Educational Issues
Въпроси на преподаването

THE PROBLEM OF ENSURING THE INFORMATION SECURITY OF CHILDREN AND ADOLESCENTS IN THE CONTEXT OF EDUCATIONAL INTERNET PROJECTS IMPLEMENTATION

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Abstract. The continuous development of technologies on the Internet leads to new threats that can harm the physical and mental health of children and adolescents and their personal safety. The article analyses the importance of creating a culture of information security for children and adolescents, which is necessary to neutralize the negative consequences of Internet threats, highlights the main problems in ensuring the security and development of children in the information space. The article describes the results of the study of Internet projects directed at creating a culture of information security of children and adolescents, as well as projects aimed at ensuring their information security on the Internet. It has been shown that sufficient attention to the problem of creating a culture of information security for children and adolescents has already been paid at the State level and the relevance of solving the problem of developing and implementing educational programs that provide systematic study of the foundations of information security for students has been justified.

Keywords: information security; cyber threats; Internet projects; child safety on Internet; educational environment

Introduction

The current state of the information space of the Internet can be identified as a source of transformation of the impact of the information environment into threats to the information security of children and adolescents. This factor does not allow us to clearly consider the Internet as a favorable environment for the training, education and development of a child.

In the views of Russian scientists (L.L. Bosova L.L., Y.I. Bogatyreva, V.P. Polyakov, V.A. Romanov), the current moment of development of informatization of education is characterized by the need to develop a system of measures to increase the level of information security of students. In Russia and abroad, they are increasingly claiming that information is redundant for

modern children and adolescents, that it is impossible for them to cope with the speed and rate of growth of information volumes, with "information garbage" (Bogatyreva, 2013; Privalov & Bogatyreva, 2012; Romanov & Privalov, 2012). A distinctive feature of modern information society is the increasing degree of risks of information impact (Vagramenko J., Grozdev, S., Rusakov A., 2016). Numerous examples are known (Privalov & Bogatyreva, 2012; Pazuhina, 2013; Arpentieva, 2017) when uncontrolled access to malicious information has resulted in serious health problems, disorder of physical, intellectual, moral and mental safety of children.

In autumn 2014, after the development of a concept, scenario, methodology, the first national lesson entitled "Unified Security Lesson" was held in the Russian Federation, where children, as well as their parents, began to study such important topics as protection of personal data, security of purchases in online stores, analysis of truthfulness and reliability of information on the Internet, recognition of malicious software, Internet frauds, bullying on the Internet and much more. Such a lesson has taken place in all constituent entities of the Russian Federation, and now takes place annually. In 2014 the lesson covered 11 million schoolchildren, in 2019 the "Unified Lesson on Security on the Internet" covered the students of more than 30,000 educational organizations. Thus, the Unified Lesson became the largest event on information literacy for children and adolescents in Russia (Unified Lesson on Security, 2019).

In May 2016, the Council of the European Union adopted a resolution on the development of information literacy and critical thinking through training and education. The importance of preventing potential threats and dangers that the Internet and social media may pose is emphasized (European Council, 2016).

As part of a new computer science training program in Britain, they began to teach younger schoolchildren the basic Internet safety rules, and in secondary school students the questions of responsible and safe use of technologies, including personal data protection (GOV.UK: Department for Education, 2019).

According to the Parliament hearings held on 17 April 2017 on the subject "Topical issues of ensuring the security and development of children in the information space," the following problems in ensuring the security and development of children in the information space have been identified:

– low literacy of children in questions of safe behavior in the Internet space;
– the outrunning use by children of the Internet services in comparison with the beginning of their systematized training of computer literacy;
– the inadequate organization of protection of children from illegal content in the educational organizations, shortage of competent experts in the field of information security;
– the insufficiency of the implemented supplementary vocational programs for the teaching staff engaged in the sphere of information technologies;

– the absence of proper control of compliance with the law by owners of the websites, providers of a hosting and the telecom operators rendering services in providing the Internet access;
– the inadequate application of administrative and organizational measures, technical and software and hardware safeguards of children from harmful information in the places available to children;
– the need of increase in the involvement of parents into ensuring children's Internet security;
– the insufficiency of the system educational outreach activity directed to prevention of Internet addiction, informing children and parents of safe behavior when using information and communication technologies;
– the absence of a system of measures for counteraction of distribution of materials of extremist orientation, promotion of youth suicides on social networks;
– the shortage of the developing and training content on the Internet, interesting to children and also its promotion (Federation Council of the Federal Assembly of the Russian Federation, 2017).

Thus, for the ensuring the information security of schoolchildren, systematic competent work of all participants in the educational process is necessary, as well as the work of federal state bodies, state authorities of the constituent entities of the Russian Federation, municipal government. The pedagogical community faces the task of developing and implementing educational programs aimed at teaching children and adolescents the rules of safe behavior in the Internet space, preventing Internet addiction, the risks of involvement in illegal activities.

Thus, the current scientific and practical task is to study Internet projects aimed at creating a culture of information security of children and adolescents and to develop projects aimed at ensuring information security of children and adolescents on the Internet, which can be the basis of pedagogical support and information security support of schoolchildren with a view to the fullest development of the child's personality. This will allow to talk not only about studying an individual child at a computer, but also about a comprehensive study of the organization of his safe information educational environment (Bogatyreva & Privalov, 2016; Van Niekerk & Goss, 2013).

Research on Internet projects aimed at creating a culture of information security for children and adolescents

Nowadays many states are actively taking initiatives to improve the culture of information security for children and adolescents. In the table 1 there are some examples of such initiatives oriented to schoolchildren (Bosova L. & Bosova A., 2017).

Table 1. Formation of a culture of information security of schoolchildren in the educational system of different countries

Country	Event
South Korea	– Holding of various competitions of slogans and posters for pupils of schools on safety of information systems and networks; – Providing pupils with the developing textbooks and games
The Netherlands	– Issue of the magazine of comics about safe use of the Internet; – Placement of advice to children and quizzes on the rules of network ethics on the special website; – the organization of examination and issue of diplomas for knowledge of safe use of the Internet
The United States of America	– the organization of Internet quizzes on the safe behavior on the Internet; – Creation of the site for children http://www.4Kids.org with weekly newspaper function
South Korea	– Distribution of comics about Internet addiction and also textbooks, computer games on information security for children
Australia	– the organization of the website for young children who are only beginning to use the Internet; – Creation of the training system Netty's World which allows to receive the messages concerning information security during the on-line game
The Federal Republic of Germany	– Support of the national center of competence "SchulenansNetz" ("Schools in Network") for teaching and training of pupils of safe behavior on the Internet
Japan	– the organization of the portal for safe use of the Internet for children
Finland, South Korea, the United States of America	– the organization of concrete periodic events (day or week of information security) for promotion of information security in education institutions.

On January 27, 2019 the international day without the Internet which main goal is to be distracted from gadgets and enjoy life in the real world took place. The international day without the Internet takes place on the last Sunday of January since 2000. The British Institute for Social Inventions became the initiator of this holiday.

In Russia there is also positive experience of implementation of the educational projects directed to forming of bases of information security of pupils and also prevention mechanism from the state.

Federal Service for Supervision of Communications, Information Technology, and Mass Media restricts access to the Internet resources with information dangerous to life and health, and the work in removing prohibited information is constantly in progress, as well as block accounts on popular social networks (VKontakte, Instagram).

The Ministry of Emergency Situations of Russia (*http://www.spas-extreme.ru*) has developed a portal of children's security, where in addition to the rules of safe behavior in the real world, the rules of safe behavior in the virtual world are also placed. The portal holds creative competitions, festivals, national lessons on the basics of life safety, brochures, tests, handouts which help to prepare teachers for the lessons on safety topics are published.

On the website of the Ministry of Internal Affairs of the Russian Federation (*https://мвд.рф*) there are memos for pupils about the safe Internet, Internet fraud, tips on determining Internet resources that pose a potential threat to the financial well-being of users.

"Figure Lesson" (*https://урокцифры.рф*), a project created by leading IT companies with the support of the Ministry of Education of the Russian Federation, is aimed at developing the skills of students to work in an online environment. The materials are divided into three age groups: from 1 to 4 form (level for beginners), from 5 to 8 form (level for experienced specialists), from 9 to 11 form (level for hardened professionals).

In 2008 the project "Center for Safe Internet" (*http://www.saferunet.ru*) started which developed for pupils and their parents a number of tips on safe behavior on the Internet, among which there are tips on anti-virus, how to avoid threats of Internet addiction, how to protect against spam, insults, how not to become a victim of jokes, pranks, as well as fraud. The portal has a hotline and a helpline for victims of Internet threats. The Center for Safe Internet in Russia is the organizer of such events aimed at forming the foundations of information security such as the International Day of Safe Internet in the territory of the Russian Federation in the form of Safe Runet Week. On February 14, 2019, the week of safe Runet 2019 ended, CyberSecurityForum, where discussions on prevention and control of unsafe content, as well as on formation of positive content, master classes for pupils aimed at formation of digital security were organized.

There is the portal "Security Center in the Information Society NeDopusti!", a social project aimed at:

– protection of children from kidnapping;
– illegal exploitation;
– cruel treatment.

The slogan of the project team is "Countering digital threats, modern slavery and dangers for children". This portal receives reports of illegal content, publishes information and educational materials, which are devoted to such topical problems as: prevention of cyber humiliation, rehabilitation of victims of cyber violence, the information on net traps or online pedophiles is posted, counselling and rehabilitation work is organized, the materials on protection against digital frauds are published, psychological assistance is provided to pupils and their parents, a database of missing children is maintained and assistance in their search is provided (*http://nedopusti.ru*).

"Handling the Internet" (*http://www.разбираеминтернет.рф*) is a project that is created to cover the technical aspects of personal data security and fraud protection. The portal tells about nuances of information search and critical assessment of found content, about particularities of online shopping, and also gives tips on how to secure yourself on the Internet. On the portal there are educational videos about security on the network, the flash game "Journey to Asterix" has been developed, the purpose of which is to learn the basics of safe use of the Internet. In general, the portal is aimed at improving the digital competence of students.

"Study the Internet – manage it" (*https://игра-интернет.рф*) is a project where the information about security on the Network, protection of personal data is presented for pupils while playing. Among other things, this project is presented in the social network "Vkontakt", it has a mobile application. The online portal holds the annual National Online Championship among pupils, where teams can demonstrate their knowledge in the field of information technologies.

The Project "Positive Content" (*http://positivecontent.ru*) is aimed to encourage the creation of portals for children consisting of proven and secure content. It is a competition whose main nominations are:

– The best group on the social networks;
– The best learning game;
– The best mobile game application;
– The best mobile learning application;
– The best blog;
– The best video blog;
– The best media resource;
– The best educational media project;
– The best website of an educational and culture institution.

The portal also has a number of special nominations: the best website for children, the development of digital literacy and safety of children and young people, initiatives aimed at low-defended groups and others. Thus, in 2018 in the nomination "Initiatives aimed at low-defended groups of the population" the following projects became the winners:

– "Class Games": Prevention of bullying among minors (*https://classgames.ru*). Or the second name of this project is "Simulator for the Brave", where pupils will be able to learn what bulling is and how to protect themselves and their friends from threats of violent pressure.

– Check your level of Internet safety (*https://и-риски.рф*) where in the form of the learning game it is offered to participants to check the training level in questions of information security.

– The psychological online help to children and adolescents "The help is near"/ ("Pomosch ryadom") (*https://pomoschryadom.ru*). This information resource is represented by two categories: 6+, 12+. On the website the pupil can get online as-

sistance of a psychologist, contact numbers of trust services, addresses of assistance where they are ready to personally talk and help if urgent assistance is necessary, information support on safety issues is presented, tests and games are also posted.

With the support of the coordination center of domains ".RU/.РФ" the domain ".ДЕТИ" (*http://dotdeti.ru*) was created which combines the websites for children and adolescents with qualitative and safe content. The domain Internet space ".ДЕТИ" is created in the interests of children and adolescents. The aim of the project is to stimulate the development of websites for children that will contain safe content.

Yandex Academy has developed a children's video course "Online Security" (*https://academy.yandex.ru/events/online-courses/internet_security/*) which describes types of online fraud, how to avoid infection with an internet virus, protect your account, safely do shopping online and many other things.

The National online championship Quest "Setevichok" (*http://сетевичок.рф*) also is worth noticing. This project is aimed at developing cybersecurity and digital literacy of the younger generation. The Quest began its work in 2014 and covered an audience of 79,000 pupils. In 2015 the coverage was 170,000 participants, in 2016 it was 260,000 participants, in 2017 it was 290,000 participants. The popularity of the Quest is growing year after year, which can not but please.

MTS Company (*http://www.safety.mts.ru/ru/deti_v_inete/for_children/lesson*) together with employees of the Faculty of Psychology of Lomonosov State University of Moscow and the Fund of Internet Development made videos, a presentation, as well as a flash lesson on the topic "Safe and useful Internet", aimed at pupils of forms from 2 to 4 in which a pupil together with the heroes of the game Interneshka and Mityasik study the rules of useful and safe Internet.

The portal "Personal Data Children" (*http://персональныеданные.дети*) presents simple rules of personal data protection, including in the form of a game, carries out testing on knowledge of ways of personal data protection, gives advice to parents, holds competitions, publishes videos on protection of children's personal data. The portal material was developed by specialists of Federal Service for Supervision of Communications, Information Technology, and Mass Media.

"The Safe Internet League" (*http://www.ligainternet.ru*) posts articles on Internet safety compliance, infographics, materials for teachers that can help to prepare for lessons on safe Internet. The website presents animated presentations, lesson notes, methodological recommendations, programs for testing knowledge on Internet security, as well as video lessons. Through "The Safe Internet League" portal, dangerous, illegal content can be reported, including child pornography, drug propaganda, phishing resources, extremism/separatism, the call to suicide. The website also has a legislative framework with links to Federal laws which are aimed at information protection on the Internet. "The Safe Internet League" was established in 2011 with the support of the Ministry of Communications of the

Russian Federation, Russian Federation Ministry of the Interior, the Russian State Duma's Committee for the Family, Women and Children Affairs. The purpose of "The Safe Internet League" project is to create a safe information future of Russia. The League has its own channel on YouTube video hosting where it posts tips and useful information. "The Safe Internet League" within the framework of the Month of Safe Internet has been holding a campaign "White Internet" since 2013, the main goals of which are to unite and strengthen civil society, young people in the fight against information that harms the health and development of children, as well as to prevent breach of legislation of the Russian Federation in regard to the placement of insecure content for children.

During the 5 years of existence of "The Safe Internet League" with the help of cyber-guards (cyber-guard is a transregional youth social movement consisting of volunteers who take part in the fight against virtual crimes) are blocked:

– More than 10,000 websites and pages on the social networks with a child pornography;

– More than 3,000 websites and pages at forums with propaganda and sale of drugs;

– More than 1,000 websites and pages on the social networks with propaganda of suicides;

– More than 800 criminal cases upon distribution of child pornography are brought;

– 30 criminal cases upon production of child pornography are solved (VII International Safe Internet Forum FBI – 2016, 2016).

The Fund "Friendly Runet" (*http://www.friendlyrunet.ru*), established by the Internet Resources Analysis Center, which is aimed at development assistance an enabling environment on the Internet, implements a comprehensive strategy for the safe use of the Internet. On the website there is a hotline for registration of resorts of citizens about websites containing illegal content, also the educational materials about content and communication risks and safety in the network are presented.

"Kaspersky Lab" (*https://kids.kaspersky.ru/category/entertainment/multfilmy/*) has developed a series of cartoons aimed at informing children about safe behavior on the Internet. At this moment the following cartoons have been published: "Adventures of the Robot Casper – Oversharing. Damage of Reputation", "Adventures of the Robot Casper – Likemania", "Adventures of the Robot Casper – Danger of Meeting in Reality", "The Adventures of the Robot Casper – Communication in game", "The Adventures of the Robot Casper – Privacy of Accounts", "The Adventures of the Robot Casper – Passwords", "The Adventures of the Robot Casper – Fraud on the Internet", "The Adventures of the Robot Casper – Unauthorized Websites", "The Adventures of the Robot Casper – Shopping in Games", "The Adventures of the Robot Casper – Physhing", and many other useful cartoons.

The portal "Ucheba.ru" (*https://www.ucheba.ru/project/websafety?form=ucheba.spa*) offers 15 rules of safe behavior on the Internet. The rules were drawn up by cybersecurity experts of Mail.Ru Group Corporation and the portal "Ucheba.ru".

All the Russian projects on the Internet, in one way or another related to the formation of a culture of information security, are presented in table 2.

Table 2. The projects aimed at the formation of pupils' basis of information security

№	Website/portal/project name	Link to website/portal/project
1.	EMERCOM	http://www.spas-extreme.ru
2.	MIA	https://мвд.рф
3.	Figure Lesson	https://урокцифры.рф
4.	Center for Safe Internet	http://www.saferunet.ru
5.	Security Center in the Information Society "NeDopusti!"	http://nedopusti.ru
6.	Handling the Internet	http://www.разбираеминтернет.рф
7.	Study the Internet – manage it	https://игра-интернет.рф
8.	Positive Content	http://positivecontent.ru
9.	Class Games	https://classgames.ru
10.	Information risks	https://и-риски.рф
11.	The help is near (Pomosch ryadom)	https://pomoschryadom.ru
12.	.ДЕТИ	http://dotdeti.ru
13.	Online Security	https://academy.yandex.ru/events/online-courses/internet_security/
14.	The Quest "Setevichok"	http://сетевичок.рф
15.	Safe and useful Internet	http://www.safety.mts.ru/ru/deti_v_inete/for_children/rules/
16.	Personal Data Children	http://персональныеданные.дети
17.	The Safe Internet League	http://www.ligainternet.ru
18.	Friendly Runet	http://www.friendlyrunet.ru
19.	Kaspersky Lab	https://kids.kaspersky.ru/category/entertainment/multfilmy/
20.	Ucheba.ru	https://www.ucheba.ru/project/websafety?form=ucheba.spa

Thus, the analysis of the existing range of projects aimed at forming the foundations of safety of pupils on the Internet shows that a number of important steps of development and implementation methodological solutions on the basics of information security training on the Internet have already been taken in the world and in Russia.

However, it's necessary to admit that there is no single comprehensive training program in information and media literacy. The training does not take place systematically, and often by the efforts of those teachers, public organizations who understand the importance of this work (Bogdanova, 2016, 2017).

In addition, despite all it would seem the diversity of projects, portals, video lessons, games aimed at teaching pupils competent, safe work on the Internet, the issue of developing a methodology for teaching the basics of information security of students remains an extremely relevant task of the education system.

Projects aimed at ensuring the information security of children and adolescents on the Internet

According to the analysis report of the company NetCraft which provides analysis of web servers and web hosts, and is also the developer of the anti-phishing program in December 2019, 1,268,289,402 active websites were recorded in the Internet information and telecommunications network around the world (Netcraft, 2016).

The number of websites increases every day. How many of these sites contain unsafe information? A lot of them. And how many of these sites are suitable for use by children? Only a few.

How "not to get lost" for a little child in this chaos of websites, portals, networks, accounts... How to make a choice correctly which website can be visited, which one should not be visited, what information should be considered reliable, which one should not be considered the same, who can be communicated with, who should not be contacted, what data should not be disclosed about yourself and friends on the Network and many other questions today face us. How are we easily to convey the idea of information security to a child?

One of the main problems in the area of childhood according to the National Strategy for Children for 2012 – 2017 years is the growing new risks associated with the distribution of information that poses a danger to children (Portal GARANT.RU, 2019).

Also we shouldn't forget about software and hardware tools that can help ensure security on the Internet. They are special filters that are provided in search engines as well as on video hosts. For example, one of the largest search engines "Yandex" offers the following types of filtering: "Unlimited" (default), "limited filter" (this type of filtering excludes websites with "adult" content, if the request is not aimed at searching for this information), "family filte". The "family filter" of Yandex which completely excludes websites with "adult" content, as well as with swear words, is most suitable for ensuring child safety, but does not give full protection. Google also offers a filtering system that can be used to minimize a pupil getting to the websites with unsuitable content.

Unfortunately, this protection does not give 100% warranty, it doesn't exclude direct link to a website with unsuitable content.

These days special children's browsers have been developed to help in protection children from harmful information (table 3.).

Table 3. List of children's browsers

№	Name. Description	Link
1.	Gogul. It allows parents to set up a schedule for children to access the Internet, get a report on children visiting websites, remove an unsuitable website from the list of available sites. There is filtering of sites, photo and video materials. It also prohibits the launch of other browsers that can lead a child to unsuitable content.	http://www.gogul.tv
2.	ZipZap. It provides secure access to the Internet. It is possible to create a separate account for each family member, and also it allows to limit the circle of "friends" the child is allowed to communicate with.	http://browserss.ru/zipzap.html
3.	Interneshki. It is a browser containing a large number of safe and proven cartoons, movies, videos, children's radio, karaoke and many other things.	http://interneshki.ru/
4.	Kidzui Browser. Access is provided to only verified websites, games, photos, and videos.	https://kidzui-browser.informer.com

A number of antivirus programs help to restrict access to the websites with unsuitable content. In the programs "Kaspersky", "Dr.Web" you can specify word filtering by excluding unsuitable words, for example, "drugs". There is also software on the market that helps to control children's visiting to unsuitable websites. Such software can include "KinderGate", "Internet Censor", "CyberMom" and others.

Of course, it cannot be claimed that the Internet is a complete threat. With the development of the Internet a pupil has new opportunities. For example, today a student without visiting the library can learn a lot of new and useful information from electronic libraries, scientific portals, can increase his knowledge and skills through developmental tasks and games in the online space, can make virtual trips through museums, cities, remotely attend lessons and classes. Below there is a table of verified resources for schoolchildren with safe content (table 4).

Table 4. The portals for pupils with safe content

№	Name. Brief description	Link
1.	National digital children's library. It includes modern pieces of work for children and adolescents and also books, magazines, filmstrips and newspapers. The archive has unique periodicals of the early 20th century.	http://arch.rgdb.ru/xmlui/
2.	Web-landia. It is a portal which brings together the best websites for children on various topics: animals and plants, games and entertainment, art, history and biographies, foreign languages, mathematics and experimental sciences, travel and tourism, sports, all about man, electronic reference resources, economics, business and commerce.	http://web-landia.ru/
3.	Children and science. Here the unusual electronic courses for schoolchildren have been developed. The aim of the project is to foster interest in the subject and learning in general.	http://childrenscience.ru/
4.	Sputnik children. A portal where the verified cartoons for children are collected. The cartoons are divided into categories.	http://спутник.дети/
	Science for children. The website contains educational experiments that can be carried out at school with pupils, the examples of creative works and methods of their making, a list of events where it is possible to spend time as useful as possible, reviews of books and recommendations of experts and many other useful information.	http://naukaveselo.ru/
5.	IQsha. This children's educational resource presents the exercises and trainings for the development of IQ, as well as reports on the progress of training and progress of the child.	https://iqsha.ru/
6.	Smeshariki. It is the portal for children which presents cartoons of the series "Smeshariki", also there is an online game Sharam, during which children gain new knowledge and skills, as well as can communicate with each other. In addition, the rules of safe use of the game are presented.	https://www.smeshariki.ru/

At the same time there are such phenomena which can be both positive and negative. Let's take a look at the process of online communication. On the one hand, the Internet united everyone together, we can constantly exchange instant messages, despite the distance separating us, it can be both a couple of kilometers and a couple thousand kilometers. On the other hand, when a person communicates most of the time only in the virtual world, he loses communication skills. In this example we see both positive and negative aspects**.** Information and communica-

tion technologies have long become realities of modern life. Like any phenomenon they can have both positive and negative effects on humans. Development of ICT competence in children and adolescents is one of the main tasks in the modern world" (Pankina, 2017).

In most countries of the world children are recognized as equal participants in the process of forming the information society. State policy in this area is based on constitutional guarantees of equality of rights and freedoms of citizens and is implemented in accordance with the principles of ensuring the information security of children. Thus, the task is to organize consistent and regular activities of the State and public organizations aimed at improving the level of digital literacy of children who should acquire skills of safe existence in the modern information space from an early age. Within the framework of this policy educational institutions should develop the ability of each student to navigate the modern information environment, as well as to teach him to use it safely.

It follows that educational institutions should systematically give classes aimed at developing skills of students to safely use the information and telecommunication network the Internet. The systematic nature of the classes is due to the fact that the material must be repeated (fixed) and supplemented with new, up-to-date information. These should be not once conducted lessons, but periodically repeated, going from simpler to more complex, to more in-depth and comprehensive consideration of separate topics, with their subsequent enrichment, which leads to the need to develop and introduce into educational practice special courses on the basics of information security (Fedosov & Bogdanova, 2019; Bishop M. et al., 2017).

Summary

In the Internet space as in real life there are many diverse information threats. The most vulnerable social classes are children and adolescents. The analysis of the Internet projects aimed at fostering a culture of information security of children and adolescents, as well as projects aimed at ensuring their information security on the Internet, shows that today at the level of the State enough attention is paid to the problem of fostering a culture of information security of children and adolescents, but the most important task is the development and implementation of educational programs, the purpose of which is to systematically study the foundations of information security of students.

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