



Research Paper

The Role of Family Education in the Current Context of Digital Transformation: A Case Study in the Northern Midland and Mountainous Region of Vietnam

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Abstract

In the context of strong digital transformation, family education continues to play a foundational role in shaping children's personality, digital competencies, and life values. This article analyzes the theoretical basis of family education, assesses the current situation in the context of digital transformation, and uses practical evidence from Thai Nguyen province and some other provinces in the northern midland and mountainous region to clarify the issue. On that basis, the article proposes basic solutions to improve the effectiveness of family education, contributing to the development of human resources in the digital era.

Keywords: Family education, role of family education, digital transformation, northern midland and mountainous region, digital skills.

I. Introduction

Digital transformation has been and continues to exert profound impacts on all aspects of social life, including education. While in the past education mainly took place in schools, today, with the development of the internet and smart devices, the educational environment has expanded into digital space. In this context, family education – as the first and most long-lasting foundation in the process of human personality formation – has become even more important.

Particularly in localities such as Thai Nguyen, Tuyen Quang, Son La..., where socio-economic conditions still face many difficulties, the uneven development of digital infrastructure has created a significant gap in access to education. This raises an urgent requirement to enhance the role of the family in guiding, managing, and educating children in the digital environment.

II. Content

2.1 Current situation of family education in the context of digital transformation

a. Positive changes

Many families in Vietnam today have proactively equipped their children with learning devices (mobile phones, computers, laptops, smart devices...) to support their studies. This demonstrates that families have realized that using smart devices and mobile phones is not only for entertainment but also an essential tool for children to study and access digitized knowledge in the new era.

Parents have begun to pay more attention to online learning and learning through software and AI... The emergence of digital platforms and tools has made parents more concerned with supporting their children's learning in the digital environment. Parents are increasingly interested in what their children are learning, how they are learning, and are willing to explore and guide their children in using technology and applying software and AI technologies... to help them study effectively.

The development of platforms such as YouTube, Zoom, Google Classroom, Microsoft Teams... has supported more flexible learning for children. The use of digital platforms is one of the key factors making online learning more popular and effective in the context of digital education. Thanks to software and digital platforms, young people's learning has become more flexible – children can review lessons at home, re-watch lecture content multiple times, and parents can more easily accompany and support their children's learning.

b. Limitations and challenges

First, parents' lack of digital skills. Many parents, especially in remote and isolated areas, are not proficient in technology and cannot control the content their children access. According to a UNICEF survey in Vietnam: "Parents in difficult areas often lack knowledge of using technology for their children's learning; many families have never used personal computers or online learning software." According to the author's research, specifically in some highland communes such as Dinh Hoa in Thai Nguyen province, when children study online, parents do not know how to install or use Zoom or Google Classroom applications and have to ask teachers or acquaintances to guide them on how to log in to classes for their children.

Second, children's abuse of digital devices: addiction to mobile phones and online games; reduced real-life social interaction... According to reports from the Ministry of Information and Communications, in Vietnam many students spend more than 4–5 hours per day on mobile devices for entertainment, especially playing games and using social networks – far exceeding the required time for online learning. Typical consequences include reduced concentration in learning, susceptibility to game addiction, difficulty organizing time, and poor real-life communication skills.

Third, risks from the online environment: cyber violence; access to harmful or misleading content; online fraud... According to the EU Kids Online report, Vietnamese children access the internet early but have a higher-than-world-average rate of encountering violent content or contact with malicious individuals when unsupervised. Reports from Vietnam's Ministry of Information and Communications also show many cases of children being deceived online when shopping, revealing personal information, or being lured into sharing private images. These consequences cause stress, fear, anxiety, and potential serious psychological impacts on children.

Fourth, the digital divide: disparity between urban and rural areas; uneven internet infrastructure in mountainous provinces. According to UNICEF reports: In the northern midland and mountainous region such as Thai Nguyen, Tuyen Quang, Son La..., many households do not have stable internet and lack connecting devices for online learning. As a result, children in rural and mountainous areas are easily "left behind" in digital education if there is no intervention from families and supportive policies.

c. Specific characteristics of the northern midland and mountainous region

According to the latest socio-economic zoning orientation for the 2026–2030 period, the northern midland and mountainous region is identified as having 9 provinces under central authority after administrative unit rearrangement according to the newly issued Government Resolution, including: Thai Nguyen, Cao Bang, Dien Bien, Tuyen Quang, Phu Tho, Lai Chau, Lao Cai, Lang Son, and Son La.

The characteristics of the northern midland and mountainous region that affect family education in the context of digital transformation are as follows: Difficult terrain and dispersed population leading to limited access to education and technology; Economic conditions in many areas remain difficult, resulting in a lack of learning devices (computers, mobile phones, internet...); Diversity of ethnic groups living in the area such as H'Mong, Dao, Tay, Nung... creating language and cultural barriers; Limited educational level and digital skills of many parents; Uneven internet infrastructure... Consequences: Families face difficulties in supporting children's online learning due to lack of skills and devices; Children are prone to falling behind in digital skills compared to urban students; Parents find it difficult to control internet usage, increasing the risk of children accessing harmful content...

Although there are many difficulties, the northern midland and mountainous region will "break through" if supported appropriately by the State, local authorities, and other socio-political organizations... Thanks to digital transformation in education, children in the midland and mountainous areas can access knowledge as in cities. Families can learn together with their children through digital platforms. Some "digital literacy eradication" programs have been and are being implemented to help maintain learning even when there is a shortage of teachers or when students cannot study in person at school.

In summary, in the context of digital transformation, if the role and capacity of family education are not enhanced, children in the northern midland and mountainous region risk falling behind; conversely, if properly supported, this is the key to narrowing the digital divide and achieving sustainable development.

2.2. Impacts of digital transformation on family education

a. Positive impacts

First, expanded learning opportunities (learning anytime, anywhere). Thanks to the internet and digital devices, children can learn through videos, online classes, and digital materials without being constrained by space or time. Families can support their children's learning at home, even in difficult, remote, and isolated areas. The family can become a "second classroom" supporting children's continuous learning process.

Second, increased access to global knowledge. Children can access rich learning resources such as videos, lectures, and international courses. They are no longer limited by textbooks or domestic curricula. Families can guide their children to learn additional new knowledge beyond school.

Third, support for the development of creative thinking. Technology allows children to learn through videos, educational games, simulations... Children can explore, discover, and create content themselves (making videos, simple programming...). Educational research indicates that digital learning environments enhance critical thinking and creativity compared to traditional methods. Families can encourage children to learn and explore independently rather than learning passively.

b. Negative impacts

First, increased generation gap. Children access technology faster, while many parents cannot keep up, leading to difficulties in communication and guiding children in the digital environment. Consequence: Children tend to use technology freely without parental guidance and control.

Second, decline in family communication. Heavy use of mobile phones and computers reduces time for direct conversation. Family members tend to have “each person with their own screen and sitting in their own corner.” Consequence: Family bonding decreases, affecting children’s psychology and personality development.

Third, risk of behavioral deviation. Children easily access bad content: violence, misinformation, inappropriate games... which can lead to negative behaviors such as game addiction, vulgar language, imitating deviant behaviors, and even causing social disorder and social evils. Consequence: impacts on children’s ethics, behavior, and comprehensive development.

2.3. Some basic solutions to improve the effectiveness of family education in the current context of digital transformation

Solution 1: Enhancing digital capacity for parents. Organize training classes on basic digital skills for parents, such as using smartphones, online learning applications, and information searching... Guide parents on how to control and orient their children’s internet use (setting time limits, monitoring learning content, viewing access history, and enabling safety modes). This is the solution that helps parents become “companions and guides” instead of passively managing their children.

Solution 2: Strengthening coordination among family – school – society. Schools need to support and guide parents in using digital platforms (online classes, assignment applications, information exchange). Local authorities and mass organizations should disseminate information on digital safety and internet usage skills for families. Effective implementation of this solution will create a comprehensive support network for children in the digital environment.

Solution 3: Building a healthy environment. Families need to set regulations on device and social media usage time. Increase encouragement of family activities such as reading books, sports, and direct conversations to reduce device dependence. Good implementation of this solution helps balance digital learning with comprehensive development.

Solution 4: Developing digital skills for children. Equip children with skills to search for and select information. Skills for self-protection online (not sharing personal information, recognizing fraud, understanding cybersecurity laws...) and critical thinking to distinguish right from wrong. Effective implementation of this solution will help children participate proactively and safely in the digital environment.

Solution 5: Improving policies and infrastructure. The State needs to invest in internet access in remote and isolated areas to ensure every child has the opportunity for digital learning. Implement programs to support learning devices (computers, mobile phones...) for disadvantaged students. Good implementation of this solution will reduce the digital divide between regions and ensure equity in education.

III. Conclusion

In the context of digital transformation, family education not only maintains its foundational role but also becomes a decisive factor in forming children’s digital competencies and personality. Particularly in the northern midland and mountainous region, promoting the role of the family is an important solution to narrow the digital divide and improve the quality of education.

Therefore, synchronous coordination among family, school, and society is needed to build a comprehensive educational environment that adapts to the requirements of the digital era.

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