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## **Regulatory framework for the formation of information culture of modern Kazakhstan youth**

The article analyzes the regulatory framework for the formation of the information culture of modern Kazakhstan youth. The authors present the main components that form the general information culture of society, including information, media and digital literacy, digital infrastructure. Researchers have identified the main areas of state activity, which reflects this problem, namely state policy in the field of creation and development of the state information infrastructure, e-government, educational and media policy, cyber security and child safety. The article also provides an overview of international legislation and international regulatory experience, from the 1982 Grunewald Declaration of UNESCO to the Council of Europe Strategy for the Rights of the Child (2016–2021). The current situation in Kazakhstan is confirmed by official statistics of the Committee of Statistics of the Republic of Kazakhstan. The authors conclude that not all spheres of the formation, development and regulation of the information culture of Kazakhstan society, including youth, are in the focus of attention of state structures. Some measures are taken late, or do not have specific mechanisms for functioning and implementation. According to the authors, in the context of the COVID-19 pandemic and, consequently, the transition to distance learning, more than 90 % of Kazakhstan children turned out to be active users of information and communication technologies, daily encountering all the opportunities and potential threats posed by the global Internet.

*Keywords:* information culture, information and digital literacy, media literacy, digital infrastructure, security, state regulation, «Digital Kazakhstan», state regulation, legal acts.

### *Introduction*

The problem of the formation of an information culture of youth at the present stage of development of society acquires special significance. Information is rightly perceived as one of the most important social, political and economic resources, and society is becoming more informational. In the context of the COVID-19 pandemic and the associated restrictions on physical contacts of people, the importance of skills in working with information flows, the ability to use traditional and innovative capabilities in the field of information has acquired strategic importance. Today, a person needs a fairly high level of culture of handling information, the availability of developed skills for its search, transmission, processing and analysis, as well as the ability to practically use information resources for the purpose of training and solving professional problems.

The transformation of society is determined not only by the complication of information and communication technologies and telecommunication systems, but also by the formation of a fundamentally new information sphere of life. The number of people involved in the information field is increasing more and more, and they act as not only consumers of information, but also producers of information services and resources.

### *Methodology and research methods*

An important element of the logical analysis of information culture is the consideration of this concept in the system of categories «culture», «actual culture» and «computer culture».

The content of the concept of «culture» is obviously wider than the content of the concept of «information culture». Culture as a whole provides a person with the opportunity to carry out social interaction, interaction with other people, while information culture acts as a condition that ensures this perception in certain situations. Information culture acts as part of the overall culture, providing a number of its characteristics. The basis for the development of information culture is the changed social situation, which necessitated the continuous replenishment and updating of knowledge, the receipt and use of new information.

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General and informational culture includes the norms and values of the sociocultural system, while having various carriers. For a general culture, society as a whole, a social group, and a personality act as a subject. The information culture is represented mainly at the personal level, as a result of which a sociological study requires consideration of the personal representation of the values, norms and skills of information culture.

The relationship between information and general culture is provided by the current culture of society. The concept of relevant culture delimits that part of the general culture that actually functions in a given society or social group in a specific historical period [1, p. 95]. At the same time, the concept of «information culture» is broader than the concept of «actual culture», since it contains knowledge acquired by a person not only about modern culture, but also about cultures of the past.

Thus, a common culture acts as a common system in relation to informational and relevant cultures. These concepts can be correlated with each other as general, special and singular.

The logical elements of the concept of information culture are revealed in comparison with the concepts of «learning culture» and «computer culture», which intersect each other both in content and in meaning. Information culture has a direct instrumental impact on activities in the process of training, education, and the formation of professional qualities. The culture of learning should be understood as a method and measure of the formation, development and implementation of social and professional qualities of the individual [2, p. 28].

In terms of content, the relationship between the concepts of information culture and the culture of learning is quite contradictory. On the one hand, the concept of a culture of learning is narrower, since this type of culture is localized in the framework of one type of social activity. On the other hand, the culture of learning is broader than informational, since it contains a huge stock of institutional knowledge and values. In this sense, information culture should be considered as one of the tools of the learning process. In terms of the correlation of information and computer culture, it should be noted that computer culture is included in the structure of information culture as one of its most important elements, providing organizational conditions for search, perception and mastery necessary information. The widespread use of computer technology significantly affects the formation of the information culture of the individual. However, the concept of «computer culture» is not identical to the concept of «information culture», since it is much more recent in the substantial sense.

A logical analysis of the concept of «information culture» allows us to distinguish it as an independent concept, which is part of the culture of society. Its specificity lies in the instrumental orientation, which contributes to the formation of both the culture as a whole and its individual types, especially the culture of education and the future professional culture.

The concept of «information culture» in sociological science has many interpretations. Some authors define information culture by highlighting its pragmatic nature. In this case, information culture is defined as the best way to handle knowledge, information and provide it to an interested consumer to solve theoretical and practical problems [3, p. 24]. Other researchers point to such a quality of information culture as the individual's ability and ability to store, receive, transform and transmit information. Information culture is also associated with the development of a training system, preparing a person for the effective use of information tools and information. Often, information culture is understood as «a social phenomenon of an integrative nature, which consists of a system of information representations and activities» [4, p. 13]; or is it considered «as part of a common culture, consisting of an alloy of information worldview, information literacy and literacy in the field of information and communication technologies» [5, p. 26]. These definitions fix the relationship of information culture with the skills of searching and using information, but they do not take into account aspects due to social interaction based on the information received.

In this regard, a number of researchers consider the concept of «information culture» in the framework of the activity approach. Pointing to the informational essence of creativity, V.A. Lozova, I.N. Pugin investigate this problem through the structure of human intellectual activity [6, p. 100]; E.S. Zharikov [7, p. 55], V.M. Livshits, O.S. Razumovsky analyze this problem in direct connection with the optimization of creative activity [8, p. 45].

At the cognitive level of information culture, information is value-based; in modern culture, knowledge and the time it takes to master it often becomes more important than money capital [9, p. 39]; D. Bell understands knowledge as «a set of organized statements about facts or ideas that represent a reasonable judgment or experimental result that is transmitted to others through some means of communication in some systematic form» [10, p. 333]. The knowledge and social values of information culture include: knowledge of the

general principles and laws of information; possession of relevant professional and/or training information; unprofessional, ordinary knowledge, elements of unsystematized knowledge from various professional fields, especially humanitarian, which is important for the development of an individual's worldview.

Along with knowledge, an information culture includes the ability to: work with various information; extract information from various sources; evaluate the information received; perceive and understand information; information search and processing skills; information literacy; computer literacy; media literacy; social interaction skills in the information field. At the same time, the concepts of information and computer literacy, media literacy and information culture as a whole should be clearly separated.

The origin of the word literacy refers to the ability to read and write. Early descriptions of computer literacy also focused on acquiring sets of rules and technical capabilities. However, by the end of the 20th century, this definition has expanded significantly. According to a working definition agreed upon at a UNESCO meeting of experts in June 2003 in Paris, «literacy is the ability to identify, understand, interpret, create, communicate, calculate and use printed and written materials related to different contexts. Literacy implies lifelong learning that allows people to achieve their goals, develop their knowledge and potential, and fully participate in the life of their society and society as a whole» [11, p. 1].

Digital literacy is a common concept for important skill groups, whose names are often used synonymously; however, their content is not quite the same. ICT literacy refers to a set of user skills that allow you to actively participate in society, where services and cultural offers are supported by computers and distributed on the Internet. Technological literacy (formerly called computer literacy) entails a deeper understanding of digital technology and includes both user and technical computer skills. Information literacy focuses on one of the key aspects of our knowledge society: the ability to optimally find, identify, retrieve, process and use digital information [11, p. 1, 2].

Media literacy — knowledge, skills and abilities necessary for understanding all means of (mass) communication and formats in which the creation, storage, transmission and presentation of data, information and knowledge (for example, printed newspapers and magazines, radio and television, cable media information, CD, DVD, mobile phones, PDF text formats, JPEG format for photographs and graphic images) [12, p. 6–7].

### *Discussions*

In the 2000s, around the world as a whole, general trends were observed in the transformation of all social institutions and spheres of human activity under the influence of information and communication technologies. Active progress was observed in all areas of development, production and implementation of modern technologies, a developed information environment was formed that corresponded to the tasks of socio-economic development, the state strove to ensure equal access of the population to information resources and trained citizens, social institutions, business and government bodies at all levels to life in an information society.

In accordance with article 20, paragraph 2 of the Constitution of the Republic of Kazakhstan «Everyone has the right to freely receive and disseminate information in any way not prohibited by law» [13]. This norm determines that every person, including a child, has the opportunity to receive equal access to information. However, the big difficulty is how we can use this information, for what purposes and how it will affect us.

The development of information infrastructure began in Kazakhstan in the 1990s, when the state program for accelerated industrial and innovative development was launched, the Bolashak international education program was initiated; in 2005, the formation of «electronic government» began. Also in Kazakhstan, a number of elements of the innovation ecosystem were created, AO Nazarbayev University is operating, and the Astana hub is launched. These efforts have provided relevant results: today, 3/4 of the adult population of our country has a basic level of digital literacy; more than 3/4 have Internet access [14].

On October 13, 2006, Resolution of the Government of the Republic of Kazakhstan No. 995 «On approval of the Program for reducing information inequality in the Republic of Kazakhstan for 2007–2009» was adopted. The aim of the program was to reduce information inequality in the Republic of Kazakhstan, to achieve 20 % of the level of computer literacy of the population and Internet users in the Republic of Kazakhstan. The implementation of the Program was ensured through the implementation of the following measures: improvement of regulatory legal support; teacher training to educate the population on computer literacy; methodological support for the process of teaching the population of computer literacy in distance and full-time forms of education; educating the population of computer literacy; creation of a monitoring

system and periodic analysis of the implementation of the Program; reduction of tariffs for Internet access and providing the population with affordable computer equipment; training of domestic IT-specialists; formation of citizens' interest in the development of information and communication technologies; formation of public support for the implementation of program activities in the state and Russian languages [14].

One of the important steps towards creating the conditions for the transition to the information society was the State program «Information Kazakhstan 2020», approved on January 8, 2013 by Decree of the President of the Republic of Kazakhstan No. 464 [15]. As a foundation for the digital transformation of the country's economy, this program contributed to the development of the following areas: the transition to the information society, improving public administration, the creation of «open and mobile government» institutions, increasing the availability of information infrastructure not only for corporate structures, but also for citizens of the country.

First President N.A. Nazarbayev in his Address to the People of Kazakhstan dated January 31, 2017, announced the Third Modernization, the core of which is digitalization, noted the need to cultivate new industries created using digital technologies, and that it is important to ensure the development of communications and widespread access to fiber-optic infrastructure. «The development of the digital industry will provide an impetus to all other industries» [16].

In the fifth priority of the Third modernization N.A. Nazarbayev outlined the relevance of the fight against cybercrime, religious extremism and terrorism. This Address of the Head of State instructed the Government and the National Security Committee to develop the concept of «Cyber Defense of Kazakhstan», the purpose of which is to ensure the information security of society and the state in the field of information and communication, as well as protecting the privacy of citizens when they use the information and communication infrastructure.

December 12, 2017 by the Decree of the Government of the Republic of Kazakhstan No. 827 the State program «Digital Kazakhstan» was approved [17]. The content of the program includes the following aspects: a description of international experience, an analysis of the current situation, goals, objectives, target indicators and indicators of the implementation of the Program, a description of the main directions and ways to achieve the goals, namely digitalization of economic sectors, transition to a digital state, implementation of digital silk ways», the development of human capital, the creation of an innovative ecosystem, management system. The purpose of the program: accelerating the pace of development of the economy of the republic and improving the quality of life of the population through the use of digital technologies in the medium term, as well as creating conditions for the transition of the economy of Kazakhstan to a fundamentally new development path, ensuring the creation of a digital economy of the future in the long term. Duration: 2018–2022.

In accordance with the State Program «Digital Kazakhstan», it is planned to achieve the target indicator for increasing the level of digital literacy of the population in 2019 — 78.5 %, in 2020 — 80.0 %, in 2021 — 81.5 %, by 2022 up to 83 % [17].

According to the Law of the Republic of Kazakhstan «On Informatization» dated November 24, 2015 No. 418–V, the term «digital literacy» means «knowledge and the ability of a person to use information and communication technologies in everyday and professional activities» [18]. Digital literacy consists of basic and professional digital skills.

Basic digital skills include the following five competencies:

1. Basic digital skills involving the confident use of a personal computer and laptop, mobile devices, the Internet, security and data protection.
2. Skills of using «electronic government» and public services, including obtaining the necessary electronic public services «online», without leaving home.
3. Skills for using the four components of Open Government.
4. «E-commerce» skills, including the skills of acquiring, selling and promoting «online» goods and services.
5. Information security skills, including the protection of personal data, the protection of PCs, tablets, smart phones and other electronic devices, Internet protection, protection during financial transactions.

Professional digital skills include competencies of basic digital skills, media skills (skills of using digital devices (digital cameras, video cameras, etc.) and professional digital skills — the use of software and hardware solutions in professional activities. According to the Statistics Committee of the Ministry of National Economy of the Republic Kazakhstan in 2019, the digital literacy rate in Kazakhstan was 79,6 % [19]. One of the directions of developing information literacy of the population and ensuring access to public ser-

vices was the development of the «Electronic Government» [20]. The electronic government was created in the form of the basic infrastructure and information systems of state bodies directly or indirectly involved in the provision of public services.

According to the developers, during the existence of e-government, four important stages of its formation and development have been passed.

The first stage is informational. It was during this period that the e-government portal was launched and filled with information. Information appeared on government bodies, their work and the services they provide to the public. In addition, the regulations for the provision of services were given and regulatory acts were posted for review. At this stage, every Kazakhstan citizen could get all the necessary information on the portal — a list of necessary documents, the size of the state duty, contact details of the state agency that I needed to contact.

The second stage — interactive, was the beginning of the provision of electronic services on the portal. The introduction of interactive services on the e-government portal has saved many times on the collection of documents. It was at this stage that departmental information systems, state databases, electronic licensing and an e-government gateway were introduced.

The third stage is transactional. At this stage, citizens were able to pay state duties and fees, fines, utilities. If earlier it was necessary to go to the bank to pay for the service, now it has become possible to receive and pay for the service online. For entrepreneurs, the transactional stage made it possible to participate in electronic public procurement, in connection with which the transparency and openness of competitions and tenders increased.

The fourth stage is transformational. The main goal from now on is maximum efficiency in the provision of services to citizens. To achieve this goal, interactive and transactional services are combined into complex services, which the Kazakhstan population often needs. For example, users have the opportunity to register a legal entity in 15 minutes or register the birth of a child, while at the same time having decided all the related issues — apply for assignment of benefits and put the child on the queue in kindergarten. Particular attention on the e-government portal is given to socially significant services, which is why all of them have been transferred to electronic format. According to the UN World Ranking, the E-Government Development Index (EGDI) in the Republic of Kazakhstan in 2018 was 39, and the e-participation index (EPI) was 42 [21].

As of July 2017, more than 740 services and services were transferred into electronic form, 83 mobile services were implemented. Already in 2015, the volume of public services provided in electronic form on the web portal amounted to more than 36 million, in 2016 — about 40 million. As of September 2017, the number of registered unique users has reached more than 6.6 million people.

As of October 2017, 349 public service centers functioned in the country, the number of which has so far increased. In 2013, the Unified Contact Center was created on the basis of the Call Center of the «electronic government» with a free telephone number 1414. An Open Government platform was implemented on the electronic government web portal. As of October 2017, 2,376 data sets were posted on the Open Data portal, 17,132 draft normative legal acts and draft laws were discussed, and 14,928 budget documents were published [21].

On June 30, 2017, by the Decree of the Government of the Republic of Kazakhstan No. 407, the Concept of Cyber security («Cyber Defense of Kazakhstan») was adopted [22]. The concept is based on an assessment of the current situation in the field of informatization of state bodies, automation of public services, prospects for the development of a «digital» economy and technological modernization of production processes in industry, expanding the scope of information and communication services. The document defines the main directions of implementing state policy in the field of protection of electronic information resources, information systems and telecommunication networks, ensuring the safe use of information and communication technologies. The concept was designed to form a unity of approaches to monitoring the information security of state bodies, individuals and legal entities, as well as to develop mechanisms for the prevention and rapid response to incidents in the field of information security, including in emergency situations of a social, natural and man-made nature, the introduction of a state of emergency or martial law. When developing the Concept, international experience was studied in the field of forming approaches to protecting the national information and communication infrastructure of both leading countries in the development and use of information and communication technologies, and countries seeking to expand the scope of application of these technologies to achieve their socio-economic development.

According to the developers of the concept of cyber security «Cyber shield of Kazakhstan» in this area of the functioning of the state there are such serious threats as:

- low legal literacy of the population, ICT workers and heads of organizations on information security issues;
- violation by state and non-state informatization entities and users of ICT services of the established requirements, technical standards and regulations for the collection, processing, storage and transmission of information in electronic form;
- unintentional personnel errors and technological failures that have a negative impact on information systems, software and other elements of the information and communication infrastructure;
- actions of international criminal groups, communities and individuals to carry out embezzlement in the financial and banking sector, harmful effects in order to disrupt the operation of automated process control systems in industry, energy, communications and in the field of information and communication services;
- activities of political, economic, terrorist structures, intelligence and special services of foreign states, directed against the interests of the Republic of Kazakhstan by providing intelligence and disruptive effects on the information and communication infrastructure [22].

Preparation and ensuring the effective implementation of the provisions of the above strategic documents implied significant changes at all levels of the education system of our country in order to expand the skills of working with information, computer literacy, and the formation of critical thinking.

A necessary step in this direction was the adoption in 2012 of a new State Compulsory Education Standard [23]. This state standard at the legislative level enshrined the formation of competencies as expected learning outcomes, including in the area of working with information.

On December 11, 2014, Resolution of the Government of the Republic of Kazakhstan No. 1297 «On the draft Decree of the President of the Republic of Kazakhstan» On Amendments and Additions to the Decree of the President of the Republic of Kazakhstan dated December 7, 2010 No. 1118 «On approval of the State Program for the Development of Education of the Republic of Kazakhstan for 2011–2020 was adopted. «The goal of «e-learning «e-learning» was noted «the development of students' skills necessary in the XXI century, including information and media literacy, critical thinking, research skills, the ability to solve creative problems, the ability to work in a team, independence, civil liability, through the formation of an information and communication educational environment» [24]. Among the objectives of the State program were the following: improving the legal framework for e-learning, developing digital educational resources in three languages with priority in the state language In order to accompany the educational process of the secondary school, organize networking and cooperation between all participants in the educational process, increase the effectiveness of educational management through the development of the structure of the information and educational environment.

On January 30, 2012, by Decree of the Government of the Republic of Kazakhstan dated June 25, 2012 No. 832, the National Plan of Action for the Development of Functional Literacy of Schoolchildren for 2012–2016 was approved. The purpose of the National Plan is to create conditions for the development of functional literacy of schoolchildren of the Republic of Kazakhstan. In this case the term «functional literacy» in its broadest definition appears as «a way of social orientation of an individual integrating the connection of education (primarily general) with multifaceted human activity» [25]. According to the authors of the document, functional literacy is becoming one of the basic factors contributing to the active participation of people in social, cultural, political and economic activities, as well as lifelong learning.

In the framework of updating the State Compulsory Education Standard (SCES) of both the current 11-year and 12-year school, the development of functional literacy of students is defined as one of the priority goals of education.

In accordance with the Plan, the result of the development of functional literacy is the mastery by students of a system of key competencies that allow young people to effectively apply their knowledge in a practical situation and successfully use it in the process of social adaptation. Key competencies are the state's requirement for the quality of personality of a high school graduate in the form of educational results, as stated in the State Educational Standards and educational programs. Among the key competencies of a secondary school graduate, almost everything can be attributed to information culture: information (the ability to study independently or learn throughout life), communicative (the ability to spoken, written, productive communication in Kazakh, Russian and English (foreign) languages), social (ability to social interaction), personal (ability to self-organization, self-improvement, life and professional self-determination, self-

realization, to be tolerant), civil (ability to bear responsibility for one's homeland on the basis of Kazakhstan's self-awareness and cultural identity) and technological (ability to the use of technologies, including scientific, digital at the level of an effective user) [25].

Thus, it can be noted that the implementation of the National Plan of Action for the Development of Functional Literacy of Schoolchildren for 2012 — 2016 is directly related to the development of the information culture skills of Kazakhstan youth. In addition, the introduction of this document actually anticipated the transition in high school to an updated educational program, where special attention is paid specifically to the development of critical thinking skills when the student is working with information.

Relevant for the Kazakhstan society are many recommendations of the Council of Europe on ensuring the safety of minors from information negatively affecting their «physical, mental and moral development». European experience shows that it is necessary to determine the provisions established by law in the field of television broadcasting, to take appropriate measures to ensure that broadcasts do not include programs that could seriously harm the physical, spiritual and moral development of minors, especially programs containing pornography or causeless violence», to prohibit programs that may impede the development of minors [26].

For example, experts at the Sanj Research Center cite several examples of successful experience of foreign countries in their research, such as the USA, Canada, Japan, etc. For example, since 2000, it has been forbidden to sell televisions in the USA and Canada that do not have a special encoding device that allows parents to program the TV to receive programs based on their age classification. This is done in order to protect minors from television programs, which can seriously impede their «physical, mental and moral development». When giving children Internet access, schools, libraries, Internet cafes and computer clubs must be required to install filters or blocking software. In 2004, the US government allocated \$9 million. USA for the program of implementing content filters in all schools of the country, and the state guarantees the provision of technical support. Or such a measure as establishing a rule for services, payment for the provision of which occurs as a pay-per-call. In the USA, there are so-called «Rules 900» when using mobile telephony. In order to protect consumers from accidental calls and the need to pay for them, the number by which these commercial services are provided should begin with the number 900. This allows parents to block calls to numbers starting with 900 and, thus, protect themselves from having to pay for telephone entertainment for children, as well as protect children from unwanted information, for example, from such as sex on the phone, etc. [26].

The result of state regulation is that, for example, in the USA, scenes of cruelty and bloody scenes cannot be seen in the news, this is prohibited. In Japan, a broadcaster is required to give warnings if there are scenes of sex and violence in the program, through captions or overlays during the demonstration of these programs, as well as in preliminary comments posted in the print media and on the Internet. In other countries, such as France, Italy, there are also strict rules by which broadcasters are not allowed to broadcast programs that harm the mental or moral development of children, demonstrate unjustified cruelty, contain pornography or encourage racial, sexual, religious or national intolerance [26; 82].

The European Union and the United States have developed appropriate special programs with priority funding, for example, «Safe Internet». Within the framework of such a social program, countries are creating national centers working in the field of ensuring the safe use of the Internet for children. As a rule, the work of these national centers is carried out in four areas: the creation and maintenance of the functioning of a «hot line» on the Internet, designed to detect illegal information on the network; activities to educate parents and children about the dangers on the Internet and how to counter them; the establishment of hotlines for the provision of counseling to children; development and implementation of Internet content filtering systems [26; 83]. Of course, in Western countries, the problem of the aggressive negative impact of modern media on children was encountered much earlier than in Kazakhstan. In this connection, a great deal of experience has been accumulated in these countries on the prevention of the influence of illegal Internet content, on the creation and functioning of public and state organizations engaged in public control.

With all its obvious relevance, at present, the problem of developing an information culture remains underestimated in Kazakhstan. This is due to the fact that insufficient attention is paid to this problem, both from the side of official structures and society as a whole. In fact, children got unhindered access to the worldwide Internet network with all its capabilities and potential threats, without having the slightest idea about what and who awaits them there. The number of Kazakhstan children — users of information technology and the Internet is growing every year. The official data are presented in Table 1.

Table 1

**The proportion of children aged 6 — 15 years — users of information and communication technologies in the Republic of Kazakhstan [27]**

Characteristic	2012	2014	2016	2018	2020
Computer users total	40.1	52.8	63.5	76.9	more than 90*
Of them:					
Living in urban areas	43.5	55.6	68.7	78.2	
Living in the countryside	37.1	50	61.7	75.4	
Internet users in total	32	43.6	62.1	72.9	more than 90*
Of them:					
Living in urban areas	36.9	48.1	67.3	75.7	
Living in the countryside	27.5	39.1	56.6	69.8	

Note: \* — official data as of the first half of 2020 are not available. The authors' assumption based on the noted dynamics in previous years.

The data show that each year the proportion of children aged 6 to 15 years — users of computers (including tablets, mobile phones) and Internet is increasing. Moreover, the dynamics are much higher than among the adult population. In 2020, as a result of the announced COVID-19 pandemic, we all witnessed how the whole world and Kazakhstan, including, switched to online and distance learning. As a result, the involvement of children as users of computers and the World Wide Web has increased even more. Children received assignments, completed them, and consulted with teachers, exclusively through the Internet. The exception was only those children who live in areas with limited Internet coverage and those children who were not able to use technical means. But the last problem was solved by the schools themselves and the regional administrations. In fact, we can say that 2020 was a turning point when almost all children were active participants in the Internet community. But what about the content security situation that our children use, for what purpose do they access the world wide web, with whom do they communicate, what issues do they discuss, do they have an idea of the threats that await them there? Of course, children alone will not be able to solve this problem; joint coordinated activity of the parental community, teachers, psychologists, school and regional administrations, and legal structures is necessary.

An inextricable component of information literacy is media literacy. In general, media education has been actively developing in the world since the middle of the twentieth century. This term is understood not so much as the skills for preparing media texts (what journalists and reporters teach), as the skills of critical attitude to information received from various sources; differentiation of truthful and objective information from false information and propaganda, as well as skills and abilities to work with sources of information, search for necessary information, etc. [28].

With the development and spread of the worldwide Internet, the tasks of media education have expanded significantly. The development of information and communication technologies required additional efforts to clarify how the Internet works and how, where and how information flows, how to create and disseminate your own information; how social networks work and so on. Currently, with the transfer of public services to the online format, media education is required not only for children but also for adults (for example, in the UK OFCOM shares media education for adults and for children). At the same time, it has long been recognized at the highest political level that information can be a threat to the mental, emotional and moral health of children, therefore, states should take measures at the legislative level to limit dangerous and threatening information for children (containing scenes of violence and murder, ill-treatment, sexual violence and pornography, any exploitation and discrimination that promotes drugs, their derivatives, alcohol, etc.). However, the other obligatory side of restrictive and prohibitive measures is precisely the development of media education as a joint process with the participation of the state, society and media to educate the population and increase the level of its media literacy.

International organizations such as the UN, UNESCO and UNICEF have made a great contribution to creating the legal framework for media education, the Declaration of the Rights of the Child, the Convention on the Rights of the Child, the Riyadh Guidelines and others have been adopted. The foundation for the development of media education in the world has been laid since the adoption of the Grunewald Declaration UNESCO in 1982 [29], which recommended the following measures:

1) initiate and support the development and implementation of comprehensive programs for media education at various levels, from preschool to university, as well as for adult education in order to disseminate knowledge, develop skills and form opinions that contribute to the growth of critical consciousness and, therefore, greater competence of those who use electronic and print media;

2) to organize retraining courses for teachers, both with the aim of deepening their knowledge in the field of mass media, and for the purpose of mastering by them appropriate teaching methods, taking into account the significant but fragmentary acquaintance of students with the mass media;

3) stimulate research in the field of psychology, sociology, communication, contributing to the development of media education;

4) to support and strengthen the actions undertaken by UNESCO to develop international cooperation in the field of media education.

On June 21–22, 2007, experts, officials, educators, researchers, representatives of non-governmental organizations and media figures from all regions of the world developed and adopted 12 recommendations on media education, called the Paris Agenda or 12 Recommendations on Media Education. These recommendations were adopted at the end of the UNESCO International Media Education Symposium — *Advances, Obstacles, and New Trends since Grunewald: Towards a Scale Change?* [30]. The main goal of the conference was to identify how the process of media education is going on in the world, and what difficulties are encountered in implementing this kind of educational policy and practical experience, as well as to develop effective recommendations aimed at improving the level of media education and mobilizing the efforts of its supporters.

On November 24, 2008, the European Parliament adopted the Resolution on the Media Literacy Report in the Digital World [31], which required Member States to pay systematic attention to the development of media literacy. The European Commission also insisted on this, urging member states to include special courses in their curricula aimed at helping EU citizens become active users of information. One of the most recent media education documents is the Council of Europe Strategy for the Rights of the Child (2016–2021) [32], in which a separate section is devoted to the rights of the child in the digital world and the obligations of states to create better conditions for the child in the digital environment. In particular, the developers of the Strategy note that «all children should be able to securely access ICTs and the digital media, as well as be able to fully participate, express their opinions, seek information and enjoy all the rights enshrined in the UN Convention on Rights child» [32]. The authors believe that ICT and digital media have added a new dimension to children's right to education and to promote the creative, critical and safe use of the Internet, the Council of Europe will launch a pan-European project on education in the field of digital citizenship, building on the achievements of the program «Education for Democratic Citizenship and Education in human rights». Based on multi-stakeholder consultations and the sharing of best practices, guidelines and a set of competency descriptors in the field of digital education will be developed, which will be provided to Member States for use in school settings [32].

Thus, UN international organizations have many years of experience in the field of digital and media literacy. There are legal acts that define the basic concepts and regulate legal relations in this area. But the most important thing, in our opinion, is that here the general right of everyone to receive information is accepted, threats and potential risks are determined when children use technical means and the Internet. The ways of preventing or mitigating the negative impact of digital technologies on children are identified, in particular, the need to develop critical thinking and media education skills of both children and teachers. In Kazakhstan, this problem has not yet received such a thorough study, although some work is already underway.

On July 2, 2018, the Law of the Republic of Kazakhstan «On protecting children from information harmful to their health and development» was signed [33]. In this Law, the concept of «protecting children from information that is harmful to their health and development» is defined as a combination of legal, organizational, technical and other measures carried out in order to ensure the information security of children. It defines the concept of «information security of children» as «ensuring the protection of the rights and legitimate interests of children from information that is harmful to their health and development» [33].

In accordance with Article 8 of this document, public control over compliance with the requirements of the Law may be carried out by individuals and non-profit organizations in accordance with their charters. In addition, individuals and non-profit organizations are entitled to:

1) to monitor the distribution of information products and children's access to information, including through the creation and maintenance of «hot lines», the use of technical, hardware and other forms of moni-

toring and identification of information, information products and actions of persons who are harmful to the health and development of children;

2) to submit information on violations of this Law to state bodies and local executive bodies;

3) to carry out activities aimed at raising the level of awareness of children about the opportunities, potentials, risks and threats of the information disseminated, as well as teaching parents the skills to control minors when they receive and use information;

4) conduct an analysis of information literacy among children and parents;

5) carry out other actions in accordance with the legislation of the Republic of Kazakhstan [33].

This norm shows that the state is ready for cooperation in the field of developing information culture skills among young people, analyzing and monitoring the level of information literacy and jointly developing actions to improve the situation. The Sanj Research Center has been actively working in this direction. In 2010, studies were conducted on «Children's Information Security: Problems and Solutions» [27] and «The Impact of Audio-Video Products, Computer and Information Media Promoting Pornography, Cruelty and Violence on the Physical and Mental Health of Children. Protection of their morality» [34]. At present, it is necessary to conduct new deeper studies in this direction with the involvement of specialists of a narrow direction: sociologists, educators, psychologists, IT specialists, etc. In addition, the age classification of information products and the sign of the age category are introduced in the law (Articles 9–15). Age classification is carried out before the distribution of information products in the Republic of Kazakhstan by the owner of information products produced and (or) manufactured in the Republic of Kazakhstan or by the owner or distributor of information products imported (delivered) to the territory of the Republic of Kazakhstan. In the implementation of the age classification assessment subject [34]:

1) Subject, genre, content and decoration of information products;

2) Features of perception by children of a certain age category of information contained in information products;

3) The likelihood of harm to the health and development of the child.

Age classification is carried out with the assignment of information products of the corresponding age categories: «up to 6 years old», «from 6 years old», «from 12 years old», «from 14 years old», «from 16 years old», «from 18 years old». This norm is implemented in accordance with the requirements of this Law and the Law of the Republic of Kazakhstan «On Cinematography».

### *Conclusion*

Thus, having determined the legal framework for the formation of information literacy of Kazakhstani youth, it can be concluded that Kazakhstan has created a legal framework for the full development of the information society. The implementation of the State Programs «Information Kazakhstan» and «Digital Kazakhstan» allowed us to create a digital infrastructure and train professional personnel. However, the existing potential and real threats affect different spheres of the life of society and humanity as a whole. Among them, insecurity from cyber threats, information attacks, low level of information and media literacy of not only children and youth, but also the adult population, and as a result of manipulation of public opinion and provocation.

Besides, the entire world community is concerned about ensuring the safety of children and adolescents on the Internet. This problem becomes especially relevant in the context of quarantine and the full involvement of children as a user of technical means and a user of the Internet. Unfortunately, little work has been done in this direction. The existing legal documents define general issues and do not have specific mechanisms for implementation in reality. Although it should be noted that the introduction of an updated educational program in high school and the mandatory development of critical thinking skills as learning outcomes will certainly contribute to the overall development of information literacy among children.

Kazakhstan legislation defines information threats that can harm the health and development of children, contains measures to counter them, including taking into account potential risks when children use technical means and the Internet. However, in comparison with the legislation of a number of countries where information and communication technologies were initially developed, domestic regulatory acts need to be further expanded and specified.

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## Қазіргі қазақстандық жастардың ақпараттық мәдениетін қалыптастырудың нормативтік-құқықтық негіздері

Мақалада қазіргі қазақстандық жастардың ақпараттық мәдениетін қалыптастырудың нормативтік-құқықтық негізіне талдау жүргізілген. Авторлар қоғамның жалпы ақпараттық мәдениетін қалыптастыратын негізгі компоненттерді келтірген, олардың ішінде ақпараттық, медиа және сандық сауаттылық, сандық инфрақұрылым. Зерттеушілер аталған мәселеде көрсетілген мемлекеттік қызметтің негізгі салаларын, атап айтқанда мемлекеттің ақпараттық инфрақұрылымын құру және дамыту саласындағы мемлекеттік саясатты, электрондық үкіметті, білім беру және медиасаясат, киберқауіпсіздік және балалардың қауіпсіздігін анықтаған. Мақалада сондай-ақ халықаралық заңнамаға шолу және ЮНЕСКО-ның 1982 жылғы Грюнвальд декларациясынан бастап және бала құқықтарын қолдау үшін Еуропа Кеңесінің стратегиясына (2016–2021 жылдар) дейін реттеудің халықаралық тәжірибесі келтірілген. Қазақстандағы қазіргі жағдай Қазақстан Республикасы Статистика комитетінің ресми статистикалық деректерімен расталды. Авторлар қазақстандық қоғамның, оның ішінде жастардың ақпараттық мәдениетін қалыптастыру, дамыту және реттеудің барлық салалары мемлекеттік құрылымдардың назарында емес деген қорытындыға келеді. Кейбір шаралар кешіктіріліп қабылданған немесе жұмыс істеу мен іске асырудың нақты тетіктері жоқ. Авторлардың пікірінше, COVID-19 пандемиясы жағдайында және соның салдарынан қашықтықтан оқытуға көшу кезінде қазақстандық балалардың 90 %-дан астамы ақпараттық-коммуникациялық технологияларды белсенді қолданушылар болып, күн сайын дүниежүзілік Интернет желісі арқылы барлық мүмкіндіктерге және ықтимал қауіп-қатерлерге тап болды.

*Кілт сөздер:* ақпараттық мәдениет, ақпараттық және цифрлық сауаттылық, медиасауаттылық, цифрлық инфрақұрылым, қауіпсіздік, мемлекеттік реттеу, «Цифрлық Қазақстан», мемлекеттік реттеу, нормативтік-құқықтық актілер.

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## Нормативно-правовые основы формирования информационной культуры современной казахстанской молодежи

В статье проведен анализ нормативно-правовой основы формирования информационной культуры современной казахстанской молодежи. Авторами приведены основные компоненты, формирующие общую информационную культуру общества, в числе которых информационная, медиа- и цифровая грамотность, цифровая инфраструктура. Исследователи определили основные сферы государственной деятельности, где отражена данная проблема, а именно государственная политика в сфере создания и развития информационной инфраструктуры государства, электронное правительство, образовательная и медиаполитика, кибербезопасность и безопасность детей. В статье дан обзор международного законодательства и обобщён международный опыт регулирования, начиная от Грюнвальдской декларации ЮНЕСКО 1982 г. до Стратегии Совета Европы в поддержку прав ребенка (2016–2021 гг.). Современная ситуация в Казахстане подтверждена официальными статистическими данными Комитета статистики Республики Казахстан. Авторы приходят к выводу, что не все сферы формирования, развития и регулирования информационной культуры казахстанского общества, в том числе и молодежи, находятся в центре внимания государственных структур. Некоторые меры приняты с опозданием, или не имеют конкретных механизмов функционирования и реализации. По мнению авторов, в условиях пандемии COVID-19 и, вследствие этого, перехода на дистанционное обучение более 90 % казахстанских детей оказались активными пользователями информационно-коммуникационных технологий, ежедневно сталкиваясь со всеми возможностями и потенциальными угрозами, которые несет всемирная сеть Интернет.

*Ключевые слова:* информационная культура, информационная и цифровая грамотность, медиаграмотность, цифровая инфраструктура, безопасность, государственное регулирование, «Цифровой Казахстан», государственное регулирование, нормативно-правовые акты.

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