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The role of primary school teachers in evaluating the digital culture and competence of younger students

Abstract. *The article reflects issues of assessing the digital culture and competence of primary school children. The purpose of which was to find out the possibility of using the Internet space by elementary school students. The experiments were conducted in the form of a questionnaire survey of elementary school students of the Municipal State Institution of Secondary School № 19 in Aktobe according to the methodology of G.U. Soldatova and the teams of authors «Digital competence of adolescents and parents. Results of the all-Russian Study». The authors compare the concept of «digital culture» by various domestic and foreign authors, and also analyze scientific sources devoted to the formation of digital and information culture of teachers and primary school students.*

Keywords: *primary school age, information culture, digital culture, questionnaire, types of Internet users.*

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Introduction

The modern era is based on the latest digital technologies, which is commonly called information, and this era is characterized by the formation of a global media environment. According to the American futurist and sociologist E. Toffler, in the near future, new parameters of the structure of society will be based not on material values or violence, but on intelligence and knowledge that information gives.

Scientists from various countries and various fields of knowledge agree that humanity has entered a new era - Digital civilization. The term «digital civilization», as well as the terms: digital culture, digital literacy, and digital competence are often used, each of which has its own definition and content. In general, quite abstractly and generically, digital civilization

can be considered as a fundamentally different type of development of society, in which digital, and electronic means replace analog and linear formats of communication and functioning of systems [1].

For the first time, the concept of «digital literacy» appeared in the 2000s at a conference (O'Reilly Emerging Technologies 2004), held under the motto «To shape the future, you need to be there.» At this conference, the first definition of the concept of digital culture was adopted; this definition includes all Web 2.0 tools and all interactive technologies. The remaining definitions given to the concept of «digital culture» in other studies are divided into two categories. The first characterizes it as a purely technological phenomenon, and the second considers it as a phenomenon of not only technological but also humanitarian dimension [2].

According to Fluckiger, digital culture builds its definition on a set of values, knowledge, and practices related to the use of technology, the use of mass media, and the culture of communication and self-expression among young people [3]. The definition given by Greenhow and Levin on digital culture concerns digital literacy in its aspect of participation during activities using platforms and social networks [4].

In the author's scientific works of Kazakhstani researchers D.M. Dzhusubalieva, E. Yerkinai, it is proposed to introduce an elective subject «Introduction to digital culture» to educational programs of universities, including in the training of primary school teachers. According to the authors, the training of specialists for the digital economy should primarily be based not only on professional competence but also on the formation of digital culture and digital competence among future specialists, as a necessary condition of the modern world [5].

When a child crosses the threshold of school for the first time and becomes a student, he has to deal with a large amount of information. The task of the teacher at this stage is to give the child a guideline, to teach him to use a wonderful tool like the Internet, and to apply his knowledge in various fields [6].

Thus, in the learning process, when a younger student begins to get acquainted with the information environment, there are problems that hinder the effective teaching of younger students, such as the illegibility of the information received and overload in the processing of new knowledge and concepts. In this case, one of the tasks of a modern teacher is the need to educate younger schoolchildren with information tastes, to develop the moral qualities of a person such as norms and values as kindness, honor, conscience, etc. [6].

Consequently, children of primary school age, in connection with the progress in their general mental development, have the desire to take a new, more «adult» position in life and perform a new, important activity not only for themselves but also for people around them. Therefore, it largely depends on the teacher to interest school young children in the educational process using

modern teaching methods and information literacy.

Through the information literacy of the future teacher, we understand a kind of part of the information culture of the individual, determined by the sphere of professional and pedagogical activity. Information culture, as well as digital culture, is presented by us as a set of modern worldviews and competence, translated into the educational process aimed at the formation of students' information culture [7].

Candidate of Pedagogical Sciences R.A. Shaukhalova in her writings cites the author's definition of the digital culture of a modern teacher as «a system of personal qualities, including components: knowledge, skills, and skills of working with information in a digital environment; ability and readiness for effective and professional information activities, a digital worldview corresponding to the current stage of development of society.» The definition of author on the digital culture of a modern teacher, in our opinion, most correctly and fully defines this concept [8].

Due to the fact that the modern student lives in the world of digital culture the role of the teacher in information culture is changing, he becomes the coordinator of the information flow. A teacher who keeps up with the times is psychologically and technically ready to use new and modern technologies in teaching today. The effectiveness of the process of forming the information and digital culture of a primary school student is conditioned by the implementation of such leading didactic principles as a scientific character, the connection of theory with practice, systematic, consistency, visibility, accessibility, and differentiated approach.

The task of a teacher who has a professional education is to help his students organize the search and selection of new material, to assess the reliability, completeness, and objectivity of the material obtained in the media space. He must teach his student how to correctly apply the information received to make decisions.

On the one hand, Due to the fact that the information culture of primary education involves the use of digital technologies, on the other hand,

they should not harm the health of the child and it is necessary to observe a reasonable regime in the organization of educational activities. The purposeful work of the school, and the teacher on the formation and digital culture of the student, in our opinion, is able to some extent to remove the problems of educational overload. The teacher should instill a love for reading fiction and cognitive literature, he should be aware of the reading activity of children.

Thus, the primary school teacher should contribute to the formation of the information and digital culture of the student, which manifests itself in the following aspects are:

- manifests itself in an interest in information activities;
- the need to realize its important role and the influence of digital culture knowledge in educational processes;
- consciously choose sources of information and own algorithms for their processing;
- make comprehensive use of the traditional, electronic, network, and other information resources;
- to realize that you are a carrier and distributor of information;
- in active informational behavior.

When solving problems of the harmonious development of information skills of primary school students, a teacher must adhere to several conditions, these are:

1. The student's information and search activity should be motivated;
2. The work of schoolchildren with additional sources of information should be voluntary;
3. Information resources should be available;
4. When working with different information sources, a student should have sufficient time for independent work;
5. Interaction of schoolchildren with the information environment should be phased.

The formation of digital culture or digital competence in the information society is one of the most important tasks of modern education. The formation of this information and digital

culture of younger schoolchildren takes place in several stages and directions: during scheduled activities and during extracurricular time. When performing scheduled tasks, the teacher is obliged to direct students to expand the sources of information through dictionary work, the use of encyclopedias, reference books, including paper and electronic; compare and compare information obtained from different sources; determine the degree of truthfulness; present your experience in the form of reports, abstracts, presentations.

The teacher in their own sphere has an opportunity to integrate the educational process of working with a computer, which allows the teacher to use advanced technologies in their lessons while making the learning process more interesting, diverse, and intensive. He has the opportunity to apply computer tests, and in a short period of time, the teacher determines the level of assimilation of the studied material in all students, which allows him to draw conclusions in a timely manner. At the same time, using a differentiated approach, the teacher has the opportunity to choose the level of difficulty of the task for a particular student. And so the teacher can differentiate tasks, depending on the level of knowledge and ability of each student. Also, the student receives an objective result indicating errors immediately after completing the test, which is impossible, for example, with an oral survey. Meanwhile, remember how we ourselves, as students, waited for the results of tests and dictation [9].

Research methods

The main research methods are the analysis of scientific sources devoted to the formation of the digital and information culture of teachers and primary school students, terminology for describing the characteristics of the digital culture of a teacher and a student, the conditions determining the scope of the study, survey methods, as well as methods used in the framework of an integrative approach to the process of forming a digital culture of a teacher.

Results and discussion

Conducted a questionnaire survey of school students in order to find out the use of the Internet. The survey was conducted among students in the 4th grade of the Municipal State Institution of Secondary School No. 19 in Aktobe. The questionnaire questions reflect the clarification of ICT competence among primary school students and characterize the following questions.

What are students using the Internet for? Questionnaire questions:

- 1) I use the Internet when preparing homework;
- 2) I use the Internet to communicate with friends;
- 3) I use the Internet to find interesting information;
- 4) I use the Internet for online and mobile games;
- 5) I use the Internet when preparing for extracurricular tasks, class hours, etc;
- 6) I use the Internet to communicate with children from other countries;
- 7) For international purposes (to practice a foreign language);
- 8) Getting knowledge about other countries, in the future this knowledge will be useful when traveling.

The following results were obtained, which are reflected in table.

This school is bilingual, i.e. in grades 4A and 4A children with the Kazakh language of instruction, and in grades 4B, 4B, 4G with Russian language of instruction. Analyzing the results, we observe that the language of instruction does not play an important role in this matter. The students' answers are almost identical, i.e. children use the

Internet for educational purposes and to search for interesting information, learn news, want to get information about other countries, and use it for online and mobile games. Fewer children want to practice a foreign language, and only a third of students are ready to communicate with children from other countries.

Children are not aware of the problems that can arise from uncontrolled use and immersion in the global information network. To make the children's stay in the information space safe is the task of parents, the child's close environment, and teachers. It is necessary to help primary school students navigate the flow of information, teach them how to use information, and discard the unnecessary information. The teacher needs, perhaps with the school's medical officer, to clearly explain to the student how much time he can be in the Internet space and how being on the Internet can affect his health. It is necessary to give vivid examples available for primary school age, using the right numbers.

In the next stage of the questionnaire, the same students were offered a task - to choose from five questions of the questionnaire the most priority for him. The work was carried out to identify the types of Internet users among elementary school students. The suggested questionnaire questions are below. The methodology was taken from G.U. Soldatova et al. from the work: «Digital competence of adolescents and parents. Results of the all-Russian study» [10].

Types of Internet users:

- 1) The Internet is used for educational purposes and to find interesting information;
- 2) The Internet is used for the purpose of communication and to search for interesting information;

Table 1. Using the Possibility of the Internet

Grade	The number of students	№1	№ 2	№ 3	№ 4	№ 5	№ 6	№ 7	№ 8
4A (A)	25	24	25	25	14	12	8	19	25
4Ә (A)	28	28	28	28	15	13	9	20	28
4Б (B)	27	27	27	27	11	16	8	16	27
4В (B)	24	24	24	23	11	15	9	12	24
4Г (G)	23	23	21	23	10	15	9	20	22

Table 2. Types of Internet users

Grade	The numbers of students	№1	№ 2	№ 3	№ 4	№ 5
4A (A)	25	8	7	5	5	2
4Ә (A)	28	9	8	6	5	2
4Б (B)	27	8	6	6	4	1
4В (B)	24	7	6	4	4	3
4Г (G)	23	6	6	4	3	2
Total	127	38	33	25	21	10
Percent	100%	30%	26%	20%	16%	8%

3) The Internet is used to search for interesting information and read news feeds on social networks;

4) The Internet is used for online and mobile games;

5) They use almost all the features of the Internet.

The results for determining the types of Internet users are shown in Table 2.

In the process of empirical observations, the following types of Internet users were identified according to Soldatova G.A.:

1. «learning-oriented» (30%) - i.e. The Internet is used for educational purposes and to find interesting information;

2. «communicators» (26%) - i.e. the Internet is used for the purpose of communication and to search for interesting information;

3. «online readers» (20%) – i.e. The Internet is used to search for interesting information and read news feeds on social networks;

4. «players» (16%) – i.e. The Internet is used for online and mobile games;

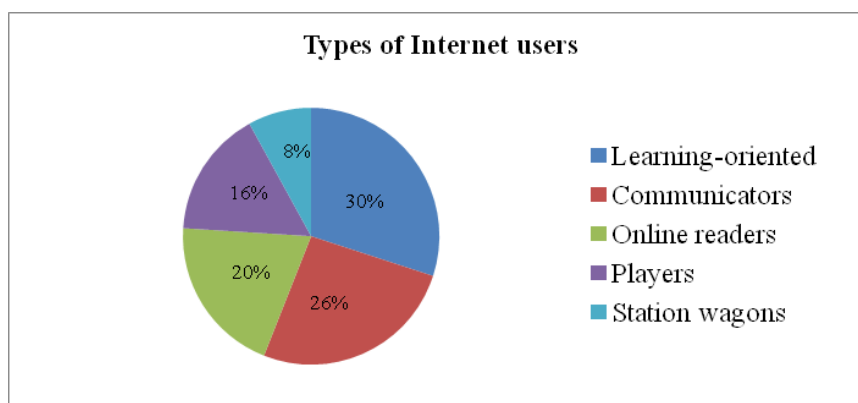
5. «station wagons» (8%) – i.e. they use almost all the possibilities of the Internet.

We have arranged this data in the form of a diagram, which is located below.

Thus, the Internet becomes a guide to the information space for schoolchildren, one of the main ways of social interaction. The information obtained from the media space is used by schoolchildren, both for educational and entertainment purposes.

Conclusion

Using the possibilities of the Internet for educational purposes, schoolchildren learn a lot of new things and expand their horizons, satisfying their cognitive needs. The task of the teacher in this matter is to ensure that children do not use unverified, unreliable material.

Diagram 1. Types of Internet users

Bearing in mind the fact that almost all children who have Internet at home like online games, the teacher, together with his parents, should control the time for games, and know which games his student prefers. Online games contribute to the development of spatial and strategic thinking, and the ability and need to communicate with other players in multiplayer online games develop communication skills. These games require the perseverance and attention of the student. Being at the computer for a long time while playing can affect the health and mental state of a younger student. When using the Internet for communication, the child

must learn interaction skills and the ability to build interpersonal connections. It is necessary to explain to the student that in fact, these will be just fleeting contacts and in real life, they will not encounter friends online.

A primary school teacher in his work is obliged to form general academic skills and abilities in his student and must teach children key competence. The learning process involves the use of various technologies, while digital technology is known to children from early childhood and accompanies them from birth. The task of the teacher is to teach his student to navigate correctly and use the information received.

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**Бастауыш сынып оқушыларының цифрлық мәдениеті мен құзыреттілігін
бағалаудағы бастауыш сынып мұғалімінің рөлі**

Аңдатпа. Ұсынылған мақалада бастауыш сынып оқушыларының цифрлық мәдениеті мен құзыреттілігін бағалау мәселелері көрсетілген. Негізгі мақсаты бастауыш сынып оқушыларының интернет

кеңістігін пайдалану мүмкіндіктерін анықтау болды. Тәжірибе Ақтөбе қаласының коммуналдық мемлекеттік мекемесі № 19 орта мектебінің бастауыш сынып оқушыларына Г.У.Солдатова және авторлар ұжымының «Жасөспірімдер мен ата-аналардың цифрлық құзыреттілігі. Бүкілресейлік зерттеудің нәтижелері» әдістемесі бойынша сауалнама жүргізілді. Отандық және шетелдік авторлардың «цифрлық мәдениет» ұғымына салыстырмалы талдау жасалынып, сонымен қатар мұғалімдер мен бастауыш сынып оқушыларының цифрлық және ақпараттық мәдениетін қалыптастыру мәселелеріне арналған ғылыми дереккөздер сарапталды.

Түйін сөздер: бастауыш сынып оқушысы, ақпараттық мәдениет, цифрлық мәдениет, сауалнама, интернет – пайдаланушылардың түрлері.

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Роль учителя начальных классов в оценке цифровой культуры и компетентности младших школьников

Аннотация. В предлагаемой статье отражены вопросы оценки цифровой культуры и компетентности детей младшего школьного возраста. С целью, которой заключались в выяснении возможности использования школьниками младших классов интернет пространства. Эксперименты проведены в виде анкетирования учеников младших классов «Коммунального государственного учреждения Средней школы № 19» города Актөбе по методике Г.У.Солдатовой и коллектива авторов «Цифровая компетентность подростков и родителей. Результаты Всероссийского исследования». Приводятся сравнение различных отечественных и зарубежных авторов понятия «цифровой культуры», а также анализируются научные источники, посвященные вопросам формирования цифровой и информационной культуры учителя и школьников начальных классов.

Ключевые слова: младший школьный возраст, информационная культура, цифровая культура, анкетирование, типы Интернет – пользователей.

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