

Integrated Model of Protecting Children's Rights in The Context of Digital Transformation

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Abstract

This article examines the issues of protecting children's rights and ensuring legal security in the context of digital transformation in Uzbekistan. The study analyzes the impact of digital technologies on children's rights, including cyberbullying, harmful online content, violations of personal data privacy, and digital safety challenges. International experiences and national legislation are comparatively studied to identify existing legal and institutional problems in the field. The research substantiates the necessity of integrating legal guarantees with legal education mechanisms in order to effectively protect children in the digital environment. Based on the analysis, an integrated model combining state policy, educational institutions, family, law enforcement agencies, digital platforms, and civil society institutions is proposed. The article emphasizes that strengthening digital literacy and legal awareness among children, parents, and teachers is an essential component of ensuring children's rights in the digital age. The findings of the study may contribute to improving national legislation and developing preventive mechanisms for children's digital safety.

Keywords: Digital transformation, child rights, digital law, cybersecurity, cyberbullying, digital literacy, legal education, online safety, legal guarantees, personal data protection.

Introduction

Ideas concerning the necessity of protecting human rights have deep historical roots. As V. A. Kartashkin notes, "The Magna Carta of 1215 served as a foundation for the key principles of limiting state power and protecting individual rights, which remain relevant today"[1]. The idea of human rights protection has evolved over centuries, and its modern content developed on the basis of philosophical and legal ideas of equality, freedom, and natural rights formed during the

Enlightenment period. Later, these principles were enshrined in national constitutions and international legal instruments, including the 1948 Universal Declaration of Human Rights and the 1950 European Convention on Human Rights[2].

Research Methodology

The study employs comparative-legal, systemic-analytical, formal-legal, statistical, and logical analysis methods. Official reports of international organizations such as the United Nations (UN), UNICEF, UNESCO, and the World Health Organization (WHO), as well as normative legal acts of the Republic of Uzbekistan, were examined. In addition, foreign and national academic literature on digital transformation and child rights protection was analyzed. The study assesses existing mechanisms for ensuring child safety in the digital environment using a comprehensive approach.

The main objective of this research is to analyze the theoretical and legal foundations of child rights protection and legal security in the context of digital transformation in Uzbekistan, to conduct a comparative study of international experience and national legislation, to identify existing challenges, and to develop scientifically grounded proposals and recommendations aimed at addressing them.

Scientific novelty

The scientific novelty of this study lies in systematizing the legal guarantees of child rights protection and legal education mechanisms under digital transformation through a unified integrated model. The research develops evidence-based proposals aimed at enhancing children's digital legal literacy, improving preventive legal education tools, and strengthening cooperation mechanisms between state bodies, the education system, family institutions, and civil society organizations.

In the 21st century, the development of digital technologies is generating new opportunities for the realization of human rights, while simultaneously giving rise to new risks and threats. The widespread advancement of the internet, artificial intelligence, big data, blockchain, and electronic platforms has significantly accelerated the process of digital transformation across all spheres of society. This, in turn, has led to the emergence of new forms of legal relations and contributed to the formation of the concept of "digital law"[3].

Although digital transformation expands access to education, communication, and information, it also creates serious risks for children, including cyberbullying, exposure to harmful content, and the disclosure of personal data[4]. According to UNICEF data, every half a second, a child goes online for the first time worldwide, which further increases the urgency of ensuring child protection in the digital environment[5].

Nowadays, Uzbekistan is also experiencing rapid development of internet and digital technologies. At the same time, ensuring the legal security of children in the digital environment, protecting them from online threats, and improving their digital literacy have become key priorities of state policy.

One of the most significant features of the 21st century is the digital transformation of society and its impact on legal regulation. The development of the internet, artificial intelligence, blockchain, big data, e-commerce, and digital payment systems has led to the emergence of a new branch of

law—digital law. It not only reinterprets traditional branches of law (civil, commercial, intellectual property, and administrative law), but also generates entirely new legal relations[6].

Digital transformation is a continuous process of change driven by digital technologies. It affects not only enterprises but also individuals, science, education, and governments at various levels[7]. In the context of digital transformation, the increasing flow of data and the expansion of information systems have made cybersecurity a critically important issue. Therefore, states are adopting cyber defense strategies, implementing measures to protect critical information infrastructure, and legally strengthening the use of electronic signatures and electronic identification tools.

According to research by McKinsey & Company, digital transformation is a long-term effort aimed at continuously improving and reshaping organizational processes; it is not a one-time project but an ongoing evolution[8]. From a legal perspective, the term “digital law” refers to a set of legal norms regulating new legal relations arising as a result of societal digital transformation, and it is considered an emerging independent branch of law.

Today, internet and virtual environments are rapidly developing in our country as well. In developed countries, this process began approximately a quarter of a century earlier, and both its positive and negative consequences have already become evident. Worldwide, a child goes online for the first time every half second. Digital technologies expand children’s opportunities for education, creativity, and access to information; however, alongside these opportunities, significant risks are also emerging[9]. The rapid expansion of the global internet has fundamentally transformed approaches to youth education and upbringing. At the same time, protecting the rights of the younger generation from the negative impacts of cyberspace has become one of the most pressing issues.

In this regard, the main objective of this study is to conduct an in-depth analysis of the theoretical and legal foundations of child rights protection and legal security in the context of digital technology development in Uzbekistan, to identify existing problems through comparative analysis of international experience and national legislation, and to develop scientifically grounded proposals and recommendations aimed at addressing them. To achieve this objective, the study comprehensively examines the interrelationship between digital technologies and child rights, identifies emerging legal risks and threats in the process of digital transformation, and analyzes international and national legal experience comparatively. Furthermore, effective mechanisms for strengthening child rights protection and legal security are developed, and based on these, evidence-based recommendations are proposed. As a result, this research contributes to a comprehensive understanding of both theoretical and practical issues related to the implementation of digital technologies in Uzbekistan and offers effective solutions. It also promotes not only the provision of traditional legal knowledge to children but also their education in understanding, protecting, and responsibly exercising their rights in the digital environment.

International research

The United Nations (UN), the World Health Organization (WHO), the United Nations International Children’s Emergency Fund (UNICEF), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) are among the first international institutions to draw attention to issues related to young people’s interaction with digital technologies. They

consistently emphasize both the positive aspects of this process and its potential risks and negative consequences.

According to UN data, young people aged 15 to 24 are more active internet users than other population groups—by 2025, 82% of them are expected to be online. This has created unprecedented opportunities for communication, learning, socialization, and entertainment; however, it has also introduced significant risks. Each time they access social media and instant messaging platforms, young people are exposed to cyberattacks and peer-to-peer violence[10].

UNICEF has addressed this issue by collaborating with social media platforms and developing guidance on combating cyberbullying[11]. UNESCO, in turn, has strengthened global efforts in this area by designating the first Thursday of November each year as the International Day against Violence and Bullying at School, including Cyberbullying, thereby promoting international awareness and action[12].

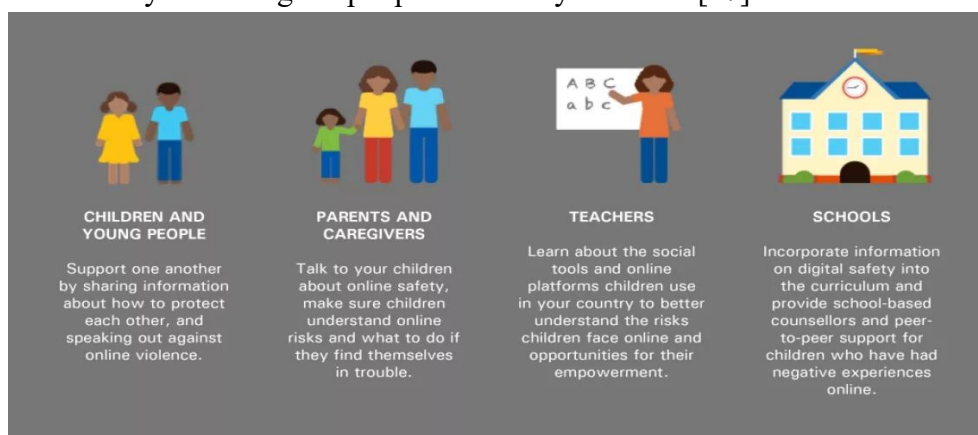
The Executive Director of UNICEF, Anthony Lake, stated: “The digital world presents us with a dual challenge: maximizing the benefits of the internet for every child while minimizing its harmful impacts”[13].

In 2017, UNICEF published The State of the World’s Children, which became the organization’s first comprehensive report examining the impact of digital technologies on children. The report called on governments, the technology sector, and the telecommunications industry to ensure equitable access to the digital environment for children, to expand opportunities for its benefits, and to protect them from harm[14].

The World Health Organization (WHO) has issued specific guidelines aimed at limiting screen time. Research shows that excessive screen exposure is associated with obesity and other cardiometabolic risk factors, mental health problems, poor nutrition, eating disorders, and negative effects on child development[15].

The UNICEF Innocenti Research Centre, in its 2025 report Childhood in a Digital World, analyzed the impact of digital technologies on children’s mental health and digital skills based on global and comparative data. The report highlighted that the effects of digital technologies on children—whether positive or negative—largely depend on how they access online content and what types of content and experiences they encounter[16].

Below are UNICEF recommendations that can help parents, schools, and children themselves enhance protection by following simple precautionary measures[17].



1-figure. Recommendations for increasing the level of protection [18].

Foreign studies indicate that the globalization of digital technologies and the Internet requires states to improve legal standards, adapt national legislation to modern requirements, and enhance the digital literacy of the population.

National studies. In Uzbekistan, the issue of protecting families and children from digital threats is considered a priority of state policy. In recent years, the legal framework in this area has been significantly strengthened, and institutional measures have been implemented. The country joined the UN Convention on the Rights of the Child in 1992 and, in accordance with it, has been fulfilling its international obligations to protect children from all forms of violence.

Constitutional and legal guarantees of children's right to education.

In the Republic of Uzbekistan, the right of children to education is enshrined at the constitutional level and is recognized as one of the fundamental social rights of the individual. In the context of ongoing digital transformation, ensuring this right has become increasingly relevant, as the widespread introduction of information and communication technologies into the education system expands access to quality education while simultaneously creating the need to ensure children's digital safety.

According to Article 50 of the Constitution of the Republic of Uzbekistan, "Everyone has the right to education. The State guarantees free general secondary education and primary vocational education. School affairs are under state supervision"[19]. This provision establishes the universal nature of the right to education and imposes on the State the obligation to create the necessary conditions for ensuring quality and safe education for children.

Article 78 of the Constitution stipulates that the State shall protect the rights, freedoms, and lawful interests of children[20]. This provision serves as a constitutional guarantee for the protection of children's right to education. In particular, in the process of using digital educational platforms, ensuring data protection, cybersecurity, and safeguarding children from harmful information are among the State's priority tasks.

The right of children to education is also clearly defined in the Law "On Education" of the Republic of Uzbekistan. According to Article 5 of this Law, everyone has the right to education regardless of gender, race, nationality, language, religion, social origin, beliefs, or personal and social status[21]. This provision establishes the principle of equality in education and guarantees non-discriminatory access to education for children.

Furthermore, Article 9 of the same Law states that ensuring quality education based on state educational standards is one of the key responsibilities of the State [22]. In the context of digital transformation, this provision is essential for establishing the legal basis of distance learning, electronic platforms, and digital educational resources.

In addition, the Law "On Guarantees of the Rights of the Child" of the Republic of Uzbekistan also pays special attention to the right of children to education. According to Article 23 of this Law, every child has the right to education, including free general secondary education and access to state educational institutions[23]. This provision strengthens the State's obligation to ensure equal educational opportunities for children.

Moreover, legislation also addresses the issue of protecting children from harmful information. In particular, the Law "On Protection of Children from Information Harmful to Their Health" establishes legal mechanisms aimed at restricting the dissemination of information products that may negatively affect the mental and moral development of children[24].

In conclusion, the right of children to education in Uzbekistan is sufficiently well-established at both the constitutional and legislative levels. However, the acceleration of digital transformation requires further improvement of existing legal mechanisms. In particular, it is necessary to develop special legal mechanisms aimed at protecting children's personal data in distance learning systems, ensuring a safe digital environment on educational platforms, and preventing cyberbullying.

In 2025, the Law "On Protection of Children from All Forms of Violence" was adopted in Uzbekistan and entered into force. This law clearly defines all forms of physical, psychological violence and neglect against children, including domestic abuse, bullying in educational institutions, and exploitation, and establishes measures for their prevention. Within this framework, the protection of children is not only the responsibility of parents or guardians, but also of schools, healthcare institutions, law enforcement agencies, and local communities. In this way, the national child protection system is being improved on the basis of interagency cooperation, with clearly defined responsibilities for all stakeholders.

In conclusion, international and national studies show that the issue of protecting children's rights in the context of digital transformation is widely addressed in academic literature. However, most existing studies focus separately on legal guarantees or technological security measures. A comprehensive integrated approach that combines legal protection mechanisms and legal education tools within a single system remains insufficiently developed. Therefore, this research aims to develop an integrated model combining legal guarantees and legal education mechanisms for the protection of children's rights in the digital environment. Discussion. The introduction of digital technologies, while creating new opportunities in the field of child rights protection and legal security, also generates certain risks and limitations. The results of the study indicate that in Uzbekistan, within the process of digital transformation, there are several pressing challenges in effectively organizing the child rights protection system based on the integration of legal guarantees and legal education mechanisms.

One of the main threats children may face in the digital environment is cyberbullying (online harassment and humiliation). Cyberbullying refers to situations in which a child is insulted, mocked, threatened, or intimidated by another person (or a group of peers) via the internet. Such virtual violence can seriously damage a child's psychological well-being. Research shows that one-third of young people across 30 countries have experienced cyberbullying, and one in five has missed school because of it. Cyberbullying may cause stress and depression in children, negatively affect their academic performance, and even increase suicidal tendencies[25].

In addition, children may be exposed to age-inappropriate or psychologically harmful content. On the internet, they may encounter messages promoting hatred or violence, content encouraging suicide, as well as pornographic or extremist materials that negatively affect their developing cognitive and emotional capacities. Such harmful content can influence a child's psyche and significantly hinder their moral development.

According to research, when faced with online risks, most adolescents turn to their peers (54%) rather than parents (48%) or teachers (19%)[26]. Moreover, compared to boys (33%), adolescent girls (78%) are more cautious about violent or sexually explicit online threats or messages. About 58% of girls stated that they would inform their parents about online threats, whereas among boys this figure is only 38%[27].

The protection of children's personal data in the digital space is also a major challenge. Young users may unknowingly disclose personal information (such as name, home address, school, photos, etc.) online, or mobile applications and games may collect their data. As a result, children's personal data may fall into the hands of third parties and be misused. For instance, in 2022, approximately 1.7 million children's personal data were exposed or stolen due to data breaches worldwide—roughly one in every 43 children[28].

Conclusion. This study aimed to conduct a comprehensive analysis of child rights protection in Uzbekistan under conditions of digital transformation, focusing on the integration of legal guarantees and legal education mechanisms. The analysis of theoretical sources, international reports, and national legislation shows that ensuring children's rights in the digital environment is increasingly becoming a multi-layered system with legal, social-pedagogical, and technological dimensions. The findings confirm that children's right to education in Uzbekistan is firmly guaranteed at the constitutional and legislative levels. In particular, Articles 50 and 78 of the Constitution, the Law "On Education," and the Law "On Guarantees of the Rights of the Child" ensure children's rights to education, equal development opportunities, and state protection. At the same time, the Law "On Protection of Children from Information Harmful to Their Health" provides an important legal foundation for ensuring safety in the digital environment.

However, empirical and statistical data show that children in the digital space still face widespread risks such as cyberbullying, harmful content, disclosure of personal data, and psychological threats. In particular, data from UNICEF and other international organizations indicate that a significant proportion of adolescents tend to seek help from peers rather than parents or teachers when encountering online problems, which suggests that the practical effectiveness of formal protection mechanisms remains insufficient.

At the same time, the study confirms that children's digital literacy and legal awareness directly influence their online safety. Digital safety cannot be ensured solely through legal norms; it requires coordinated cooperation between the education system, family institutions, civil society, and digital platforms.

The analysis demonstrates that although the current legal framework contains norms related to the protection of children from digital threats, these provisions are largely fragmented and require a unified, integrated conceptual approach. In particular, the institutional relationship between legal education and digital security policy remains insufficiently systematized.

In conclusion, two key directions are essential for the effective protection of children's rights in the context of digital transformation: first, improving the regulatory and legal framework in line with contemporary requirements; second, forming a comprehensive protection system through the integration of legal education and digital literacy. Such an approach ensures not only legal protection of children but also their informed, safe, and responsible participation in the digital environment.

As a result, the integrated model developed within this study serves as a scientific and practical basis for advancing child rights protection in Uzbekistan in accordance with the demands of the digital era, harmonizing existing legal and pedagogical mechanisms, and strengthening preventive protection systems.

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