgency.

The findings also carry several practical implications. Because communication frequency exerts the strongest influence on performance, schools should establish routine channels for regular contact with parents, ensuring that families receive timely updates and prompt notice of any difficulties. Given the importance of parental participation, schools should actively encourage parents to engage in their children's education through meetings, homework supervision, and ongoing dialogue with teachers. Teachers, for their part, should improve the quality of communication by providing clear and practical information and by fostering two-way exchange rather than one-directional reporting. Finally, convenient communication channels should be provided to support these efforts, while recognizing that the tools themselves are most effective when they enable frequent and meaningful interaction. The marked differences in performance between parallel classes observed in this study suggest that strengthening home-school communication at the class level may be a practical avenue for narrowing such gaps.

Chapter 5 Conclusion and Recommendations

5.1 Conclusion

This study aimed to explore the impact of home–school communication quality on students’ academic performance, taking Langfang No.9 Middle School as a case study. The research focused on five dimensions of home–school communication quality: communication frequency, communication content effectiveness, communication interaction, communication channel convenience, and parental participation. The study was guided by research objectives examining how each of these dimensions affects students’ academic performance. The statistical results indicate that all five dimensions have significant positive effects on students’ academic performance. Among them, communication frequency has the strongest influence ($\beta = 0.298$), followed by parental participation ($\beta = 0.271$), communication interaction ($\beta = 0.224$), communication content effectiveness ($\beta = 0.186$), and communication channel convenience ($\beta = 0.149$).

The findings indicate that communication frequency plays an important role in determining students’ academic performance. When schools and families maintain frequent and regular communication, parents are better able to stay informed about their children’s learning progress and to provide timely support at home. This suggests that the regularity of home–school communication is a significant factor influencing students’ academic outcomes.

Communication content effectiveness and communication interaction also contribute to students’ academic performance. When teachers provide clear and meaningful information about students’ learning, and when communication between teachers and parents is two-way and responsive, parents can better understand their children’s needs and offer appropriate support. This reflects the importance of both the quality of communication content and the level of interaction in supporting students’ learning.

In addition, communication channel convenience and parental participation also affect students’ academic performance. When schools provide convenient and accessible communication channels, and when parents actively participate in their children’s education, students are more likely to receive consistent support from both home and school. These practical and behavioral factors play an important role in shaping students’ learning outcomes.

Overall, the results support the view that home–school communication quality plays a meaningful role in students’ academic performance. The five dimensions of communication jointly influence students’ learning outcomes. These findings contribute

to a better understanding of how cooperation between schools and families supports students' academic development and provide valuable insights for schools seeking to strengthen home-school communication. The regression analysis shows that the five dimensions of home-school communication explain a substantial proportion of the variation in students' academic performance ($R^2 = 0.650$), indicating that home-school communication quality provides a strong explanation of students' academic outcomes at Langfang No.9 Middle School.

5.2 Recommendation

Based on the research findings, several recommendations are proposed for schools, teachers, and parents seeking to improve students' academic performance through home-school communication.

1. Maintaining Frequent and Regular Home-School Communication

Schools should focus on maintaining frequent and regular communication with parents, as communication frequency was found to have the strongest influence on students' academic performance. Establishing routine channels for sharing students' learning progress, such as periodic updates, regular feedback, and scheduled parent-teacher meetings, can help keep parents informed and engaged. Consistent communication strengthens the connection between school and family and encourages parents to provide timely support for their children's learning at home.

2. Improving Communication Content and Encouraging Interaction

Since communication content effectiveness and communication interaction significantly influence students' academic performance, teachers should provide parents with clear, specific, and meaningful information about students' learning progress and difficulties, along with practical suggestions for support. In addition, teachers should encourage two-way, interactive communication rather than onedirectional reporting, allowing parents to express their views and to work together with teachers in addressing students' learning needs.

3. Providing Convenient Channels and Promoting Parental Participation

Communication channel convenience and parental participation also play important roles in supporting students' learning. Therefore, schools should provide convenient and accessible communication channels, such as messaging applications and online meeting platforms, to make communication more efficient and inclusive. At the same time, schools should actively encourage parents to participate in their children's education by attending meetings, supervising homework, and maintaining regular contact with teachers.

In addition, providing parents with clear guidance on how to support their children's learning at home can help them participate more effectively and contribute to a cooperative educational environment.

5.3 Future Research Suggestions

Although this study provides useful insights into the impact of home-school communication quality on students' academic performance, several directions can be considered for future research.

Future studies could expand the scope of research beyond a single school. This study focused on Langfang No.9 Middle School, which allowed for a detailed analysis of home-school communication within one specific educational context. However, future research may include multiple schools to compare home-school communication practices and their effects on students' academic performance across different educational settings.

Further research may also consider expanding the coverage of the sample. Most respondents in this study were students and parents from a single middle school. Communication practices and academic outcomes in other schools or regions may vary due to differences in school resources, family backgrounds, and educational environments. Future studies could include respondents from various schools and regions to provide a more comprehensive understanding of home-school communication.

In addition, future research could adopt mixed research methods. This study used a quantitative questionnaire survey to analyze the relationships among the research variables. While quantitative analysis provides statistical evidence, qualitative methods such as interviews or focus groups may help explore the deeper experiences and perceptions of teachers, parents, and students regarding home-school communication.

Finally, future studies may extend the research model by incorporating additional variables. In addition to the five dimensions of home-school communication examined in this study, factors such as teacher-student relationships, students' learning motivation, family socioeconomic status, and school management may also influence students' academic performance. Including these variables may provide a more comprehensive explanation of the factors that shape students' learning outcomes.

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Appendix

Questionnaire

Dear,

This questionnaire aims to investigate the impact of home–school communication quality on students’ academic performance. This survey is for academic research purposes only. All responses will remain anonymous and confidential.

Part I: Demographic information

Gender

☐ Male

☐ Female

Age

☐ Under 25 group

☐ 25–34

☐ 35–44

☐ 45–54

☐ 55 years of age and older

Education level

☐ High school and below

☐ Bachelor's degree

☐ Master's degree

☐ Doctoral degree

☐ Other

Monthly family income

- ☐ Less than 3,000 RMB
- ☐ 3,000–6,000 RMB
- ☐ 6,001–9,000 RMB
- ☐ 9,001–12,000 RMB
- ☐ More than 12,000 RMB

Does your family maintain regular communication with the school?

- ☐ Yes
- ☐ No

Do you think home–school communication affects your child’s academic performance?

- ☐ Yes
- ☐ No
- ☐ Uncertain

Part 2: Communication Frequency

Please indicate how much you agree with the following statements.

Stairs:

1 = Strongly opposed

2 = disagree

3 = Neutral

4 = Agree

5 = strongly agree

No	Statement	1	2	3	4	5
A1	Teachers frequently communicate with parents about students' learning progress.	☐	☐	☐	☐	☐
A2	Parents receive regular updates about students' academic performance.	☐	☐	☐	☐	☐
A3	Teachers contact parents when students encounter learning difficulties.	☐	☐	☐	☐	☐
A4	There is regular communication between the school and parents.	☐	☐	☐	☐	☐

Part 3: Communication Content Effectiveness

No	Statement	1	2	3	4	5
SN1	Teachers provide clear feedback about students' academic performance.	☐	☐	☐	☐	☐
SN2	Information shared helps parents understand students' learning progress.	☐	☐	☐	☐	☐
SN3	Teachers provide useful suggestions for improving students' learning.	☐	☐	☐	☐	☐
SN4	Teachers explain students' strengths and weaknesses clearly.	☐	☐	☐	☐	☐

Part 4: Communication Interaction and Channel Convenience

No	Statement	1	2	3	4	5
PBC1	Communication between teachers and parents is twoway rather than one-way.	☐	☐	☐	☐	☐
PBC2	Teachers respond to parents' questions in a timely manner.	☐	☐	☐	☐	☐
PBC3	The school provides convenient communication channels for parents.	☐	☐	☐	☐	☐
PBC4	Platforms such as WeChat, DingTalk, or online meetings make communication easier.	☐	☐	☐	☐	☐

Part 5: Parental Participation and Academic Performance

No	Statement	1	2	3	4	5
PI1	Parents regularly pay attention to students' academic performance.	☐	☐	☐	☐	☐
PI2	Parents communicate with teachers about students' learning.	☐	☐	☐	☐	☐
PI3	My academic performance has improved recently.	☐	☐	☐	☐	☐
PI4	Overall, I am satisfied with my academic performance.	☐	☐	☐	☐	☐