

Exploration of the Path of Digital Empowerment of Home-School-Community Collaborative Education

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Received: May 22, 2025; Accepted: June 3, 2025; Published: June 4, 2025

Abstract

The purpose of this study is to explore the effective path of home-school-community collaborative education under digital empowerment, so as to promote the all-round development of students' morality, intelligence, physical fitness, art and labor. Based on the implementation of the Law of the People's Republic of China on the Promotion of Family Education under the background of the "double reduction" policy, and combined with the relevant research results at home and abroad, this study analyzes the current challenges faced by home-school-community collaborative education, such as insufficient parental participation, imperfect school family education guidance service system, and weak ability to integrate social resources. Make full use of digital technology to build a new model of "three-in-one" home-school-community collaborative education, that is, with the school as the core, the family as the foundation, and the society as the supplement, the three parties work together to jointly promote the healthy growth of students.

Keywords: collaborative education, "home-school-community", digitalization, family education

1. Introduction

At present, China's education reform is undergoing profound changes, and the implementation of the "double reduction" policy and the promulgation of the "Family Education Promotion Law of the People's Republic of China" have put forward new requirements and challenges for the collaborative education of families, schools and communities. The traditional education model is difficult to meet the needs of the development of the times for talent training, and it is urgent to explore a more efficient, scientific and comprehensive education model [1]. In the information age, digital technology is booming, providing strong technical support and development opportunities for home-school-community collaborative education. The use of digital means can break the limitations of time and space, realize the sharing and optimal allocation of educational resources, and improve the communication efficiency and educational effect between the family, school and society, so as to promote the all-round development of students' morality, intelligence, physical fitness, art and labor. However, there are still many challenges in home-school-community collaborative education, such as low parental participation, imperfect school family education guidance service system, and insufficient ability to integrate social resources. These challenges not only affect the effectiveness of home-school-community collaborative education, but also limit the application and play of digital technology in the field of education. Therefore, it is of great theoretical significance and practical value to study the effective path of home-school-community collaborative education under digital empowerment. The purpose of this study is to deeply analyze the current situation and problems of home-school-community collaborative education, explore the path of using digital technology to effectively promote home-school-community tripartite collaborative education, provide theoretical support and practical reference for the construction of a high-quality education system, and ultimately promote the healthy growth of students and the vigorous development of national education.

2. Literature Review

2.1 The definition and Connotation of the Concept of Home-School-Community Collaborative Education

"Family-school-community collaborative education" does not simply refer to the separate education of the three subjects of family, school and society, but is a new type of education model that emphasizes the deep integration, mutual cooperation and joint education between the three[2]. This kind of collaboration is not a simple superposition, but needs to be built on the basis of the common goal of education, through effective communication mechanisms and resource sharing, to form a joint force in education, to achieve the improvement of educational efficiency.

The connotation of home-school-community collaborative education is multi-dimensional. It not only involves the unification of educational goals, but also includes the integration and sharing of educational content, educational methods, and educational resources. As the first classroom for students' growth, the family bears important responsibilities such as emotional care and behavioral habit formation. As the main front for students' growth, the school is responsible for imparting knowledge, skills and values; The society provides abundant practical opportunities and diversified educational resources to supplement the deficiencies of school education[3]. Therefore, the home-school-community collaborative education emphasizes that the three cooperate with each other and complement each other's advantages in the education process, so as to jointly promote the all-round development of students' morality, intelligence, physical fitness, art and labor. Specifically, collaborative education needs to clarify the responsibilities and authority of all parties, build effective communication channels, establish an information sharing platform, and form a cooperation mechanism, so as to finally realize the optimal allocation of educational resources and maximize the educational effect

2.2 The Theoretical Basis and Research Status of Home-School-Community Collaborative Education

Home-school-community collaborative education is not a new concept, and its roots can be traced back to many fields such as educational sociology, family pedagogy, and public management theory. From the perspective of the sociology of education, schooling does not exist in isolation, but is embedded in a broader socio-cultural network. Student development is influenced by a complex interplay of multiple factors at home, school, and community. Therefore, to understand home-school-community collaborative education, it is necessary to draw on the theory of social systems and pay attention to the interaction between various subjects and the integration of resources. Family education provides important theoretical support for understanding the role of family in the process of educating people, for example, the rights and responsibilities of family education, and the influence of family education methods, which are closely related to home-school-community collaborative education. In addition, the theory of holistic government that has emerged in recent years emphasizes the optimization of the government organizational structure and the reconstruction of the government affairs process guided by social needs, which provides a new idea for the institutional design of home-school-community collaborative education [4]. This is in contrast to the traditional bureaucratic theory, which prefers to avoid coordination problems through centralization.

Scholars at home and abroad have carried out a lot of research on home-school-community collaborative education. The United States has accumulated rich experience in the field of parent participation in school education, for example, there are in-depth discussions on the positive role of parent participation, the exploration of parent participation models, and how to effectively improve parent participation [5]. However, foreign research results are not necessarily fully applicable to China's national conditions. China's social and cultural background, family structure, and education system are significantly different from those in Western countries, so it is necessary to carry out targeted research based on the actual situation in China.

In recent years, there has been an increasing number of domestic researches, covering many aspects such as model exploration, practical case analysis, policy research, and digital empowerment of home-school-community collaborative education. Some studies focus on the lack of parental subjectivity in home-school cooperation, and discuss corresponding solutions. Other studies focus on how to effectively integrate community resources to provide richer support for student growth. However, there are some shortcomings in the existing research, for example, the in-depth analysis of the home-school-community collaborative education mechanism and the application of digital technology in it still need to be strengthened [6]. Future research needs to pay more attention to the differences in the participation of different regions, different school types and different social groups in participating in home-school-community collaborative education, and explore more effective paths and strategies to promote the all-round development of students' morality, intelligence, physical fitness, art and labor.

2.3 The Impact of Digital Technology on Home-School-Community Collaborative Education

Digital technology has profoundly changed the form and mode of education, and has had a multifaceted impact on home-school-community collaborative education. First of all, it breaks the limitations of time and space and promotes the efficient transmission and sharing of information. For example, schools can publish teaching information, homework arrangements, school activities, etc. through online platforms, and parents can keep abreast of their children's school situation and communicate with teachers through the platform. The online learning platform provides students with rich learning resources and personalized learning experiences, making up for the shortcomings of school education; Various digital resources in the community, such as online libraries and museums, also provide students with a broader learning space. Digital technology has facilitated the transformation of the way of interaction between home, school and society[7]. Traditional face-to-face communication methods

are inefficient and easily limited by time and space, while digital technology provides more diverse interaction methods, such as video conferences, online questionnaires, online parent-teacher conferences, etc., which improve communication efficiency and enhance the interactive effect. Digital technology also provides new tools and means for home-school-community collaborative education [8]. However, digital technology is not flawless. On the one hand, the existence of the digital divide may lead to the inability of some families to enjoy digital education resources equally, exacerbating educational inequality. On the other hand, over-reliance on digital technology may also lead to students' lack of face-to-face communication and social communication skills, which is not conducive to their social development. Issues such as information security and privacy protection also need to be paid attention to [9].

3. Path Exploration

3.1 Analysis of the Current Situation of Family Education and the Demand for Digital Empowerment

At present, family education is facing many challenges, such as the lag of parents' education concepts, single education methods, lack of professional guidance, lack of time and energy, etc., which are particularly prominent in the context of the "double reduction" policy. Many parents face the dilemma of high work pressure and limited time, which makes it difficult to effectively participate in their children's learning and growth. Some parents lack scientific parenting knowledge and methods, and are prone to adopt simple and crude education methods, which is not conducive to the healthy development of children's physical and mental health. In addition, the uneven distribution of family education resources and the obvious gap between urban and rural areas make it difficult for parents in some areas to obtain high-quality family education guidance services.

Digital technologies offer new ways to solve these problems. Through the development and application of relevant family education apps or platforms, parents can be provided with convenient learning and communication channels[10]. For example, the platform can provide parenting knowledge, expert consultation, online courses and other services to help parents improve their parenting skills. Digital technology can also facilitate interaction and communication between parents, schools, and communities, and build a closer collaborative education network.

3.2 Research on the Current Situation of School Education and Digital Empowerment Strategies

School education is the core link of home-school-community collaborative education, and the research on its current situation and digital empowerment strategy is very important. At present, school education has made remarkable progress in the application of informatization, but there are still some shortcomings. For example, the digital infrastructure construction of some schools is not perfect, and the development and utilization of digital teaching resources need to be improved [11]Teachers' ability to apply information technology is uneven, and there is a lack of systematic digital teaching training and support. There are also certain challenges in the construction and management of the digital platform for home-school-community collaborative education, such as the lack of unified platform standards and norms, the imperfect data security and privacy protection mechanism, and the lack of smooth information exchange and resource sharing between home, school and community.

Schools need to explore digital means to optimize the education evaluation system, such as using big data to analyze students' learning situation, adjust teaching strategies in a timely manner, and meet students' learning needs in a personalized manner. Digital tools can also be used to enhance home-school communication, such as using the home-school communication platform to provide timely feedback on students' learning [12], so that parents can better understand their child's learning progress and learning status, and effectively participate in their child's education. In addition, schools can also use digital technology to expand educational resources, such as using online learning platforms to provide rich learning resources, effectively integrating with community resources, and using social resources to promote the all-round development of students. The university also needs to establish an effective digital platform management mechanism, including the formulation of platform use specifications, data security management systems, and related technical support guarantee systems to ensure the effective operation and long-term development of the platform. Through the implementation of these digital empowerment strategies, schools can better play their core role in collaborative education and provide a stronger guarantee for the healthy growth of students.

3.3 Exploration of the Current Situation of Community Education and the Integration Path of Digital Resources

At present, community education is faced with problems such as scattered resources, low utilization efficiency, and information asymmetry in promoting home-school-community collaborative education. In many communities, there is a lack of professional family education guidance personnel and corresponding educational resources, making it difficult for parents to obtain effective family education guidance and support [13]. The utilization rate of various educational resources (e.g., libraries, museums, science and technology museums, etc.) in the

community is not high, and it is not effectively integrated to serve family education. Digital technologies offer new ways to solve these problems.

Effective integration of digital resources can break through the limitations of time and space and build a community education network with wider coverage and more accurate services. For example, a digital platform can be developed that integrates functions such as family education guidance, community activity information, and resource reservation, to provide parents with convenient access to information and service appointment channels [14]. This platform can integrate various educational resources in the community, such as information on activities in nearby libraries and museums, as well as family education guidance services provided by volunteers, so as to achieve resource sharing and efficient use. At the same time, the platform can push personalized educational information and activity recommendations according to the needs of parents and the age characteristics of children, so as to improve the efficiency of resource utilization.

3.4 Digital Construction and Path Analysis of the Home-School-Community Collaborative Education Model

Digitalization does not simply refer to the application of technology, but to effectively integrate technology into all aspects of home-school-community collaborative education to form an organic whole. This needs to start from the construction of information platforms, data security and privacy protection, and the improvement of digital literacy of teachers, parents and community members.

An effective digital platform is the foundation. The platform needs to have functions such as information release, interactive communication, resource sharing, and learning management [15]. Schools can issue notices, share teaching resources, assign homework, and answer questions online through the platform. Parents can learn about their children's learning, communicate with teachers, and participate in various school activities through the platform. Community organizations can provide relevant educational resources and services through the platform, such as online courses, expert lectures, volunteer activities, etc. The design of the platform should focus on user experience, be convenient and easy to use, and be able to adapt to the needs of users of different ages.

Building a digital platform is not an easy task. It needs to consider data security and privacy protection issues to ensure that the personal information of students and parents is not leaked [16]. At the same time, it is also necessary to establish a sound management mechanism to ensure the stable operation and efficient maintenance of the platform. The promotion and use of the platform also requires certain training and guidance to help teachers, parents and community members better understand and use the functions of the platform.

4. Discussion

4.1 Analysis of the Effectiveness of the Digital Path of Home-School-Community Collaborative Education

1) Evaluate the role of digital tools and platforms in improving the efficiency of home-school communication. For example, do online communication platforms effectively shorten the time it takes to transfer information between schools, families and communities, reduce communication costs, and improve the quality of communication? This requires examining the use rate of the platform, parent satisfaction, and the actual impact of platform-based communication on students' learning and life, such as the timeliness of homework feedback, and the timely communication and resolution of students' problems between home and school.

2) Analyze the contribution of digital means to improving the quality of family education. Do digital resources, such as online education platforms and family education guidance courses, really help parents master scientific education methods and improve their educational capabilities? It is necessary to examine the parents' use of these resources, the learning effect, and whether these resources are actually translated into improvements in family education practice, such as the way parents get along with their children, the change in family education concepts, etc.

3) To evaluate the role of digital resource integration in enriching community education resources and expanding students' learning and development space. For example, does the integration of the community's educational resources through digital platforms effectively provide students with richer extracurricular activities, practical opportunities, and promote students' development in different fields? This requires examining the richness of the resources on the platform, the accessibility of the resources, and the practical impact of these resources on students' interest development and ability development.

4.2 The Challenges and Limitations of the Digital Path of Home-School-Community Collaborative Education

In the process of exploring the path of digitally empowered home-school-community collaborative education, we will inevitably face many challenges and limitations.

1) The existence of the digital divide cannot be ignored. There are differences in the economic conditions of different families and the level of digital literacy of parents, which makes it difficult for some families to make full use of digital technology to participate in home-school-community collaborative education. This is not only reflected in the lack of hardware equipment, but also in the lack of parents' ability to grasp digital platforms and applications, making the advantages of digital empowerment unable to benefit all students.

2) Data security and privacy protection issues are also worthy of attention. The collection and use of student and family information on digital platforms requires a sound data security management mechanism to ensure the confidentiality and integrity of information and prevent information from being leaked or misused. This requires the development of strict rules and regulations and technical measures, as well as the strengthening of training for relevant personnel to improve data security awareness and management capabilities. In addition, how to balance the relationship between information disclosure and personal privacy protection is also an issue that requires in-depth consideration.

3) The application of digital technology may also have some negative effects. For example, over-reliance on digital tools can lead to a lack of necessary offline interaction and social interaction experience, affecting social adaptability and interpersonal communication skills. At the same time, the information on digital platforms is mixed, and it is necessary to strengthen the content moderation and screening mechanism to prevent bad information from having a negative impact on students. In addition, the rapid iteration of digital technology itself may also lead to frequent updates of platforms and applications, which requires continuous investment in maintenance and updates to ensure the stability and availability of the platform.

4.3 Improvement and Perfection of the Digital Path of Home-School-Community Collaborative Education

In order to improve the digital path of home-school-community collaborative education, it is necessary to start from multiple levels. First of all, it is necessary to strengthen top-level design, formulate better policies and regulations, clarify the responsibilities of all parties, and avoid duplication of resources and information islands. This requires coordination at the national level between the education sector, the science and technology sector, and relevant social organizations to form unified standards and norms, promote data interconnection and resource sharing, and ensure data security and privacy. Second, it is necessary to improve technical support capabilities and develop more convenient, practical and secure digital platforms and application tools. This not only needs to pay attention to the functionality of the platform, such as home-school communication, learning resource sharing, personalized learning recommendations, etc., but also pay attention to the user experience of the platform, make it easy to operate and use, and provide necessary technical support and training. In addition, the security of the platform is of paramount importance, and effective measures need to be taken to protect the privacy and security of students' and parents' personal information.

In addition to platform building, it is also necessary to pay attention to the capacity improvement of teachers, parents and community workers. Teachers need to be trained in the use of digital tools and information-based teaching methods in order to effectively use digital platforms for teaching and learning activities, and to guide students and parents in using these tools. Parents need to understand how to use digital platforms to engage in their children's learning and growth, and to maintain effective communication with the school and community. Community workers need to master the use of digital resources to integrate community education resources and provide better social education services. Therefore, continuous training and support is crucial, and a combination of online and offline training content and approaches can be used to provide a variety of training content and approaches.

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