

# Challenges Faced by Early Childhood Family Education in the Context of Digitalization

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**Abstract:** In the context of the digital age, families, as the primary social learning environment for young children, are experiencing unprecedented changes in their educational methods and content. This study aims to explore how digital technology impacts family education practices and to analyze the challenges parents face when using digital tools for educational activities. Data were collected through questionnaires from parents of children aged 0-6 years and analyzed using qualitative methods. The findings indicate that while digitalization offers rich resources and convenient communication methods for family education, it also brings challenges such as information overload, difficulty in managing screen time, and a decline in the quality of parent-child interactions. This paper proposes specific strategies and recommendations to address these issues, supporting parents in providing more effective education in a digital environment.

**Keywords:** Digital age; Early childhood family education; Digital tools; Parent-child interaction

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## 1. Background and Significance of the Study

With the rapid development of information technology, young children are increasingly exposed to various digital devices. The proliferation of technology offers convenient access to information but also raises concerns such as attention distraction and screen addiction. Therefore, investigating the challenges of early childhood family education in the digital context and identifying effective family education strategies is crucial for promoting the healthy development of young children.

In recent years, research on the impact of digitalization on early childhood development has increased. International studies on electronic products and parent-child education began earlier and cover a wide range of fields, including psychology, education, and sociology. In the United States, researchers focus on how electronic products affect children's cognitive development, attention, and social skills. For instance, studies have shown that excessive use of electronic products may be associated with attention deficit/hyperactivity disorder (ADHD) in children. Meanwhile, some European countries, such as those in the Nordic region, emphasize guiding and supervising children's use of electronic products through parental involvement to promote healthy growth.

With the rapid development and widespread use of technology, the ownership and usage frequency of electronic products in Chinese households are continuously rising. Domestic scholars have started to pay attention to the impact of this phenomenon on parent-child education and children's growth. Research has found that the use of electronic products not only changes children's learning methods but also affects their lifestyle and social behavior. Chinese studies also highlight that parental involvement and guidance during children's use of electronic products are crucial for mitigating negative impacts and fostering parent-child relationships.

Research on family education, both domestically and internationally, emphasizes a common core: in the context of the digital age, the role of parents becomes more significant. Parents need to master relevant digital skills and understand how to guide their children in using electronic products safely and healthily, as well as how to utilize these tools to promote their children's overall development.

## 2. Overview of the Digital Context

With the rapid advancement of information technology, digitalization has become a hallmark of modern society, significantly impacting various aspects of life, particularly education. This is evident in several key areas:

## **2.1 Technology Proliferation:**

Smart devices such as smartphones, tablets, and computers have become ubiquitous, essential tools in daily life and work. Their portability and multifunctionality have made information access and processing more convenient, dramatically changing lifestyles and learning methods.

## **2.2 Internet Development:**

Continuous advancements in internet technology provide vast information resources. Online education platforms, e-books, and online courses have enriched learning pathways, enabling learning anytime and anywhere, breaking the constraints of time and space.

## **2.3 Rise of Social Media:**

Social media platforms like Weibo and WeChat facilitate communication and provide new interactive methods for education.

## **2.4 Abundance of Digital Resources:**

Digital technology greatly facilitates the creation, sharing, and dissemination of educational resources. The increasing number of educational apps, video tutorials, and interactive software offers rich learning options for learners of different ages and levels.

While digitalization has transformed lifestyles and brought unprecedented opportunities to education, it also presents numerous challenges.

## **3. Impact of Digitalization on Early Childhood Family Education**

Early childhood is a critical period for development, where good family education plays a decisive role in intellectual and character formation. Traditional family education theories emphasize the importance of parent-child interaction, the role model function of educators, and the influence of the environment on children's development. In the digital context, family education theories need to be updated to accommodate technological changes, particularly in managing the use of digital devices at home and leveraging digital tools to promote comprehensive child development.

Current research shows that the impact of digital technology on early childhood family education is dual-faceted. On one hand, reasonable use of technology can enrich educational resources and enhance learning efficiency, as seen with educational software and online learning platforms. On the other hand, improper use can lead to children's over-reliance on screen entertainment, reducing direct interactions with parents and other children, thereby affecting social skills and physical development. Additionally, the insecurity of the online environment may pose psychological and physical risks to young children.

This paper provides specific strategies and recommendations to address these challenges, aiming to support parents in delivering more effective education within the digital environment.

## **4. Research Findings**

To better understand the application of electronic products in family education and their impact on parent-child education in the digital age, this study conducted a detailed survey of 500 urban families in Sichuan Province, China.

### **4.1 Major Findings of the Survey**

**Ownership of Electronic Products:** The survey results indicate that 100% of families possess at least one electronic product, such as a smartphone, tablet, or computer. Specifically, the ownership rate for smartphones is 100%, tablets 66%, and computers 75%. These figures highlight the widespread prevalence of electronic products in modern households.

**Frequency and Purpose of Children's Use:** Among the 500 families, approximately 81% of children use electronic products for more than one hour daily, primarily for activities such as watching videos (animations, TV shows), playing games, and learning. This indicates that electronic products have become an integral part of children's daily activities.

**Parental Involvement:** The survey shows that about 68% of parents regularly monitor their children's screen time and content, while 32% of parents find it challenging to do so consistently due to busy work schedules. Additionally, 50% of parents use electronic products with their children for educational or recreational purposes, which helps enhance parent-child relationships and guide healthier use of electronic products.

**Impact on Learning:** Parents have differing views on the impact of electronic products on learning. Approximately 44% of parents believe that electronic products enrich learning resources and methods, positively influencing their children's education. In contrast, 41% worry that over-reliance on electronic products may negatively affect learning outcomes and attention spans. The remaining 15% hold a neutral stance, acknowledging both the positive and negative aspects of electronic product use.

**Impact on Parent-Child Education:** Most parents believe that reasonable use of electronic products can serve as a tool for parent-child education, enhancing interaction and emotional bonds through shared activities. However, some parents are concerned that

electronic products may reduce face-to-face communication time among family members.

In summary, electronic products occupy a significant position in modern families, impacting children's development and family education. Parents hold complex attitudes, recognizing the potential benefits for learning and interaction while also noting the risks of excessive use. Balancing the use of electronic products to maximize their educational benefits while mitigating potential drawbacks is a challenge that all families must face.

## **4.2 Digital Literacy and Educational Perspectives of Parents**

The study found that most families have established a well-equipped digital environment, owning multiple smart devices and having access to high-speed internet. However, parents generally lack sufficient knowledge on how to safely and appropriately guide their children's use of these devices. Insufficient digital literacy is a common issue among parents. Although most parents recognize the importance of controlling screen time, strict enforcement remains challenging. Additionally, parental educational perspectives show diversification under the influence of digitalization.

## **4.3 Challenges and Dilemmas in Family Education**

Most young children frequently engage with digital technology in daily life, mainly for watching videos and playing games. This high frequency of non-educational use has raised concerns among experts.

The primary challenges faced by parents in family education include balancing online and offline activities, selecting appropriate educational applications, and addressing children's screen dependency issues.

## **5. Analysis of Challenges and Strategies in Family Education in the Digital Context**

This study identifies several major challenges brought by digitalization: managing screen time, monitoring content quality, and reducing parent-child interaction. If not properly addressed, these challenges may affect children's socio-emotional and cognitive development. To address these challenges, this study proposes several strategies: enhancing parents' digital literacy training, establishing family screen time management rules, and selecting high-quality educational content. These strategies aim to better guide children in the digital environment. The limitations of this study primarily lie in the sample selection, suggesting that future research should expand the sample scope to include rural and economically underdeveloped areas. Additionally, future research should focus on the impact of digital technology on children with special needs.

## **6. Conclusion and Recommendations**

This study systematically explores the challenges faced by early childhood family education in the context of digitalization and proposes specific strategies to address them. It is hoped that this research can provide scientific parenting support for parents in the digital age and offer a theoretical basis for relevant policy formulation. The study shows that digitalization has both positive impacts and negative challenges for early childhood family education. Parents need to take effective measures to guide children in using digital technology safely and healthily. The government should enhance the cultivation of parents' digital literacy and promote scientific family education concepts. Schools and educational institutions should provide more support, including recommending educational applications and offering parent training courses. Future research should further explore the application of digital technology in family education across different cultural and economic backgrounds and consider the long-term impact of technological advances on family education methods.

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