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DESIGNING EDUCATIONAL EXPERIENCES OF MULTILITERACY

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INTRODUCTION

The relevance of the study is conditioned by the transformation of traditional ideas about literacy in pedagogical science.

The definition of the essence of the concept of "literacy" is increasingly becoming the subject of research in various scientific fields. Philologists, pedagogues, culturologists, sociologists and philosophers are interested in this problem. In the last decade, literacy has been regarded as one of the 21st century skills along with universal competences. In the late 1980s, the notion of "new literacy" emerged in pedagogical discourse. Scientists define this phenomenon as a set of knowledge, skills and abilities, thanks to which there is a successful interaction with different environments (economic, technological social, etc.) and the application of acquired knowledge in different life situations [59]. The term "functional literacy" is actively used in modern education. Functional literacy is understood as "a person's ability to use knowledge acquired during life to solve a wide range of life tasks in different spheres of human activity, communication and social" [119]. Active use of the term "literacy" in a variety of contexts (mathematical, scientific, etc.) does not cancel the traditional understanding of literacy as a sum of reading and writing skills. At the same time, both reading and writing have changed significantly due to changes in text as a socio-cultural phenomenon. The phrase "texts of a new nature" is increasingly used. By "texts of a new nature" we will understand "a thought fixed on some medium, for the display of which a connected sequence of heterogeneous symbols (signs of verbal and non-verbal nature) is used" [54]. Such texts have a non-linear structure, assume a reduction in volume by increasing the information load on each text unit. Note that "texts of a new nature" can exist in both paper and digital formats. The text parts containing the most important information are capacious text fragments (orientation towards "small text structures"), the semantic content of such texts is translated through various sign systems and can be duplicated in different parts of the text. An important role in "texts of a new nature" is played by interactivity, involving the reader in a dialogue (using different forms of feedback: likes, comments) [56, P. 104]. It is logical to assume that interaction with the polycode structure of texts requires a qualitatively different category of literacy.

In scientific discourse since the middle of the 20th century, various varieties of "literacies" important for interaction with texts of a new nature have appeared: information literacy, multimodal literacy, multiple literacy, transliteracy, media literacy, multiliteracies, and others. These concepts characterise context-independent literacy oriented towards the use of multimodal communication. Our choice in favour of the concept of "multiliteracies" is conditioned by the need to emphasise the plural nature of modern literacy, which allows understanding and creating polymodal texts that are actively used in modern education. Among the key areas of educational development, multimodal pedagogy has come to the forefront [76].

In the framework of the research, multiliteracy will be considered as a new format of traditional literacy. The need for a concise concept to emphasise the multiple nature of literacy. A more detailed argumentation of the choice of this concept from the terminological field is presented in Chapter 1.

As a result of the initial analysis of theoretical and practical prerequisites for the emergence of the phenomenon of multiliteracy, the contradictions between:

- active use of the concept of "multiliteracy" in the pedagogical context (E.I. Trofimova, I.A. Kolesnikova, M.S. Dobryakova, etc.) and the lack of description of multiliteracy skills taking into account the pedagogical potential of the phenomenon;

- existing educational practices of developing individual multiliteracy skills and students' lack of experience in applying these skills in their entirety;

- the presence in the modern world of such a phenomenon as "texts of a new nature" and the lack of educational situations aimed at learning to interact with them through the actualisation of multiliteracy skills.

The identified contradictions allowed us to formulate the research topic: "Designing educational experience of multiliteracy".

The following **hypotheses** are highlighted within the presented research:

- The transformation of traditional literacy has led to the emergence of multiliteracy;

- Multiliteracy involves a range of skills that can be emphasised and described;

- multiliteracy development can occur spontaneously, indirectly and purposefully;

- an educational situation aimed at actualising multiliteracy skills can be created.

The object of the study is multiliteracy as an educational phenomenon, and the **subject** is multiliteracy skills required to interact with "texts of a new nature".

The aim of the study is to design and implement a model of an educational situation focused on mastering multiliteracy skills necessary for interacting with a "text of a new nature". Achieving the goal implied solving the following **tasks:**

1) On the basis of theoretical understanding of the processes of transformation of literacy and the phenomenon of "texts of a new nature", to propose a pedagogical definition of the phenomenon of multiliteracy;

2) To conduct a comparative analysis of works devoted to the experience of mastering multiliteracy skills in the educational process;

3) To analyse the content of educational programmes dedicated to the purposeful development of multiliteracy;

4) To present a characteristic of a multiliterate person taking into account the attitude of Russian teachers and schoolchildren to various aspects of multiliteracy;

5) To develop and test a model of educational situation aimed at designing the experience of mastering multiliteracy skills for interaction with "texts of a new nature".

The study will use: interdisciplinary and phenomenological approaches.

Research methods: theoretical analysis, experience analysis, questionnaire survey, "research in action" method, modelling method, design method.

The following groups of works provided the **theoretical basis for the** study:

- materials that allow tracing the transformation of the term "literacy" are represented by dictionary articles, UNESCO documents, PISA study, publications by T.G. Galaktionova, E.O. Galitskikh, G.V. Danilova, E.I. Kazakova, Nai-Cheng Kuo, AC. Danilova, E.I. Kazakova, Nai-Cheng Kuo, AS. Makarenko, N. Martin, Y.P. Melentieva, M. Protasio, E.S. Romanicheva, B. Stirt, V.A. Sukhomlinsky, L.N. Tolstoy, Xuan-Yi Huang, D. Hartman, K.D. Ushinsky;

- studies devoted to theoretical and socio-cultural prerequisites for the emergence of the phenomenon of multiliteracy (D. Buckingham, I.A. Kolesnikova, I.B. Korotkina, I.N. Trofimova); works on the theory of multiple intelligence (G. Gardner), cognitive learning (M. Kalantis, B. Komp), convergent culture (G. Jenkins), the theory of semiotic diversity (Y. Lotman);

- works on the theory and practice of multiliteracy pedagogy (L. Ajay, L. Unsworth, M. Anstey, P. Alberts, A. Atabekova, T. Grabil, S. Kazden, B. Cope, G. Bull, F. Serafini, S.T. Tandiana, L. Kitson, F. Kuo);

- scientific publications on "experience" as a pedagogical category (L. Unsworth, L.S. Vygotsky, J. Dewey, M. Mead, K. Rogers, S.V. Khristoforov).

The empirical base of the study was the programmes of educational courses on multiliteracy development implemented at the University of Newcastle, Australia ("Multiliteracy, Communication and the Young Child", "Multiliteracy"), University of Melbourne, Australia ("Multimodal Literacy"), University of Oslo, Norway ("Research on Multilingualism and Multiliteracy in Education"), materials of the research Centre for Playful Learning "The Joy of Multiliteracy Learning" at the Faculty of Education Sciences, University of Helsinki, mater

The experimental base of this study was: the programme "Literary Creativity" of Sirius Centre (Sochi), courses of the educational platform "School in the Palm of Your Hand".

A total of 541 participants (217 teachers and 324 students) took part in the study at different stages.

Logic and main stages of the study

- At the first - *problem-analytical (theoretical)* - stage, the relevance of the research is outlined, the working hypothesis is formulated and the methodology is described. The socio-cultural and theoretical prerequisites for the emergence of the phenomenon of multiliteracy were analysed. The working definition of the concept "multiliteracy" was formulated taking into account its pedagogical potential, the key concepts of the study were clarified, and the characteristic of skills that constitute multiliteracy was proposed.

- at the second - *ascertaining* - stage of the research, educational practices of multiliteracy development as a target reference point and spontaneous result were identified and described. For this purpose, the existing foreign programmes in the system of higher education were analysed, and our own experience of taking a short-term educational course "Literacy in Different Modalities" was presented. A comparative characteristic of students' and teachers' positions regarding the skills of a multiliterate person is presented.

- at the third - *transformative* - stage of the research, the model of an educational situation aimed at designing the experience of mastering multiliteracy skills for interaction with "texts of a new nature" "Multiliteracy: puzzles of meaning" was described. The model was tested in the framework of a short-term educational programme, a series of master classes and a digital mini-course.

The scientific novelty of the study is that:

- the concept of "multiliteracy" was clarified and specified taking into account its pedagogical potential. Multiliteracy is defined as an integrative personal characteristic, which implies the desire and ability to use verbal and non-verbal means of interaction with "texts of a new nature";

- The data on multiliteracy as an educational result were expanded and supplemented. The deficit of educational situations aimed at the development of multiliteracy skills in the traditional educational process of the school was recorded;

- The components that make up the structure of the model of the educational situation of designing multiliteracy experience were determined: knowledge, instrumental and reflexive;

- A model of an educational situation in which multiliteracy is presented as a goal and a means was designed.

Theoretical significance of the thesis:

- enriching the section of the theory of pedagogical science devoted to the scientific and pedagogical foundations of transformations in education in a changing society with knowledge about the phenomenon of multiliteracy, taking into account its pedagogical potential;

- the totality of teaching methods and technologies are supplemented with the knowledge of multiliteracy as a way of interacting with information to obtain new knowledge in its integrity and diversity;

- The section of the theory of pedagogical science on educational technologies is supplemented by the development of a model of an educational situation in which multiliteracy is present as an end and a means.

The results of the study have **practical significance**, which is expressed in the following provisions:

- the proposed list of multiliteracy skills complements and enriches the requirements to meta-educational learning outcomes (according to FSES LLC) in the categories: "to conduct cognitive activities", "to use modern interactive technologies, applying communication skills";

- strengths and weaknesses of the available programmes of targeted multiliteracy education abroad were identified. The strengths of the courses include the orientation of training on multiliteracy as a significant educational outcome, the formation of skills of multimodal communication, interpretation and analysis of data presented in different formats. At the same time, the weaknesses of the training were revealed: the content and assignments do not reveal the social and cultural contexts of multiliteracy, the requirements for the final work presuppose the use of only one verbal modality;

- The conclusions of the survey of teachers and schoolchildren about multiliteracy skills can be used for the development of domestic programmes of additional professional education for teachers, specialists in working with gifted children, as well as for junior students of philological, library and information and other faculties of humanitarian direction;

- The model of the educational situation "Multiliteracy: puzzles of meaning", developed on the basis of semiotic didactics, taking into account the theory of multiple intelligence, allows to supplement the traditional ways of reading reflection and can be used in the educational process, where there is a need to create "texts of a new nature";

- introduction of multiliteracy ideas into the practice of additional education can be carried out in face-to-face and distance forms through the use of the model "Multiliteracy:

puzzles of meaning" in three different formats (master classes, short-term educational programmes, online courses);

- The developed methodological materials: the programme of the distance mini-course "Multiliteracy: Puzzles of Meaning", a series of master-classes "What it means to be literate in the XXI century", a short-term programme of the module "Nine ways to the text" can be offered for work with schoolchildren of 5-9 grades in the system of additional education of philological profile, and can also be recommended to students of philological and library and information specialties within the framework of pedagogical practice;

- The results of the dissertation research can be offered in the framework of the courses of pedagogical qualification improvement, oriented on achievement of professional requirements of the passport of speciality 5.8.1. ""General pedagogy, history of pedagogy and education" in the directions: "Methods and technologies of multicultural, personalised and developmental learning"; "Formation of students' attitude to communication in the widest possible context, including in hypermedia format";

- Within the framework of the practical part of the study, more than two hundred students aged from 14 to 21 years old gained experience of mastering multiliteracy skills in the course of the programmes "Multiliteracy: Puzzles of Meaning", "What It Means to Be Literate in the 21st Century", "Nine Ways to Text". The participants expressed a positive attitude to the experience and a desire to use this experience in the future.

The validity of the research results is confirmed by the theoretical and methodological conditionality of the initial provisions, the results of approbation, carried out in compliance with the requirements of validity, reliability and objectivity in the process of analysing the products of students' creative activity. Quantitative methods of data processing were applied, which made it possible to verify the validity of the put forward hypothesis and consistency of the conclusions obtained in the course of the study.

Approbation and implementation of the research results

Theoretical and practical results of the research, obtained in the process of work were presented at international scientific-practical conferences and pedagogical forums: joint speech with the supervisor T.G. Galaktionova at the forum "Living Classics", 23 September 2021, St. Petersburg; speech at the International scientific-practical

conference "Reading of children and adults: development of interest in reading as part of the national cultural policy" 22-23 April 2021, St. Petersburg (SPb APPO); virtual speech at the IV International Conference-Forum "Children's literature as an event", 25-27 February 2021, St. Petersburg (SPb APPO); virtual speech at the IV International Conference-Forum "Children's literature as an event", 22-23 April 2021, St. Petersburg (SPb APPO) Personalized Model of Education in the Conditions of Digitalization" at the St. Petersburg International Education Forum, 24-26 March 2021; presentation at the IV International Conference-Forum "Children's Literature as an Event", 25-27 February 2022, Moscow (RSDB); the results of the research were presented at the International Scientific and Practical Conference "Reading of Children and Adults: Development of Interest in Reading as a Part of National Cultural Policy", 21-22 April 2022, St. Petersburg (SPb APPO), at the XIII International Conference of Researchers of Higher Education (St. Petersburg, Russia), at the XIII International Conference of Researchers of Higher Education (St. Petersburg, Russia), at the XIII International Conference of Researchers of Higher Education (St. Petersburg, Russia), at the XIII International Conference of Researchers of Higher Education (St. Petersburg, Russia)

Master classes were developed and held as part of the Literary Creativity programme at the Sirius Education Centre in March and August 2021, and an educational course was created for the digital education platform School in the Palm of Your Hand in September 2021.

The structure of the thesis. The study consists of an introduction, three chapters, a conclusion, a list of literature including 173 items, and three appendices. The total volume of the thesis is 169 pages.

Provisions for defence:

1.   **Transforming the concept of literacy.**

The analysis of the transformation process of the notion of literacy shows that literacy of the 21st century is acquiring a multiple character, uniting content-independent types of literacy (reading literacy, media literacy, communicative literacy, information literacy, etc.), necessary for interaction with modern polymodal texts, "texts of a new nature". It is revealed that in the terminological field defining this phenomenon among

the concepts of transliteracy, multimodal literacy, polymodal, multiple literacy, etc., the concept of multiliteracy is actively used. The concept of multiliteracy is actively used.

2. Defining multiliteracy taking into account the pedagogical potential of the phenomenon.

Based on the analysis of definitions of multiliteracy in the context of pedagogical discourse, the concept of multiliteracy as an integrative personal characteristic is specified, which implies the desire and ability to use verbal and non-verbal means of interaction with "texts of a new nature". This is manifested in the students' understanding of the significance of the multiple polymodal nature of communication in the ability to apply multiliteracy tools to solve educational and life tasks, when interacting with texts of different modalities.

3. Multiliteracy as an educational outcome.

Analysis of existing educational programmes for multiliteracy development shows that mastering multiliteracy experience is considered as a significant educational outcome, which is manifested in students' mastering the skills of multimodal communication, interpretation and analysis of texts presented in different formats.

In Russian education there is a lack of educational situations aimed at actualisation of skills necessary for interaction with "texts of a new nature". It is also stated that existing foreign multiliteracy courses do not pay sufficient attention to the creation of "texts of a new nature" as the most obvious indicator of multiliteracy.

4. Model of educational situation of designing multiliteracy experience.

The model educational situation consists of a set of the following components:

- knowledge component - updating existing knowledge and acquiring new knowledge about the essence of multiliteracy phenomenon;

- instrumental component - mastering tools to activate various multiliteracy skills;

- reflexive component - creating a reader's response in the format of a "text of a new nature".

In this model, multiliteracy is presented as a goal and a means of educational activity.

5. Approbation of the educational situation model.

The results of approbation showed that the experience of interaction with the "text of a new nature" with the help of multiliteracy skills causes a positive attitude of students. The viability of the educational situation model was proved for implementation in three formats: a short-term educational programme, a digital mini-course and master classes.

The products of the students' creative activity show a sufficient level of understanding of the content of the source text and correspond to the characteristics of "texts of a new nature". Pupils' works are characterised by such features as refusal of linearity and hypertextuality. The texts are based on verbal constructions, which are supplemented with signs, symbols, multimedia fragments.

Main scientific achievements:

−   Proposed a teaching definition of multiculturalism [27, p.41, 57] (with an individual contribution rate of no less than 70%);

−   A comparative analysis was conducted on works dedicated to mastering multicultural skills in the educational process [28, p.57106] (with an individual contribution rate of no less than 70%);

−   Analyzed the content of educational programs aimed at purposefully developing multiculturalism [57, p.83, 98];

−   Considering the attitudes of Russian teachers and students towards various aspects of multiculturalism, the characteristics of multicultural individuals have been proposed [143, p.98] (with an individual contribution rate of no less than 70%);

−   Developed and tested an educational context model aimed at designing multicultural skill development experiences that interact with "new natural texts" [29, p.41, 57] (with an individual contribution rate of at least 80%).

CHAPTER 1. THEORETICAL BACKGROUND TO THE STUDY OF THE PHENOMENON OF MULTILITERACY

The aim of the chapter is to propose a definition of the phenomenon of multiliteracy taking into account its pedagogical potential and to formulate a list of skills of a multiliterate person based on the analysis of theoretical premises of the study of the transformation of the concept of "literacy". To achieve the goal it is necessary to solve the following **tasks**:

- to consider the process of transformation of the concept of "literacy" into the category of "multiliteracy" in connection with the presence of "texts of a new nature" in the educational process;

- to identify the theoretical foundations of multiliteracy in the context of the humanities;

- propose a definition of multiliteracy, taking into account its pedagogical potential;

- Identify common and unique aspects in the different skill characteristics that define multiliteracy;

- to form a list of skills that define multiliteracy, taking into account its pedagogical potential.

1.1 Evolution of the concept of "literacy" in Russia and abroad

This paragraph presents the results of analysing the definitions of literacy found in reference resources, historical essays and pedagogical research.

In order to trace the evolution of the concept of "literacy" into the category of "multiliteracy" at different stages of society development, the following tasks were accomplished:

- key differences in the definitions of the term "literacy" given in domestic and foreign dictionaries and encyclopaedias in different historical periods are highlighted;

- A comparative analysis of the content of the concept of "literacy" in domestic and foreign pedagogical research is presented.

The theoretical basis was formed by explanatory dictionaries, encyclopaedias ("The Explanatory Dictionary of the Living Great Russian Language by V.I. Dahl" [40],

"The Encyclopaedic Dictionary of Brockhaus and Efron" [40]) [40], "The Encyclopaedic Dictionary of Brockhaus and Efron" [17], "The Explanatory Dictionary of D.N. Usha [17], "D.N. Ushakov's Explanatory Dictionary" [116], "D.N. Ushakov's Explanatory Dictionary of the Living Great Russian Language". [116], "S.I. Ozhegov's Explanatory Dictionary". [82], "The Big Soviet Encyclopaedia" [11], "Russian Pedagogical Encyclopaedia". [103], "Dictionary of Psychological and Pedagogical Concepts" [105], "Russian Statistical Yearbook" [103], "Vocational Education" dictionary by S.M. Vishnyakova [20], "Dictionary-guide on reading" by V.A. Borodina [12], "American explanatory dictionary of the English language" [155], "Chambers' Dictionary" [168], "Oxford English Dictionary" [160], "R.H. Webster's Unabridged Dictionary. Webster's" [155], "Dictionary of the International Literacy Association" [156], "Xinhua Dictionary" [172], "Estonian Explanatory Dictionary" [162], "Finnish Explanatory Dictionary". [151], Irish Language Council's Irish Explanatory Dictionary [154], Irish Language Dictionary [154], "The Comprehensible Dictionary of the Korean Language". [172], "Slovnik of the Polish Language". [159], "National Encyclopaedia of Sweden" [152]). We analysed UNESCO documents, PISA, publications by T.G. Galaktionova, E.O. Galitskikh, G.V. Danilova, E.I. Kazakova, Nai-Cheng Kuo, A.S. Makarenko, N. Martin, Yu. The authors of the article are A.S. Makarenko, N.P. Melentieva, E.S. Romanicheva, M. Protasio, B. Stirt, V.A. Sukhomlinsky, L.N. Tolstoy, Xuan-Yi Huang, D. Hartman, K.D. Ushinsky.

Let's consider the first group of results.

The choice of reference and information resources is explained by the fact that dictionaries and encyclopaedias contain articles that briefly explain the term. In addition to Russian and English-language resources, dictionaries and encyclopedias of the languages used in the countries that took the first eleven positions in the PISA reading literacy survey (international programme for assessing students' educational achievements) were selected for analysis [59].

As the first source, we chose V.I. Dal's Dictionary of the Living Great Russian Language. In the dictionary there is no term "literacy", but there is "literacy": "Ability to read and write, sometimes only to read" [40, P.400]. One can observe the tendency of

separate assessment of reading and writing as constituent elements of a person's education, which continued for several centuries: practically until the end of the 19th century a person who can read and write was called literate, while a person who can only read was called "scantily literate", "low-literate" or "semi-literate".

The Encyclopaedic Dictionary of F.A. Brockhaus and I.A. Efron (the period of the dictionary's creation dates back to the late 19th - early 20th century) defines the word "literate" as a person who can read and write in a language. It is specified that "in a more precise sense this word is applied only to people who can read and at the same time write, as opposed to people "semi-literate", i.e. who can only read" [17, P.537].

In D.N. Ushakov's Explanatory Dictionary of the Russian Language (1935) Literacy is considered in two meanings: "Ability to read and write"; "The spread of literacy in the country" [115, C.616]. The second definition indicates that this phenomenon refers not only to pedagogy, but also to sociology. The level of literate population of the country is a significant indicator of society development.

"The Great Soviet Encyclopedia" (1969-1978) provides a definition of literacy that highlights specific skills: "A certain degree of oral and written language skills is one of the most important indicators of the cultural level of the population. The issues of the definition of literacy and its statistical designation during censuses in the late 19th century and the first half of the 20th century were repeatedly addressed at European and international meetings on vital statistics and census programmes. The General Conference of UNESCO (10th session, Paris, 1958) recommended that all countries, when conducting population censuses, consider as literate persons who can read with reading comprehension and write a brief statement about their daily life" [11, P.433].

In 1987, S. I. Ozhegov's "Explanatory Dictionary of the Russian Language" interpreted the dictionary meaning of the adjective "literate" as follows: "1. Able to read and write, as well as able to write grammatically correct, without mistakes. 2. Possessing the necessary knowledge, information in any field. 3. Performed without mistakes, with knowledge" [81, P. 257].

In the dictionary "Professional Education" of 1999, created with the purpose of "objective reflection of the modern level of development of the national pedagogical

science" [20, P.7] literacy is understood as "possession of understanding, knowledge and skills necessary for successful activity in any field". [20, P.7] literacy is understood as "possession of understanding, knowledge and skills necessary for successful activity in any field" [20, P.173].

Realisation of cognitive activity as a sign of literacy is mentioned in the definition given in the "Dictionary of Pedagogical Usage": "The level of education characterised by the ability to use the basic ways of cognitive activity (reading, writing, counting)" [104, P.14].

In the "Dictionary of Psychological and Pedagogical Concepts" of 2007, literacy is understood as "a certain degree of a person's mastery of reading and writing skills in accordance with the grammatical norms of the native language" [105, P.16].

An expanded understanding of literacy is provided in the Reading Dictionary (2017): "Basic learning competence that allows a person to continuously learn and master new things, gain access to the riches of world and national culture and thus expand their inner world; literacy determines the ability and readiness of a person to actively assimilate knowledge and its application in everyday life" [12, C.77].

English is a language of international communication, so we have chosen to analyse several American and English dictionaries.

"N. Webster's American Dictionary of the English Language" (USA, 1841) contains three definitions of "literacy" ("literacy"): "The quality or level of proficiency in speech and writing", "the ability to read and write"; "knowledge pertaining to a particular subject" [155]. Illiteracy is also defined there as "the inability to read and write", "a mistake or rudeness (in speaking)" [155].

In Chambers' English Dictionary (Great Britain, 1876) there are two definitions of the adjective "literate" ("literate"), one of them is related to reading and writing skills, and the second one is as follows: "The ability to use language competently and effectively" [166]. The definition is short but pithy. "Knowledge and skills in a particular area" [158], - this is a short definition of "literacy" by the Oxford Dictionary (1908). This definition expands the essence of literacy beyond reading and writing.

Thus, the comparison of definitions given in Russian and English dictionaries shows that in Russian publications literacy is presented as a set of skills (reading and writing, possession of necessary knowledge), and in English dictionaries literacy is related to the possession of speech and writing, to the ability to effectively use these skills.

The above analysis of the term in foreign and domestic dictionaries covers the period from 1841 ("American English Dictionary", USA) to 2017, when the definition of literacy in the Reading Reference Dictionary was given. "Literacy" has evolved from reading and writing, religious knowledge to highlighting different types of literacy (reading, financial, mathematical, etc.).

International approaches to defining literacy are reflected in the Dictionary of Grammatical Terms, which is presented as an interactive tool and involves online additions and changes by the International Literacy Association. The organisation emerged from the transformation of the International Reading Association (1956). According to the founders of the organisation, literacy is the foundation of all learning. The following definition of literacy is given: "The ability to identify, understand, interpret, create, compute and communicate using visual, aural and digital materials across disciplines and in any context" [156]. This definition already shows a broadening of the understanding of literacy.

Let us consider what definitions are given to the term "literacy" taking into account the national specifics of the countries where schoolchildren showed the highest results in the assessment of reading literacy in the PISA 2018 study (China - 1st place, Singapore - 2nd place, Estonia - 5th place, Canada - 6th place, Finland - 7th place, Ireland - 8th place, South Korea - 9th place, Poland - 10th place) [159].

In Chinese, literacy (识字; Shìzì): "Knowledge of a text; a criterion by which one can be said to have a good understanding of a text and be able to interpret it." This definition is given in the Xinhua Dictionary of Characters (2004) [173], which is the best-selling Chinese dictionary both at home and abroad. It should be noted that there is no writing here; this may be partly due to the fact that if a person has knowledge of characters and can understand them, he or she "automatically" knows how to write them.

"Estonian explanatory dictionary" ("Eesti keele seletav sõnaraamat", 2009) defines literacy as "reading and writing skills" [149]. The same brief definition is given by some domestic sources, but below was a reference to "computer skills", but below this dictionary there is a note that this is a type of literacy and is explained as "knowledge and skills for working with a computer" [149]. It is possible that the editors of the Estonian explanatory dictionary already in 2009 thought that this was part of basic literacy.

The Explanatory Dictionary of the Finnish Language defines literacy ("lukutaito") as "understanding, using and evaluating written texts to achieve the reader's own goals, to develop knowledge and skills, and to participate in society" [151]. In this definition, as in Chinese, it does not refer to the skill of "writing", but refers to the important social role of literacy.

Despite the active use of English in Ireland, the population of the country makes efforts to preserve and develop the Irish language. After the proclamation of Irish independence, the state newspapers, central TV channels began to use the Irish language. Thus it was revitalised. In 2018, Irish students scored highly in reading literacy and ranked eighth out of 77 countries.

The Irish Language Council's Irish Explanatory Dictionary (2013) found the following definition of literacy ("Foclóir"): "1. The ability to read and write; 2. Basic skills and competences" [154].

"Explanatory Dictionary of the Korean Language" defines literacy ("문해력") in several contexts. First of all as a term denoting the ability to read and understand a text. However, the narrow traditional definition is extended to include literacy in the context of "general nature", where it is interpreted as an understanding of the world and ecology around us. The compilers of the dictionary explain that "it enables naturalistic thinking, which involves a rejection of artificial and destroyed environments, an interest in nature, and a commitment to its preservation" [173].

The word "literacy" is translated literally from Russian into Polish, but in this language the term "alfabetyzacja" has the meaning of understanding the alphabet. When searching for the adjective "literate" ("piśmienny"), the term found resembles the Russian

word "written" and a brief definition is given: "one who can read and write" [161] ("Slovnik Polskiego" ("Slovnik Polskiego"). [161] ("Dictionary of the Polish Language", 1997).

"The National Encyclopaedia of Sweden" gives the following definition of literacy ("läskunnighet"): "one's ability to understand and form a text" [152]. The compilers note that the term is often understood as an indicator of socio-cultural development of the country. The pronoun "someone's" at the beginning of the definition personalises the reading comprehension ability ("my/their/their ability").

The definitions of literacy found in dictionaries and encyclopaedias of countries with large linguistic, sociocultural, economic [47] and political differences show both common and unique features. Without detailing the unique differences, we note that the common features include the definition of literacy through reading and writing.

The reference to normative documents of different periods seems to be a necessary part of the research. In medieval Europe, literacy was regarded as knowledge of Latin and, at the same time, as a social advantage. Literacy included knowledge of Christian texts [54]. Teachers were priests who aimed to teach religious norms and rules. This was the case not only in medieval Europe, but also in Russia.

For the first time literacy, as a necessity, is mentioned in the Vologda-Perm Chronicle of the X-XI centuries as part of the enlightenment activities of Prince Vladimir: "the great Prince Volodimer gave to teach literacy". Prince Vladimir's son Yaroslav the Wise during his reign created schools of "book learning" in Kiev and Novgorod [54]. Thus, the importance of research and development of literacy is emphasised by the leadership of the state.

In the 16th century, the importance of the problem of literacy and education increased significantly due to the rapid pace of development of the state. In 1551, during the reign of Ivan the Terrible, the Stoglavsky Council, along with urgent state problems, considered issues related to the development of literacy of the population. The Council's resolution prescribed specific measures for the spread of literacy, which included the study of the "law of God", reading, writing and singing [54]. Literacy is considered at the elementary level: writing and reading skills. Of course, literacy is also connected with the

study of religion, and the fact that these quotes are taken from state documents suggests that literacy was related to politics rather than pedagogy.

The earliest data on the first census that could be found are from 1897. According to the presented statistics, people who could read at least syllables were considered literate As a result of the First General Population Census, the literacy rate was 29.6% [47]. People who could read at least syllables were considered literate. There are few data on the development of literacy in the pre-revolutionary period. The main volume of works is devoted to the problem of relatively low literacy rate of the population, as well as the factors hindering the development of literacy.

Researchers of the Institute of Ethnology and Anthropology of the Russian Academy of Sciences believe that the real literacy of peasants was much higher than official statistics for a number of reasons: the reluctance of peasants to indicate knowledge and skills, accounting not all residents [53].

The literacy rate in 1917 was 23%, but in 1927 it was already 60.9% and since then it has been growing. In 2010, the level of literate population (citizens from 10 to 49 years old) was 99.8%, according to the Russian Statistical Yearbook [47]. The elimination of illiteracy became one of the priority tasks of the country's leadership after the revolution. The growth of industry and other spheres of development required highly qualified personnel. In 1918, a reform of Russian orthography was carried out, which further greatly simplified the process of education of the general population. In 1919, a decree of the Council of People's Commissars obliged the entire population of the Soviet Republic between the ages of 8 and 50 to learn to read and write. The existence of illiteracy in the country was perceived as a phenomenon hindering the industrialisation of production that had begun [47].

Since the 1980s, however, literacy researchers have argued that defining literacy as the ability to read and write does not include the complex ways of reading and writing that are present in context and in tandem with values [133]. The contemporary understanding of literacy as a "context-dependent set of social practices" reflects the realisation that individual reading and writing practices develop and change across the life course in response to cultural, political and historical contexts. For example, a Swiss

researcher defines literacy as: "The ability to read, write and count, process information, express ideas and opinions, make decisions and solve problems as family members, workers, citizens and lifelong learners" [170].

The first studies of functional literacy are beginning to be conducted. S.A. Tangyan in his article "New Literacy in Developed Countries" [111] (1990) traces the generalised results of the study of functional literacy, which show that the level of education existing in the population very often cannot guarantee functional literacy, since the life of an individual in modern society is accompanied by a rapid change of technological developments, ideas, individual household items, and the emergence of new knowledge [111]. The educational system in such conditions is in a deliberately losing condition and cannot prepare citizens in time for existence in new conditions. It is impossible to provide students with a full set of information and knowledge, to teach all the skills that will be useful in future life, to guarantee long-term employment in the chosen profession, as the profession may lose relevance due to scientific and technological modernisation, but it is possible to teach a person to adapt to social changes and flexibly respond to the challenges of post-industrial society. Based on the UNESCO definition, S. A. Tangyan specifies certain aspects and proposes to consider functional literacy as "the level of knowledge and skills, in particular, the ability to read and write, necessary for full and effective participation in the economic, political, civil, social and cultural life of their society and their country, to contribute to their progress and for their own development" [111].

Such expanded definitions have changed the 'practical' aspects of literacy. The increasing use of digital technologies in communication requires additional skills (e.g. interacting with web browsers and word processing; organising and reconfiguring files, etc.). These skills have since been labelled computer literacy, information literacy and technology literacy.

From the revealed data we can conclude that if earlier a literate person was called a person who could read and write, then since about 1986 we are talking about the ability to process information, to think critically, to work with multimodal forms.

For a fuller picture of the evolution of literacy, it is important to trace the development of the term specifically in educational research.

Consideration of the definitions of "literacy" given by representatives of domestic and foreign pedagogical thought seems important, as it is closest to the scope of our study. The theoretical basis is represented by the works of the following authors: L.N. Tolstoy, K.D. Ushinsky, A.S. Makarenko, V.A. Sukhomlinsky, N. Martin, M. Protasio, Xuan-Yi Huang, Nai-Cheng Kuo, D. Hartman, B. Stirt.

Pedagogical works in the field of literacy appeared even before this moment. Maxim the Greek (c. 1475-1556) in his work "On Grammar" Greek "glorifies" the science of education, speaks about the usefulness of literacy, calling it a "key" that opens "the door of reasoning" [35].

Secondary education as a system in Russia developed in the 18th century. Much attention was paid to reading, arithmetic, writing and penmanship. Teachers promoted education and taught literacy. Often the creation of schools for children was a private initiative, for example, the school of L. N. Tolstoy in Yasnaya Polyana. In the article "On methods of literacy education" L.N. Tolstoy wrote that literacy is a Russian and European concept, which means elementary skills that should be given by the school [116].

K. D. Ushinsky in his essay "On the need to make Russian schools Russian" writes: "The sharpest, most striking difference between Western education and ours is not at all in the predominant study of classical languages in the West, [...] in the fact that a Western man, not only educated, but even semi-educated, is always, most and most closely acquainted with his homeland: with his native language [...]" [120, P.21]. Ushinsky in his work "Sunday Schools" wrote about reading as one of the components of literacy: "Reading does not mean anything yet; what to read and how to understand what is read - that is the main thing" [120, p. 26-27].

A.S. Makarenko in his work "Public Education in the USSR" distinguished between literacy in pre-revolutionary Russia and literacy education in Soviet schools. Based on statistical data, he noted that literacy before the revolution meant only religious education, reading religious literature, and Soviet pedagogy brings to the forefront the ideas of public education, teaching writing and reading in the languages of the peoples of the USSR and the ability to analyse what was read [70]. Such a view of the literacy

problem persisted for quite a long time: up to the 80s of the twentieth century, literacy was mainly understood as the ability to read and write.

In the book "Conversation with a Young School Director" V.A. Sukhomlinsky writes about the problem of guiding the mental work of schoolchildren, the basis of which, in his opinion, are such skills as observing the phenomena of the surrounding world, thinking, expressing thoughts about what I see, do, think, observe, read, write [108]. He built an algorithm of a schoolchild's development, where he singled out useful skills necessary for the harmonious development of a child:

1. Ability to observe the phenomena of the surrounding world.

2. Thinking, comparing, contrasting, contrasting, finding the incomprehensible, wondering.

3. The ability to express a thought about what the student sees, observes, does, thinks. There are 12 tips in total [108].

These ideas, published in 1973, have been reflected and developed in modern approaches. In the international research of the National Research University Higher School of Economics in 2020. "Universal competences and new literacy" gives the following definition: "literacy is the ability to communicate with the world, understand its signals, process information" [119].

Despite the fact that only six representatives of national pedagogical thought who wrote about literacy in different historical periods were selected for our study, their ideas remain relevant.

Consider the definitions of literacy presented in various international documents.

Since the 1960s, there has been increasing talk of changing the characteristics of the 'literate person'. The term 'functional literacy' was first proposed at the World Congress of Ministers of Education in Tehran in 1965. Almost ten years later, in 1978, UNESCO revised the text of the previously proposed recommendations on the international standardisation of education statistics. In the new version of this document, literacy is "the ability to identify, understand, interpret, create, communicate and compute using printed and written materials related to different contexts" [35].

Of interest is the definition of reading literacy as a type of literacy given in the 2016 PISA brief: "understanding, using, reflecting on, and interacting with written texts to achieve their goals, develop their knowledge and potential, and participate in society" [58].

The given definitions of literacy in official documents of international organisations cover the period from 1958 to 2016 demonstrate how the understanding of "literacy" has been transformed from the ability to understand reading to "a set of abilities to verbal communication, logical and mathematical structuring, visual and aural expressiveness, developed kinaesthetic perception, research and search activity, dialogical communication and reflection, which allows to finally reach the level of meanings and values" [119].

The term 'new literacy' was first defined in 1993 in an article by D. Buckingham, a researcher of children and young people's interaction with electronic media and media literacy, in Towards a New Literacy, Information Technology, English Language Learning and Media Education. He wrote, "To understand important aspects of our world, a new definition of literacy is needed, a definition that is not tied to specific technologies or practices, but rather allows us to see the competencies that are necessary to master all aspects of culture and communication" [138]. Despite the widespread use of the term "new literacy" over the past three decades, it remains an academic metaphor.

The discussion of new types of literacy continued in 1994 in the American city of New London among a group of scholars from different fields of science (linguistics, pedagogy (education), literary studies, sociology, and cultural studies) [133]. The first result of their research was the article "Pedagogy of Multiliteracy: Designing a Social Future" (1996), where they considered a new term - "multiliteracy" ("multi" - "many", "literacy" - "literacy"). This concept was defined as a new understanding of literacy in the context of the emergence of different channels of communication (the emergence of the Internet) and growing cultural and linguistic diversity [135]. The authors of the article believed that this phenomenon would complement the traditional teaching of reading and writing.

The line graph (see Figure 1) shows the evolution of the usage of the term multiliteracy from 1996 to 2019 in percentage terms compared to other terms in the English language sources. The statistics of multiliteracy mentioning shows the increasing interest in it from the scientific community.
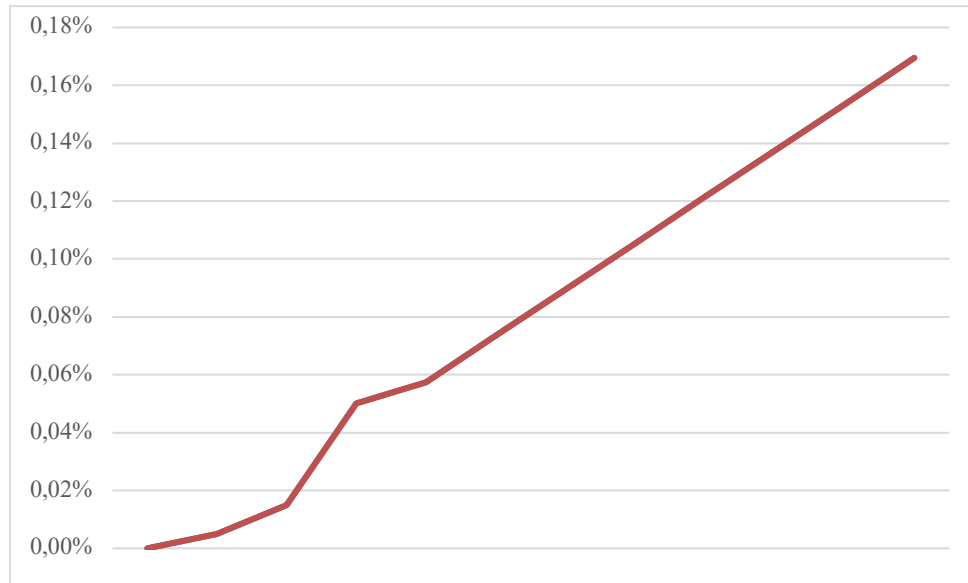

Figure 1 - Dynamics of frequency of mentioning the term "multiliteracy"

J. Sanders and P. Alberts, define multiliteracy as follows: "to know how modern messages are formed, sent, interpreted, what place in this world we occupy when we use multimedia messages, what identities we form when we use multimedia texts, hyperlinked texts" [135]. In addition, scholars argue that we are living in an era of "post-literacy" and everyone chooses their own trajectory of learning forms of literacy. This personalised approach is also found in other studies.

The results of foreign and domestic studies reveal pedagogical aspects of literacy. Expanding understanding of literacy has become a prerequisite for rethinking the concept of "literacy" and the emergence of "new literacy".

The above analysis of the term covers the period from the 11th century (Vologda-Perm Chronicle) to 2016, when literacy was defined in the UNESCO report. Literacy has evolved from reading and writing, religious knowledge to distinguishing types of literacy, a "new literacy" has emerged, researchers distinguish different aspects of literacy (reading, financial, mathematical, etc.). The study of this area is an actual direction of pedagogical research. The analysis of definitions of the term "literacy" through

explanatory dictionaries from 1841 to 2017 has shown that this is not a static, but an evolving concept.

1.2 Multiliteracy and "texts of a new nature". Processes of interaction

At this stage of the study, the following objectives need to be addressed:

− Consider the etymology of the term "multiliteracy";

− To present the phenomenon of multiliteracy in the context of related concepts;

− Define multiliteracy in terms of its pedagogical potential;

− Identify the main approaches to understanding the components of multiliteracy;

− Analyse "texts of a new nature" as a subject of research in cultural studies, philology and pedagogy.

The term "multiliteracy" is of English origin and is a semantic borrowing from English by partially translating the structure of the word "multiliteracy": "multi" [ˈmʌltɪ] many [ˈmʌltɪ] many, "literacy" [ˈlɪtərəsɪ] literacy. Attempts to calque - "multiple literacy", "multiple literacy" did not catch on and the term gradually enters the Russian language by analogy with the lexemes "multivarka", "multimillionaire", etc. "It is characteristic that in English-language scientific discourse the variants are preserved: "multiple literacy", "multiple literacies", "multiteracy" (sometimes the spelling multi-literacy is found).

The origin of the concept is associated with the activities of the "New London Group" (1996), which united scientists from leading educational centres in the USA, Australia, and Great Britain.) [133]. Ten experts from different branches of science published a study "Multiliteracy Pedagogy: Designing the Social Future", in which they used this concept to denote the modern understanding of literacy [133]. They suggest that the primary goal of education is "to ensure that all learners benefit from learning so that they can participate fully in social and economic life" [133]. So-called literacy pedagogy should, they argue, play an important role in fulfilling this mission. The article presents a link between the social changes that affect the educational environment and define a new

approach to literacy pedagogy, which they call multiliteracy. Multiliteracy in this context "is literacy instruction that focuses not only on learning to read and write, but also on the social aspect of these skills" [133]. Characteristically, the authors do not limit multiliteracy skills solely to the use of the Internet. They quite reasonably argue that multiple channels of communication and cultural diversity create the need to change the established views on literacy. The authors are convinced that multiliteracy training will allow an individual not only to quickly adapt to existing modes of communication, but also to create new ones.

In the pedagogical discourse on "literacy" in recent decades, a number of close and related terms have emerged. In order to clarify the essence of the concept of "multiliteracy", it is necessary to consider it in the context of these concepts. This work was brilliantly done by Doctor of Pedagogical Sciences, Professor I.A. Kolesnikova in 2013 [60].

On the comparative material of Russian and English sources, the author reveals the meaning of terminological neologisms proposed by the international scientific community to create a generalised idea of the phenomenon of "new literacy". The author describes the characteristic features of such types of literacy as information, audiovisual and media literacy, conditioned by technological aspects of society development. Each of them is a subject of independent study. From the pedagogical point of view, we are more interested in the approach based on qualitative characteristics of literacy. In this line of thinking we propose such verbal constructions as: "multiple literacy", "multimodal literacy", "polyliteracy", "transliteracy". Taking into account linguistic and semantic peculiarities of each of the proposed terms and objective difficulties related to conceptual and terminological vagueness, we will use "multiliteracy" as a working definition of the phenomenon we are interested in. At the same time, it is important to understand that we are not talking about the "sum of literacies", but about the synergy of different ways of interacting with real and virtual space, "in the ability not only to read, relying on traditional paper media, but the ability to read information embedded in different sign systems" [62].

Based on the pedagogical aspect of multiliteracy, the author reveals this phenomenon through four components: individual experience of working with information, search for a form of self-expression in the process of communication, correlation of information with the social context and individual needs, as well as through the transformation of the system of meanings and values from one context to another [62].

Other types of literacy, which are often equated with multiliteracy, can be considered close and related. In addition to multiliteracy, sources devoted to this issue consider contextual literacies such as financial, environmental, civic, mathematical, health, technical and other literacies. Among these types of literacy with a pronounced applied character, there is a need to distinguish between types of literacy in subject areas and types of literacy that imply the presence of context-independent skills (communicative literacy, audiovisual literacy, media literacy, functional literacy, information literacy, traditional literacy, network literacy, etc.).

In the study "Universal Competences and New Literacy" [119], the authors refer to the above-mentioned literacies as "new literacies" [119], the authors refer to the above-mentioned types of literacy as "new literacy". We believe that "new literacy" can be considered as a scientific metaphor, which, according to the statistics presented in Figure 2, has become widespread. This term "refers to the ability to manage processes using the means of encoding culturally relevant information" [119].
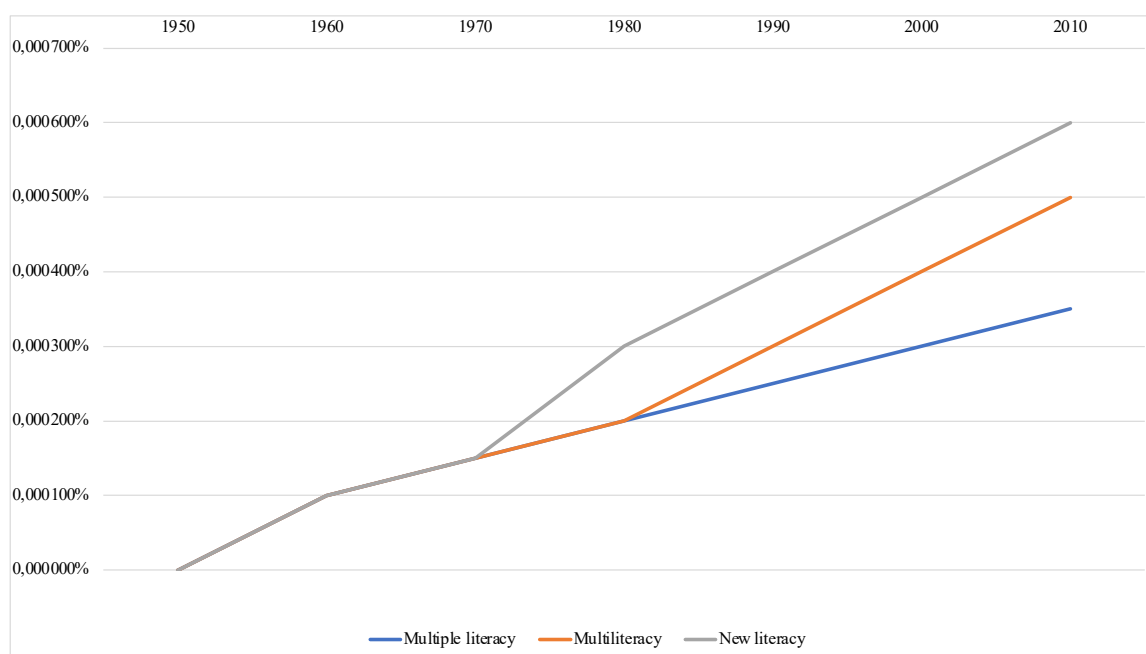
Figure 2 - Graph of term mentions in English-language literature

Then the frequency of use of terms related to cross-curricular aspects was examined: media literacy, communicative, reading, research, information, functional types of literacy (see Figure 3).
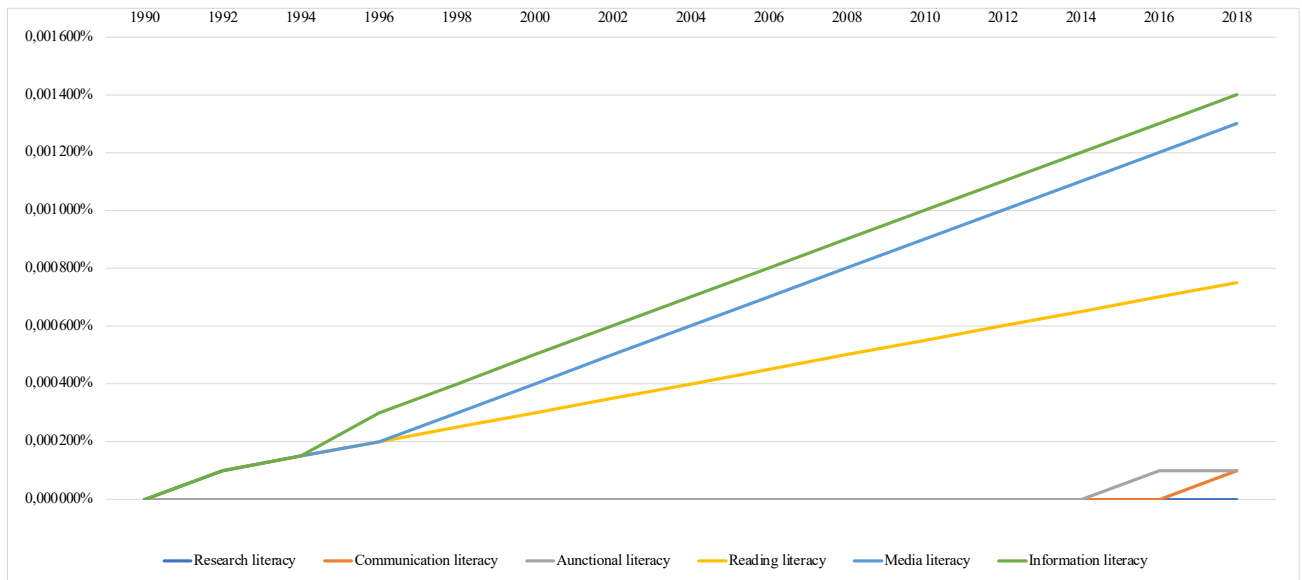

Figure 3 - Graph of the use of terms related to cross-curricular aspects of literacy

The graphs show that context-independent types of literacy are more common in the sources than subject-independent ones. While health literacy (the basis of human life) is the leader in the first graph, "information literacy" is more frequently used in the context-independent typology, although in 2000-2001 reading literacy was also frequently used as information literacy.

The authors of the report "Universal Competences and New Literacy" distinguish instrumental literacy and subject literacy as two separate categories among universal literacies. Instrumental literacy is understood as "a person's ability to use sign systems and communication tools in different situations and contexts. Without a minimum level of instrumental literacy, human functioning in modern civilisation is impossible. Such literacy is not limited to any sphere of activity and in this sense is universal" [119], while subject literacy is "basic practical knowledge in certain areas of modern life, without which human functioning in modern civilisation is also impossible (or severely hampered)" [119].

The authors of the first article on multiliteracy and now other researchers believe that searching, evaluating and using different sources of information (print, electronic, multimedia) is a new feature of modern literacy [133].

Representatives of the Finnish education system were among the first to study and apply the experience of multiliteracy. The main learning competences, including multiliteracy, are analysed in A. V. Zelenin's article "Finnish Education at a Turning Point: Where Have We Come to and Where to Go Next? The author defines this type of literacy in the context of studying Finnish education as "the ability to understand and interpret various ways of presenting a communicative act, including written and heard, visual, gesture components, etc." [50].

The frequent use of the term 'information literacy' is due to the effects of digitalisation. Easy access to information requires validation, evaluation of sources and other skills. In November 2005, an international Colloquium on Information Literacy and Lifelong Learning was held at the Bibliotheca Alexandrina [67]. Information literacy was proclaimed "the foundation of lifelong learning" and "a basic human right in a digital world and promotes social inclusion of all nations" [73]. In total, more than 20 types of literacy can be found in the literature.

UNESCO's International Bureau of Education defines multiliteracy as "a concept based on the assumption that people 'read' the world and understand information in ways other than traditional reading and writing. Multiliteracy includes linguistic, visual, aural, spatial and gestural ways of making meaning. Central to this is the belief that people in modern society must learn to construct knowledge from multiple sources and modes of representation" [75].

Based on the concepts and definitions studied, we created the following diagram (see Figure 4):
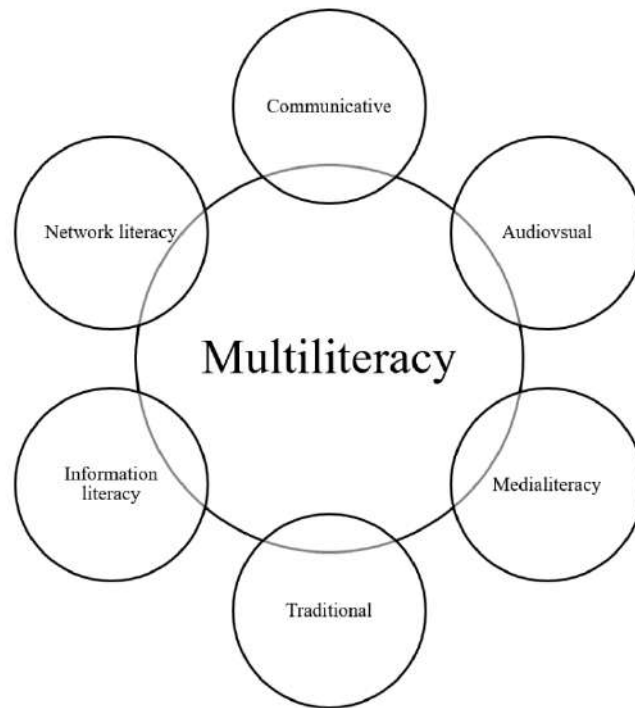

Figure 4 - Schematic representation of context independent literacy types

It is important to note that all of the skills listed are related to multiliteracy but go beyond it.

As the Internet has become a familiar resource for widespread use, sociologists have tracked the transformation processes associated with it and noted the change in social behaviour associated with the emergence of new types of interactivity and communication. We do not define multiliteracy through the widespread use of modern technologies. For example, despite the emergence of online learning, assessment methods, requirements for students and other aspects have not changed globally, they have only been transformed by the transition to the online space. Within the research it is important to emphasise that multiliteracy is a phenomenon that does not focus on the use of the internet. New opportunities have emerged for education and for accelerating communication and other processes.

In order to define multiliteracy with regard to its pedagogical potential, we turned to sources that clearly showed pedagogical aspects of the phenomenon.

When studying the history of the emergence of the term "multiliteracy", a publication was mentioned in which the concept under study was presented for the first time. The authors examine rapidly emerging linguistic phenomena in order to identify the constituent skills for proper literacy instruction in the modern world. The content of this book is of interest for our study. Among the chapters, the following stand out: "Cyber-education and technological change: multiliteracy and new times", "Multiliteracy and multilingualism", "The changing role of the school", "Design and transformation: new theories of meaning", "Multiliteracy and language: orders of discourse and intertextuality", "Multimodality", and "Multiliterate pedagogy: pedagogical additions". At the end of the book, the authors talk about projects aimed at practical experience in teaching multiliteracy and providing dialogue between teachers around the world [139], point out the importance of introducing multiliteracy skills in the education of people from different social groups, arguing that this will help their successful development in the future.

In 2011, in an article devoted to the influence of animated films on the development of schoolchildren, the author defined the role of multiliteracy to denote the ability to interpret and construct different meanings in "texts of a new nature" associated with digital technologies such as the Internet, video games, digital video, visual images, graphics [134, P.398]. We believe that this characteristic most fully reflects the polymodality of multiliteracy.

In the article by I.N. Trofimova "Multiliteracy as a social value and a factor in the development of modern society" this phenomenon is defined as a sum of skills that allows to achieve significant results of continuing education, which implies an impact on the development of society [118].

I.B. Korotkina pointed out that multiliteracy "is the goal of education, and the subject of reconceptualisation of literacy becomes inclusive education" [64]. In the study of multiliteracy pedagogy discussed above, it is mentioned rather as a process through which learning and knowledge acquisition take place. Here we present a position that

explains multiliteracy as the result of acquiring knowledge and skills at one of the stages of learning.

Based on the above, we propose to define multiliteracy as an integrative personal characteristic that involves the use of verbal and non-verbal means of interaction with new knowledge.

The next task is to analyse "texts of a new nature" as a subject of research in cultural studies, philology, and pedagogy.

It is logical to assume that traditional literacy acquires new features due to the emergence of such a socio-cultural phenomenon as "texts of a new nature". Under this term, in the logic of E.I. Kazakova's research, we understand "a thought fixed on any medium, which is displayed using a connected sequence of heterogeneous symbols (signs of verbal and non-verbal nature)" [55]. Such texts have a non-linear structure, assume volume reduction by increasing the information load on each text unit. The text parts containing the most important information are capacious text fragments (orientation on "small text structures"), the semantic content of such texts is translated through various sign systems and can be duplicated in different parts of the text. Interactivity plays an important role in "texts of a new nature" [55, P. 104].

"Texts of a new nature" become the subject of research of culturologists, cognitive scientists, pedagogues, philologists. This problematic has been continued in the works of A.R. Amerkhanova, T.E. Benkovskaya, V.S. Bratash, E.O. Galitskikh, M.Y. Gudova, T.G. Galaktionova, G.V. Danilova, Y.V. Kurbatova, S.V. Olefir, E.I. Riehakainen, N.P. Terentyeva, Y.V. Scherbenina and others. Each work devoted to the study of such texts adds a new facet to the understanding of polycode, crealised or multimodal text. These qualitative characteristics of the text are often used as synonyms. The authors note that "texts of a new nature" can exist in both paper and digital formats.

A.R. Amerkhanova considers "texts of a new nature" as a form of students' self-expression [3]. The author conducts a terminological analysis of such a quality of a "text of a new nature" as multimodality. The paper studies the history of the emergence of different types of texts in order to determine their "novelty", in particular fanfics. It is concluded that "new" texts cannot be called "new" unconditionally: in the history of

culture there are numerous examples of authors expanding the space of a work with the help of non-verbal means. In the framework of our study, the identified "effect of completion", "montage" of a literary work is of particular interest - this effect is created due to the contact between the mental fields of the author-transmitter and the reader/listener-receiver of information [3].

In the article "Texts of "new nature" and the possibility of their use in the literary education of modern schoolchildren" T.E. Benkovskaya identifies the features that distinguish the "new" text from the traditional one: "synthesis of multimedia and verbal structures; active use of hyperlinks, infographics and other signs of expression of meaning; voluminosity, the possibility of deepening, entering through it into other texts; incompleteness; the ability to dynamics, changes and additions; calculation for reflection and discussion-addition by other participants of communication; connection of the text to other texts; the ability to be used in the literary education of modern schoolchildren" [8]. The highlighted properties of the "text of a new nature" indicate the possibilities of its use in the pedagogical process due to the pronounced orientation to interaction, reflection, and communication in the context of reading.

In the work of V.S. Bratash it is proved that the "text of a new nature" can be the result of children's creativity. We share her position that the term "text of a new nature" is appropriate in pedagogical discourse as opposed to the philological concept of "polycode text". Such texts have already been reflected in educational literature and are actively used in the design of teaching tasks. V.S. Bratash emphasises that the semantic content of such texts is translated through different sign systems and can be duplicated in different parts of the text, representing the same combination by different modalities. The role of interactivity, involving the reader in the dialogue, the use of different forms of feedback: responses, comments is noted. It is obvious that interaction with these texts requires new pedagogical solutions. It is logical to assume that special skills are needed to create "texts of a new nature". Based on the system of double coding described by V.S. Bratash, we extend it to nine potential "codes" in the logic of the theory of multiple intelligence.

In the culturological study by M.V. Gudova devoted to the problem of reading "in the era of post-literacy" it is stated that "the form of literacy captures the subjective modalities of modern (post-literate) sign-text (media-information) culture" [37].

In the description of reading, the author refers to the structural-semiotic approach, for which "the ontological unit of sign-symbolic reality is the sign, and the mode of existence is the text". The author emphasises the role of text, which is the main "to explain and positively understand the processes occurring in culture, where written, auditory and visual texts and modes of communication exist simultaneously, and, entering into a competitive struggle, merged in a single information flow of virtual reality" [37]. According to the researcher, such texts can have a high cultural value. The author defines them as "polymorphic texts". This term can be legitimately considered as another synonym for "texts of a new nature". Speaking about modern conditions, the author defines literacy as "the ability of the subject of culture to "read" and "write", and in the broad sense of the word - to create and decode cultural texts" [37]. Reading in this context ceases to be only book, newspaper and magazine, screen and mobile, becomes "multimedia, interactive, hypertextual" [37]. Thus, in the modern pedagogical process there is a need to teach reading and writing taking into account the new communicative and expressive possibilities of reading "texts of a new nature".

The need to form pupils' readiness to perceive "texts of a new nature" is confirmed by pedagogical research. In the works of T.G. Galaktionova, based on the analysis of feedback, products of students' activities, carried out taking into account semiotic diversity, the need to create conditions under which "traditional verbal codes can be presented, if not on a par, at least not to the detriment of other ways of interaction with educational information" was revealed [27]. This implies the formation of certain skills not only for students, but also for teachers. The presentation of educational material in different formats implies not only technical knowledge of teachers, but also careful selection of materials, consideration and control of the results of mastering such material by students, correlation of the purpose and presentation formats.

G.V. Danilova emphasises that "texts of a new nature" can be considered as a "source for the development of "new literacy" of students [41]. When studying the attitude

of teachers and parents to textbooks in the form of comics (as "texts of a new nature"), G.V. Danilova concludes that teachers are unprepared to conduct the educational process using such textbooks, but at the same time she states that "reorientation of education to the visual series is inevitable" [41]. The author concludes that it is necessary to expand the teacher's toolkit. A similar idea can be heard in the works of E.O. Galitskikh. Based on the analysis of the experience of using "texts of a new nature" in the process of teaching future teachers of literature, the researcher notes the high didactic potential of such texts, emphasising that "texts of a new nature" positively influence the formation of creative competence of future teachers of literature [31].

H. P. Terentyeva also analyses "texts of a new nature", considering them on the example of a comic book. In the course of the study, the author concludes that "the work on creating a comic book on the read works stimulates the formation and development of certain reading skills", requires the reader to "live" the work, its interpretation [114].

Practitioners identify the risks and opportunities of using "texts of a new nature" in the learning process. As opportunities, they note that it can promote reading due to its originality, expressiveness, and unusualness. And the risk, according to teachers, in such texts is the free treatment of students with syntax, grammar and orthography of the Russian language [65].

The influence of "texts of a new nature" on reading initiation is noted by a number of researchers. In particular, S.V. Olefir, A.N. Yuldasheva, D.F. Ilyasov note that due to "texts of a new nature", their non-linear structure, orientation to different types of thinking, the possibilities of students' creative activity are expanded, and the understanding of meaning is deepened [83].

The study of semiotic diversity in the framework of the educational process of higher education was conducted by E.I. Riehakainen. The use of texts of different modalities was considered at the intersection of philology and cognitive science. The paper describes an experiment in which students mastered the educational material in four presentation formats: oral text without visual accompaniment; oral text and presentation with verbatim written text; oral text and presentation with thesis statement; oral text and presentation with thesis statement and illustrations. The analysis of the results showed

that "the combination of visual and auditory information proves to be a more effective way of presenting the material than audio only. The presence/absence of a picture supporting the text affects the subjective evaluation of the presentation format, but not the quality of information assimilation" [99].

The positive response of students to such presentation of material testifies to the expediency of using semiotic diversity in the educational process. We believe that this can be true for schoolchildren as well.

In works devoted to "texts of a new nature", one can find a critical view of this phenomenon [3, 4, 8, 13, 15, 15, 24, 24, 41, 52, 55, 81, 98]. Their fragmentary nature, incompleteness, "clippedness", and reliance on technology are noted. At the same time, the enumeration of shortcomings is levelled by the statement that "texts of a new nature" are closely related to the trends of contemporary culture: "Turning into a clip, the text is "dismantled" and loses its integrity. Similarly, computer translation of text programmes sometimes results in the so-called "abracadabra code" - a chaotic set of graphic signs. Visual reincarnation turns into textual disincarnation. But this is the clip basis of all modern culture: mosaic, fractional, discrete" [132].

At the presented stage of the research the theory of multiliteracy phenomenon is considered. The term itself is described taking into account the analysis of related concepts, the main approaches to understanding the components of multiliteracy are revealed.

The etymology of the concept of "multiliteracy" is based on the fact that the term comes from the English language. This allows us to consider it through the theoretical foundations established in the first work devoted to this phenomenon.

Among a wide terminological field, related concepts were identified and analysed, and the characteristic differences between multiliteracy and 'new literacy' and other concepts were explored. It was determined that meta-literacies (functional, informational, etc.) are related to multiliteracy, but can be manifested independently. Multiliteracy influences different areas of humanitarian knowledge, which allows us to speak about it as a significant educational result within the framework of pedagogical activity.

We consider the pedagogical potential through the justification of the legitimacy of the designation of multiliteracy as an integrative personal characteristic, which involves the use of verbal and non-verbal means of interaction with new knowledge.

The features of "texts of a new nature" that allow us to consider them as a significant educational result are defined. It is established that such texts have become the subject of pedagogical, philological and cultural studies.

Consideration of theoretical aspects of multiliteracy as a socio-pedagogical phenomenon allows us to conclude that the new quality of literacy is part of the scientific discourse.

1.3 Multiliteracy skills as a reflection of the phenomenon of multiplicity in scientific discourse

In order to identify the theoretical foundations of multiliteracy in the context of the humanities, let us turn to the humanitarian scientific knowledge reflecting the phenomenon of diversity. To these areas of scientific thought we include: the concept of convergent culture, the ideas of semiotic didactics, the theory of cognitive learning, the principles of pedagogy of personalised learning, the theory of multiple intelligence.

The following objectives are addressed in the presented paragraph:

−   present a characterisation of the essence of the phenomenon of diversity;

−   to consider the directions of scientific knowledge, which contain the ideas of multiplicity and to substantiate the connection of these ideas with the phenomenon of multiliteracy;

−   to confirm the appropriateness of using multiple intelligence theory to describe a set of multiliteracy skills;

−   formulate a list of skills that define a multiliterate person.

The essential characteristic of the phenomenon of diversity is presented in philosophical knowledge. In the works on philosophy [108] the category of diversity is considered in the logic of the concept of pluralism (from Latin pluralis - multiple) - a philosophical position according to which there are many different equal, independent bases or forms of being. From the position of philosophy, plurality or pluralism consists

in the idea that there are many independent and irreducible types of being. Aspects of this assumption can be found in the works of Empedocles, N. Kuzansky, G. Leibniz and others. The study of the questions of being, faith and religion led N. Kuzansky to the idea that everything in the world is in multiplicity, difficult for human perception: "Who can rise so high to comprehend diversity in unity and unity in diversity? This combination is beyond all comprehension" [108]. G. Leibniz's linguistic research led to new views on linguistic diversity in the world.

Diversity is considered as a universal property of nature [38]. Obviously, the same statement will be true for society. Given that education is a social phenomenon, it is logical to assume that this biological principle can be projected onto the pedagogical environment. That is, to consider the diverse property of society and, as a consequence, of education. Humanistic pedagogy has always adhered to the belief of the uniqueness of each individual, which requires the construction of this educational process with diversity in mind. We will consider diversity as a key characteristic of multiliteracy, which implies a plurality of forms and ways of mastering and transferring new knowledge.

To solve the second task we turned to such areas of scientific knowledge as the concept of convergent culture, the ideas of semiotic didactics, the theory of cognitive learning, and the principles of personalised learning pedagogy.

G. Jenkins' theory of convergent culture [147] reflects the idea of "convergo" ("converging") - "connecting in one point" different ways of presenting information [147]. Despite the fact that Jenkins is mainly focused on media formats, his idea of "transmedia storytelling" - storytelling through different modalities - turns out to be in line with our scholarly interest in the phenomenon of multiplicity. The author and his followers actively promote the idea of media education, but it is clear that it will utilise the full range of these modalities.

The author of the preface to the Russian edition, A. Pavlov, notes that Jenkins' ideas about the future and the role of media are controversial. In this context, we are most interested in the philosopher's ideas about "transmedia storytelling". This notion refers to the way a story is told through different media: films, video games, comic books, etc. The list is labelled as "transmedia storytelling". The presented list is labelled precisely as

"media", but not as modes of presentation. Such modes of representation as theatre, music, painting, and literature in general are also not noted by the author. But the idea of narrative through different modalities is in line with the concept of multiliteracy.

Since, according to Henry Jenkins, the main feature of convergent culture is the ability of each user to interact and influence the cultural space through different messages, it seems important to consider the mechanisms that can be used to educate a person prepared for competent, responsible communication in any context. For this purpose, in addition to the basic skills of reading and writing, we have to master new forms and ways of communication, which involve many different skills. We believe that multiliteracy allows us to present these skills in a coherence that will be in demand when interacting with "texts of a new nature" in a broad sense.

The category of multiplicity is a key aspect of semiotics. Semiotics (from Greek "sign") is "the science of communicative systems and signs used in the process of communication" [88, P. 6]. Education is a social sphere of activity, so the special significance for us is social semiotics - the direction of scientific works devoted to the study of the formation of meanings in the process of communication. Signs, symbols have meaning only if there is someone to "read" them. We believe that only a person with many different skills, i.e. a multiliterate person, can fully read the diversity of these signs.

Pedagogical aspects of semiotics are reflected in the ideas of semiotic didactics.

The proposed direction of pedagogical theory and practice is emphasised on the sign aspect of culture and assumes a close connection of the learning process with the resource of multiple intelligences and the pedagogical potential of semiotics.

In other words: "the cultural plurality of semiotics is utilised by the educator for educational purposes through the variable translation of content to the multiple intellectual channels of a given student, taking into account his or her sensitivity to cultural diversity" [25].

Semiotic didactics is an affirmation of variability as a pedagogical position of the modern teacher.

It is the acceptance of "perceptual ambiguity" in students as an objective factor in the learning process.

It is a phenomenon of objective-subjective multiplicity elaborated from "metaphor to technology".

Instrumentally, these ideas are reflected in the selection of content, the organisation of activities, and the assessment system:

a. Selection of content, reveals a topic in different cultural codes (language of facts, artistic images, mathematical symbols, etc.) - "semiotic context";

b. Organisation of activities includes reading, writing, listening, drawing, motor activity, manual work, exploration, communication, association, reflection, etc. - "semiotic activities";

c. The evaluation system is based on self-evaluation, procedural authentic evaluation and external expert evaluation on the basis of complementary criteria - "semiotic outcome".

In general, it is legitimate to consider it as a holistic semiotic didactics, defining "the cultural foundations of educational development at the present stage" [25].

In order to fully participate in the educational process built in the logic of semiotic didactics, teachers and students need to possess a wide range of techniques and methods of mastering and transferring new knowledge. We believe that the realisation of these tasks will require a set of multiliteracy skills.

The above ideas of semiotic didactics are consonant with the concept of personalised learning, one of the principles of which is the creation of individual educational trajectories. It is logical to assume that such an educational process is relevant to multiliteracy skills.

Cognitive learning is based on the individual cognitive characteristics of the personality. Learning based on a model of the biopsychosocial organisation of the individual.

Cognitive learning is learning based on the principles of consciousness and consists in the development of thinking abilities, intelligence of students. This system "uses not only intellectual cognitive mechanisms, realised in traditional verbal teaching methods, but also sensory-perceptual channels of different modality, as well as sensual-intuitive ways of obtaining new knowledge" [23].

The theory of cognitive learning was developed by M.E. Bershadsky [10]. It is believed that it is cognitive learning that meets the challenges of modern environment and such principles of pedagogy as openness, variability, individualisation.

Cognitive learning technology is developed on the basis of cognitive psychology and is designed to teach the perception, processing, storage of information. Its application allows students to form learning and cognitive competence, information competence, and personal self-improvement.

Cognitive in the pedagogical process is the ability to mentally perceive and process external information [10]. The development of cognitive abilities in teaching is aimed at improving different types of memory for mastering educational information, at mastering the ways of mental actions to process information in the process of its use.

Cognitive educational technology is based on the assumption that the necessary condition for successful learning is the student's understanding of the learning content. Images, perceptions, meanings and senses of words and signs, imprinted in the student's memory, are peculiar traces of previous cognitive experience, they are connected by many associative links [10].

The ideas of the cognitive approach are embodied in the model of personalised learning. This term is understood as a way of designing and implementing the educational process aimed at developing the personal potential of the student. In personalised learning, the student acts as a subject of joint learning activities, has the opportunity to build his/her individual trajectory so that it takes into account the characteristics of his/her personality and development needs.

E.I. Kazakova in describing the personalised model of education notes that "the goal of personalisation in schools is the maximum development of educational and personal potential of each student, increasing the effectiveness of the educational process for each student and for the educational community as a whole" [79].

A learning system aligned with personalisation helps to address the following challenges:

- To keep the child's interest in learning alive and to stimulate the desire for continuous learning;

- To form research and project thinking;

- Teach interaction with digital data - navigate digital space, classify, analyse, verify;

- Use information technology wisely;

- Create conditions for the realisation of individual educational trajectories [79].

The multiple nature of multiliteracy [133] provides the basis for the one proposed by Howard Gardner in 1983 [33]. Working with adults and children, studying successes and failures in their learning, the scientist came to the conclusion that people assimilate information in different ways, using different channels of perception [31]. After a lengthy study, G. Gardner identified nine ways of perception: verbal, visual, musical, logical-mathematical, intrapersonal, interpersonal, spatial, bodily-kinesthetic, existential. At this stage of the research, in order to identify and systematise multiliteracy skills on different grounds (in relation to means, activities, modes of communication, modalities of perception, etc.), we propose to refer to G. Gardner's theory of multiple intelligence as one of the possible ways of structuring multiliteracy skills.

To avoid erroneous application of theory in practice, the psychologist has compiled three clear recommendations for educators:

1) Individualise learning. Carefully study the peculiarities of each student and choose the most effective and comfortable ways of learning for a particular person. Of course, this is not so easy with large classes.

2) Teach in a variety of ways. Do not limit yourself to one individual way of teaching for each particular student, even if there is a strong belief that all his/her strengths and weaknesses are known. Storytelling, illustrations and graphs, and role-playing can be used to present information. Such an approach, according to Gardner, develops several types of human intelligence at once and helps to engage the student's strengths for better learning of the topic and improve the weak ones. Studying a topic from different angles becomes more complete and in-depth, thanks to such a variety of presentation of educational material more students will learn it [33].

Thus, we propose that multiliteracy skills include:

- The ability to understand, interpret, evaluate and produce verbal text;

- The ability to translate and perceive information through graphs, charts, diagrams;

- The ability to read and create a visual format for presenting information;

- The ability to transform content into sounds, to understand and interpret acoustic (auditory) information;

- The ability to express the ideas inherent in the text through the materialisation of meanings;

- The ability to find, compare, contrast and analyse information to gain new knowledge;

- The ability to project external information into one's own experience;

- The ability to initiate and carry out communication in the context of the topic;

- the ability to go beyond the literal meaning of a text, to identify philosophical ideas reflected in a text, to analyse what is not directly communicated in a text.

We venture to assume that the totality of these skills determines the level of multiliteracy development, which, in turn, will contribute to the implementation of the principles of personalised learning in the practice of modern schools when interacting with "texts of a new nature".

The analysis of works related to the theoretical foundations of multiliteracy allows us to consider this phenomenon in the category of diversity and characterise the essence of multiliteracy through the phenomenon of diversity, which implies a multitude of independent, equal forms of existence. The phenomenon of diversity, which implies a plurality of forms and ways of mastering and transferring new knowledge, is understood in our study as a key characteristic of multiliteracy.

The considered directions of scientific knowledge (semiotic didactics, cognitive learning theory, etc.) allowed us to describe the scientific context of multiliteracy phenomenon development. When studying the characteristics of convergent culture, multiliteracy is considered as a manifestation of convergent culture that combines different ways of presenting information.

It has been established that multiliteracy can be considered as a significant component of semiotic didactics. In order to be a subject in the logic of semiotic didactics

a student and a teacher need to possess an appropriate set of skills. These skills can be a manifestation of multiliteracy.

The relationship between multiliteracy and technologies of cognitive learning and personalised approach is fixed. The correspondence between G. Gardner's types of intelligence and necessary and sufficient multiliteracy skills was established.

The integrity and diversity of information representation in the logic of multiple intelligence theory suggests that this typology can be used to characterise multiliteracy skills.
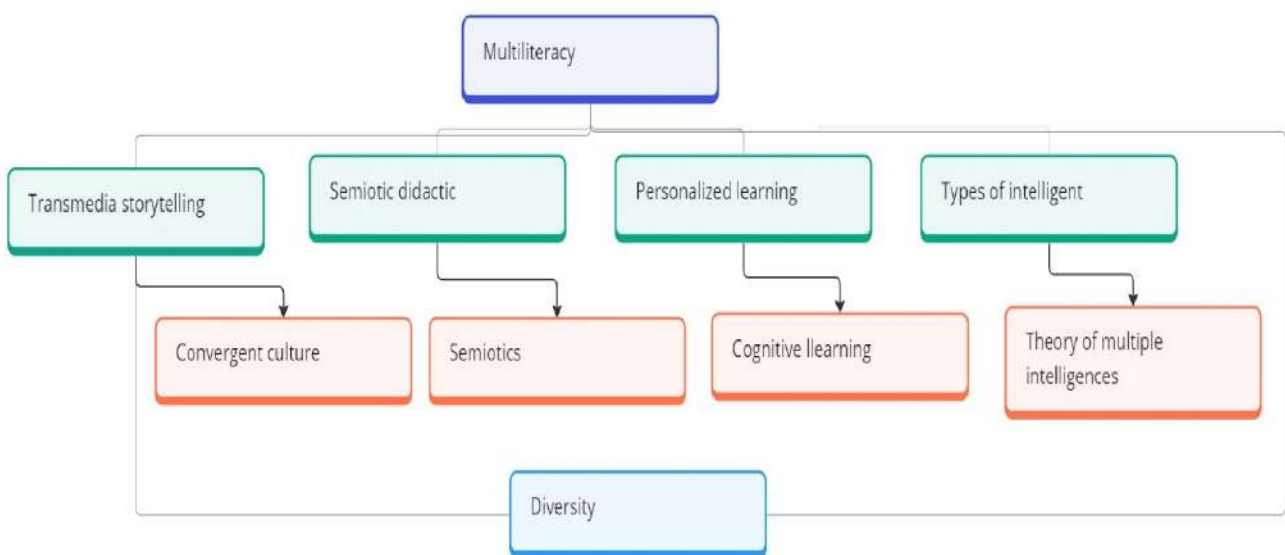
Figure 5 - Relationship of multiliteracy with different fields of humanities oriented to the phenomenon of multiplicity

The list of skills that define a multiliterate person can be presented through the characteristic of his/her readiness to interact with "texts of a new nature", including "verbal", "mathematical", "visual", "acoustic", "tactile", "research", "communication", "self-discovery", "existential".

1.4 Pedagogical aspects of multiliteracy development

The description of the conditions of multiliteracy development in modern education implies the study of pedagogical aspects of this phenomenon. For this purpose it was necessary to:

- To analyse the main theoretical provisions of "multiliteracy pedagogy";

- To consider pedagogical aspects of multiliteracy - methods, forms, means, expected results, evaluation system.

To study pedagogical aspects of multiliteracy development, we analysed works from 1996 to 2021. These are books and articles that present multiliteracy as an important part of the educational process. Methods of theoretical analysis, in particular, methods of systematisation and generalisation were used.

Earlier we mentioned a word combination that is not peculiar to the Russian-speaking pedagogical discourse - "literacy pedagogy". However, this term is often found in English-language studies. Speaking about "literacy pedagogy", researchers understand "teaching methods that combine teaching reading and writing and using different types of texts for this purpose" [150]. The transformation of literacy in the 21st century, which we recorded earlier, causes specialists to use such a notion as "multiliteracy pedagogy". This term, as a rule, refers to the theory and practice of teaching multiliteracy [169]. The seminal 1996 study "A Pedagogy of Multiliteracies: Designing Social Futures" [133] highlights the prerequisites for the transition from traditional literacy to multiliteracy. Among these prerequisites are the societal changes faced by students and teachers. The multiplicity of communication channels and the growing cultural and linguistic diversity in the modern world require a broader view of literacy. Researchers believe that incorporating multiliteracy into the context of educational activities will enable students to utilise the potential of verbal and non-verbal ways of interacting with information in a variety of disciplines. It is emphasised that the development of multiliteracy skills should complement traditional reading and writing instruction [133].

A scientific event in this field in 2001 was the publication of L. Unsworth's book Teaching multiliteracies across the curriculum: Changing contexts oftext and image in classroom practice [169]. The author defines the preconditions for the emergence of the phenomenon of multiliteracy and reveals them through sociocultural, semiotic and pedagogical aspects. The paper argues that the theoretical and practical foundations of modern "literacy pedagogy" are influenced by intermodal transformations. This is expressed in the change of semantic structures and images embedded in the text. The study describes the variety of text formats and the peculiarities of interaction with them

in different subject areas. Special attention is paid to the possibilities of information and communication technologies in the study of fiction [169]. The author emphasises that reading and writing remain the basis for literacy development.

The publications of 2005 are characterised by an appeal to the study of multiliteracy in the context of digital methods of teaching writing. In particular, the authors of the article "Multiliteracies Meet Methods: The Case for Digital Writing in English Education" emphasise that multiliteracy development occurs when working with computer programmes and media content. The authors refer to sociological studies demonstrating a high degree of students' use of digital technologies in the educational process [144]. However, they emphasise that the consequences of active but chaotic use of modern digital resources have not yet been investigated and can be very ambiguous. According to the authors, the use of digital tools should be purposefully included in the practice of teaching writing. We believe that this approach is of some interest, but the phenomenon of multiliteracy is not limited to the digitalisation of learning.

In 2010, there is a continuation of scientific discussion on this problematic. As the most authoritative publication, we chose the work of P. Alberts and J. Sanders "Multimodal Literacies: An Introduction". Discussing the essence of multiliteracy, the authors argue that "multimodality is the priority direction of literacy development in the 21st century" [135]. Multiliteracy studies consider the ways in which different semiotic systems (painting, drama, music, movement, written/oral language, mathematics) are used in the school context. Multiliteracy instruction is presented as a pedagogical practice in which learning success is achieved through students creating complex, socially constructed, personally meaningful, creative texts that incorporate different modes of communication and semiotic systems [135].

We drew attention to the 2011 article. "AMultiliteracies Pedagogy: Exploring Semiotic Possibilities of a Disney Video in a Third GradeDiverse Classroom". In this work, the author defines multiliteracy through the ability to interpret and construct multimodal texts (computer games, digital video, images, graphics) [134, P.398]. The digital character of multiliteracy, which we have discussed earlier, is emphasised. Talking about cartoons as an educational resource, the author emphasises that they are often used

in US primary schools as a material for teaching literacy. However, their influence on thinking activity has not been investigated [134]. The article raises an important problem of mismatch of literacy teaching methods with the requirements of modern multiliteracy realities that students face. The presented work demonstrates an approach close to our definition of multiliteracy through the ability to interpret and create different texts with the help of semiotic diversity. However, it limits the scope of this ability to the digital space. In our understanding, multiliteracy determines a variable approach to learning, which can be realised not only digitally.

The process of literacy transformation was reflected in the works of domestic authors. In 2013, a collective monograph "Text Pedagogy: Experience of Semiotic Solution" was published (compiler and scientific editor - T. G. Galaktionova). The researchers believe that the implementation of the semiotic approach in text creation expands the possibilities of information perception through the prism of individual intellectual features [88]. As we noted earlier, it is necessary to take into account "the diversity of individual intelligence profiles existing within one educational system of the classroom. The use of semiotic approach in education translated into the language of specific pedagogical technologies helps to do this" [88].

Based on the types of intelligence identified in G. Gardner's theory. Gardner's theory, the authors offer a corresponding typology of text types with which students interact ("verbal text", "mathematical text", "visual text", "acoustic text", "text of sensations", "research text", "text of self-knowledge", "text of communication", "existential text" (philosophical reflection) [27]. The ideas of semiotic didactics set out in the collective monograph "Pedagogy of Text" allowed to reveal the multiple nature of multiliteracy from a pedagogical perspective. This idea was further developed in the articles "The Phenomenon of Multiliteracy in the Context of Academic Discourse" [29], "The Academic Text [29], "Academic text as a resource and result in the logic of multiliteracy ideas" [28].

The 2013 paper by I.A. Kolesnikova records the existence of the concept of "multiliteracy" along with other definitions of this phenomenon and reveals the terminological problem arising in this regard [62]. Using the comparative material of

Russian and English sources, the author reveals the meaning of terminological neologisms proposed by the international scientific community to create a generalised idea of the phenomenon of "new literacy". The author describes the characteristic features of such types of literacy as information, audiovisual and media literacy, conditioned by technological aspects of society development. Each of them is a subject of independent study. We share the author's position that we should not talk about the "sum of literacies", but about the synergy of different ways of interaction with real and virtual space, "in the ability not only to read, relying on traditional paper media, but the ability to read information embedded in different sign systems" [62].

The study of the phenomenon of multiliteracy was continued in 2018 in the work of I.R. Trofimova "Multiliteracy as a Social Value and a Factor in the Development of Modern Society" ("Multiliteracy as a Social Value and a Factor in the Development of Modern Society"). The work is based on a detailed analysis of English-language studies. The author defines multiliteracy through skills that allow achieving meaningful results of lifelong learning. This seems very important to us, as it emphasises the importance of finding pedagogical solutions in the development of multiliteracy of modern schoolchildren [117].

In 2021, a large-scale research of Russian scientists "Development of multiliteracy and pragmatic communication skills in students learning a foreign language (English)" was conducted. It was conducted from 2016 to 2020, about 600 students took part. Based on the analysis of theoretical materials, the authors concluded that multiliteracy skills include: "socio-pragmatic understanding of context specificity, pragmalinguistic skills of using appropriate language units, skills of finding and using ICT sources" [136]. The combination of communicative, semiotic and technical factors also correlates with our view of multiliteracy.

Analysing the different aspects of multiliteracy reflected in the presented studies from 1996 to 2021 allows us to see similarities and differences in the description of "multiliteracy pedagogy". A contradiction can be highlighted with regard to the use of digital technologies. In some studies, digital tools are a necessary, obligatory tool, while in others they are only an additional tool of representation. We are closer to the second

approach. The reviewed works are united by the designation of semiotic diversity as the basis of "multiliteracy pedagogy". Multiliteracy is presented as a list of skills and abilities, communication norms necessary for interaction with the represented semiotic multitude. Within this broad spectrum, we want to focus on pedagogical aspects. We consider digitalisation only as a contemporary space of representation, but not the only way to realise multiliteracy.

The term "multiliteracy pedagogy" refers to a variety of activities that can be initiated by both teachers and students. When using "multiliteracy pedagogy", the existing and acquired experience plays an important role, an important stage of learning - awareness of the new, development of methods of knowledge appropriation based on the experience of the individual [133].

Thus, the analysis of the main theoretical provisions of "multiliteracy pedagogy" allows us to draw a number of conclusions. Active research on multiliteracy is related to the fact that the theoretical and practical foundations of contemporary 'literacy pedagogy' are influenced by intermodal transformations. These studies have found that teaching multiliteracy will enable learners to utilise the potential of verbal and non-verbal modes of information transfer when learning a wide variety of aspects. The second finding is the assertion that multiliteracy instruction is effective when students engage complex, socially constructed, personally meaningful, creative texts that incorporate different communicative modes or symbol systems.

In order to address the second task, the works describing examples of multiliteracy teaching practices were analysed. In several studies, the relevance of studying multiliteracy pedagogy is defined through the need to address the challenges of the mismatch between literacy teaching methods and new aspects of interaction with 'texts of a new nature'.

As a result of creating and implementing different multiliteracy learning practices, researchers point out that knowledge is not a set of information in our minds, but something we apply in an activity [133]. Learning is the result of a series of knowledge-generating activities using multimodal means.

The previously mentioned study A Pedagogy of Multiliteracy: Learning by Design focuses on the practical experience of implementing multiliteracy and the role of new digital platforms in lesson planning and materials development [133].

Researchers have noted that multiliteracy instruction should be "reflective" and contain features of didactics and "authentic pedagogy" [133]. They labelled this idea as "learning by creating", another translation that seems possible to us: "Learning by Design". They emphasize four components of such learning: perception of new knowledge through one's own experience, experiencing, conceptualising, analysing, and applying ("To know byexperiencing, conceptualizing, analysing, applying") [133]. The presented provisions refer us to the model of D. Kolb, an American scientist and educator.

B. Cope and M. Kalantis in the chapter "Introduction to Multiliteracy Pedagogy" tried to answer practical questions. First of all, how to understand what process in learning is related to multiliteracy. The researchers believe that "any interpersonal communication is to some extent intercultural" [139], and pedagogy in this context is "the design of sequences of learning activities" [139]. In order to combine written-linguistic modes of representation with visual, aural, gestural, tactile, spatial, to define activities and the order in which they are applied a "pedagogy of multiliteracy" is needed. Teaching multiliteracy, and thus using modes of representation in the educational process, is necessary on a par with referring to classical verbal texts. The authors note that the inclusion of texts characteristic of digital media in the learning process will make learning more "relevant and attractive" [139].

The authors are also aware of some of the controversial aspects of their theory, which include analysing the effectiveness of multiliteracy and assessing attitudes towards the phenomenon. Therefore, they conclude that teaching multiliteracy should include analyses of learning texts and surveys aimed at identifying students' opinions and interests. It is emphasised that texts of different types should become part of communication. The types of activities that are applied in multiliteracy pedagogy, according to scholars, will vary depending on the subject area, interests and individual characteristics of students [139].

The research of B. Cope and M. Kalantis reflects that the perception of new knowledge through one's own experience, as the first component of multiliteracy pedagogy, implies that the experience occurs as a matter of course in the process of life activity. In their view, learning happens randomly and haphazardly. But it does not involve concrete outcomes resulting from systematic, explicit and structured activity. Learning through personal experience and re-experiencing can emerge outside the educational environment - through work with text, visual, auditory materials, for example in the process of a business game or excursion. Scholars note that experiencing the new is a learning process in which the learner is immersed in an unfamiliar field of experience, real (places, communities, situations), virtual (presented texts, images, data, facts or other presented meanings). The degree of novelty should be determined by the learner, but should also contain features of something already learnt. Here the authors refer to the "zone of proximal development" construct proposed by L.S. Vygotsky [21]. Thus, students can proceed to the comprehension of new knowledge, consider its application and possibilities possessed by its carrier, determine the place of this knowledge in their own system of values. According to the authors, learning is the consequence of a series of actions related to the acquisition of knowledge, using multimodal media for external reflection of the thinking process. It consists of different actions in different domains. Through learning, individuals' ways of thinking are developed and also, according to the authors, it is "a social process, since we rely on artefacts of collective memory, and working with others is essentially a collective task of knowledge creation" [133]. Thus, "multiliteracy pedagogy" is a complex process that involves a variety of activities that can be initiated by both teachers and students. When using this methodology, the existing experience and acquired experience play a major role, an important stage of learning is the realisation of the new, the development of methods of knowledge appropriation based on the experience of the individual.

To clarify the pedagogical aspects of multiliteracy, it seems possible to refer to the works of specialists from the Institute of Education of the University of Helsinki [163]. The researchers define multiliteracy in a broad sense as "the ability to be human and live in an increasingly diverse world" [163], understanding others and communicating one's

point of view, learning about the world. [163], understanding others and communicating one's point of view, learning about the world, and critical thinking. Multiliteracy is understood as a way of thinking and implies an open attitude towards other people and cultures, the use of various tools to build communications, the ability to understand a variety of text types in a variety of environments and situations. According to researchers, the key skills of multiliteracy include the ability to evaluate information, arguments and, if necessary, to conduct a discussion, to take responsibility for one's words and actions.

The analysis of publications allows us to state that the phenomenon of multiliteracy is associated with the classical principles of didactics: the principle of visibility and the principle of accessibility. With regard to the methodology of using the phenomenon of multiliteracy, a wide variety of methods, including verbal, visual and practical teaching methods, are proposed.

The use of multiliteracy is possible in collective, group or individual forms of work. The means of learning should include the whole variety of media and pedagogical tools.

It is important to emphasise that the pedagogical aspects of multiliteracy are possible both in the traditional format and with the use of digital technologies.

Analysing the main pedagogical aspects of multiliteracy has shown that learning to read and write continues to play a fundamental role, a new perspective of literacy is not limited to the use of digital technologies. In the educational process there is an opportunity to take into account different types of intelligence and their combinations. It is expected that the educational process will utilise effective approaches to literacy learning, taking into account the diversity of ways of perceiving information. The content of the educational process in the context of "multiliteracy pedagogy" includes all necessary resources that can help in learning new material and relating it to existing knowledge.

In this regard, the expected results can be correlated with the "growth zones" of those types of students' intelligence that will be least manifested in the educational process. It is assumed that the assessment system will be aimed at recording the development of all ways of information perception.

Conclusions on the First Chapter

Theoretical analysis of works on the problems of literacy shows the transformation of this phenomenon, which is now acquiring a multiple character. This process is reflected in the emergence of the concept of multiliteracy.

In order to describe the multiple nature of literacy, multiplicity was considered as a philosophical category, when diversity is seen as a universal property of nature. As theoretical premises of this phenomenon, based on the works on the theory of multiple intelligence, convergent culture, semiotics (semiotic didactics), cognitive approach, we identified the ideas necessary to identify and describe the pedagogical potential of multiliteracy.

Among a wide terminological field, concepts characterising one or another aspect of literacy were identified and analysed. The position of multiliteracy among meta-literacy types (communicative, media, information, etc.) was determined. Multiliteracy is connected with different areas of humanitarian knowledge, which allows us to speak about it as a significant educational result within the framework of pedagogical activity.

In this study, multiliteracy is presented as an integrative personal characteristic that involves the use of verbal and non-verbal means of interacting with new knowledge. A multiliterate person can be described through a set of certain skills.

Based on the comparative analysis of common and unique aspects in the characteristics of the skills, which are distinguished by researchers and which constitute multiliteracy, pedagogical sources on the problem of multiliteracy, the theory of multiple intelligence, the following groups of skills are distinguished:

− Understand, interpret, evaluate and create verbal text (demonstrating verbal literacy);

− Translate and perceive information through graphs, charts, diagrams (manifestation of mathematical literacy);

− Read and create a visual format for presenting information (manifestation of visual literacy);

− Convert content into sounds, understand and interpret information of an acoustic (auditory) nature (manifestation of auditory literacy);

–   Express the ideas inherent in the text through the materialisation of meanings (a manifestation of tactile literacy);

–   Find, compare, contrast and analyse information to gain new knowledge (research literacy);

–   Project external information onto their own experience (self-reflection and reflection literacy);

–   Initiate and carry out communication in the context of the topic (manifestation of communicative literacy);

–   Go beyond the literal meaning of the text, highlight philosophical ideas reflected in the text, analyse what is not directly communicated in the text (manifestation of philosophical literacy).

Consideration of theoretical aspects of multiliteracy as a socio-pedagogical phenomenon allows us to conclude that the new quality of literacy is part of the scientific discourse. Multiliteracy influences different areas of humanitarian knowledge, which allows us to speak about it as a significant educational result within the framework of pedagogical activity.

CHAPTER 2. EDUCATIONAL PRACTICES FOR MULTILITERACY DEVELOPMENT

The aim of the chapter is to identify and describe the educational practices of multiliteracy development as a goal orientated and spontaneous result to substantiate the validity of the proposed characteristics of a multiliterate person. In order to achieve the stated goal, the following tasks are defined:

- to conduct a comparative analysis of the content of educational programmes dedicated to the purposeful development of multiliteracy;

- to analyse the content, structure, principles of organisation and educational outcome of the online course "Literacy in Different Modalities: Communication and Education in the Digital Media Era" through self-study of the course using the method of "research in action";

- to identify the existing experience of multiliteracy skills development in the traditional educational practice of the Russian school.

2.1 Experiences of multiliteracy development in foreign school practice

The information search has shown that there are no educational practices aimed at the development of multiliteracy in the domestic school. A query in the English-language Internet revealed the presence of such experience in higher education. The specific sources were four educational programmes - "Multiliteracy", "Multiliteracy, Communication and Young Children" (University of Newcastle, Australia), "Multimodal Literacy" (University of Melbourne, Australia), "Exploring Multilingualism and Multiliteracy in Education" (University of Oslo, Norway) and the educational module "The Joy of Multiliteracy Learning" aimed at exploring multiliteracy, implemented at the Centre for Playful Learning (Faculty of Education Sciences, University of Helsinki, Finland). The course on multiliteracy is taught to students in the Faculty of Education. Consequently, multiliteracy will gradually be introduced into school education, and multiliteracy is seen as an important skill in the work of future teachers. The authors of educational programmes develop them based on the relevance, "popularity" of certain knowledge and skills for students entering the university. Future teachers or specialists in

the field of education will master a certain list of skills and abilities, acquire certain knowledge for the implementation of professional activities, which will be reflected in their work. Based on these arguments, we have built the logic of the presented stage of the research.

The analysis of experience in the implementation of educational programmes of foreign universities was carried out according to the following parameters: content, expected results, form of educational process organisation, labour intensity, evaluation system, duration of implementation (if available).

Consider each university's experience as a practice in its own right.

Students of the Institute of Education (University of Newcastle, Australia) have the opportunity to take two courses dedicated to the phenomenon under study. It should be noted that the main directions of education and research activities at the university are energy and medicine. The Institute of Education is thus engaged in training teachers and lecturers who will have to teach schoolchildren and students interested in these directions. Perhaps, that is why the training programme for future specialists in education includes the course "Multiliteracy" (28 hours). Teachers note that it is aimed at studying the impact of modern technologies on the level of literacy in society. Students analyse the existing possibilities of digitalisation and create their own methods in this context. Among the topics studied are digital literacy, information literacy, the role of technology in the dissemination of knowledge and the peculiarities of modern communications.

The course is implemented through project activities. The authors of the course believe that this will enable future teachers to orientate themselves in changing conditions. Project-based learning appears as a way to develop communication skills and teamwork on a common task.

The authors of the programme assume that as a result of mastering the course, students will acquire critical thinking skills and will be able to improve their digital, visual, information and media literacy. These "literacies" are necessary both for their own development and for successful realisation in professional life. Students will have to independently determine the "framework" of using modern technologies to teach reading, writing and other types of literacy. As a result of mastering the course, the future specialist

in the field of education will learn the essence of concepts and principles of application of different types of literacy, learn to use modern technologies in the process of knowledge transfer, as well as master the skills of communication, co-operation with other members of society. We have noticed that digital resources are seen as an indispensable element of knowledge creation and transfer. Understanding that digitalisation processes play an important role in the life of modern society, we believe that the focus on digital capabilities will limit the rich pedagogical potential of multiliteracy as a didactic solution in education.

Multiliteracies, Communication and the Young Child (37 hours), also at Newcastle University, reviews current research on the expression and perception of children's verbal, non-verbal and written communication. The course explores pedagogical approaches to developing multimodal communication skills and how to interpret and analyse data collected through various forms of observation and assessment. The course invites participants to consider communication as a social and cultural practice.

 Upon successful completion of the course, students will be able to:

- Compose multimodal texts for children;

- Verbal and non-verbal communication with young children, communication skills;

- Use knowledge of language and early literacy to plan activities for children;

- interpret and analyse data collected through various forms of observation and assessment of children's literacy;

- Explore the varied linguistic background of children's communication.

Students will analyse the stages of children's expressive and receptive language development, design strategies for effective communication, and implement activities that promote multimodal communication skills. At one point in the course, students will learn to identify atypical language development, design literacy support strategies, and develop forms of communication with children. A strength of the course is the exploration of different aspects of oral language development, taking into account the influence of digital technologies that today's children see around them from birth.

Another Australian university, the University of Melbourne, offers a 24-hour Multimodal Literacies course. It should be noted that the university is ranked among the most prestigious in the world [136], and the main areas of study at the university are arts and humanities.

The course is devoted to the development of theory and methods for teaching multimodal literacy to children. The authors of the course describe the structure of this type of literacy through the possession of linguistic, spatial-visual, auditory, verbal, kinaesthetic modalities. The course description emphasises that literacy has changed as a result of new technologies, in everyday life both locally and globally. Consequently, literacy instruction must also be transformed.

Teachers refer to literacy learning as the skills of communicating our ideas and perceptions and the use of a wide range of multimodal texts. Particular emphasis is placed on exploring the diversity of international communicative practices, as well as investigating the role of multiliteracy in the formation and development of social connections.

The planned learning outcomes include identifying, analysing and critically evaluating multimodal literacy pedagogies, implementing a variety of multimodal environments, new technologies for learning the 'classical' school curriculum.

The course authors believe that digital technologies are part of multimodal literacy and enrich the meaning and transmission of ideas in our time.

General information about the course states that it is intended for future teachers of any discipline. A theory of literacy learning, multiliteracy, is presented, arguing that the modern communication environment is becoming increasingly multimodal. Written language is closely related to oral, visual, gesture, tactile and spatial forms of communication. Effective pedagogy must take into account the new means of communication and investigate the underlying processes.

The course takes into account current trends in literacy instruction. Literacy in the course description refers to both language proficiency and academic writing. Students explore the effects of media influences on speech and writing. A literate person, according

to teachers, reads and writes traditional, digital texts (videos, data sets, infographics, digital storyboards). This diversity of texts transforms literacy into multiliteracy.

We were pleased that all modalities are taken into account, there is reflection, attention to the comprehension of different types of text.

The University of Oslo, the oldest university in Norway, runs a postgraduate research programme at the Faculty of Education Sciences entitled "ResearchingMultilingualism and Multilingual Literacies in Education" ("ResearchingMultilingualism and Multilingual Literacies in Education", 24 hours). The authors of the programme define multilingualism as a phenomenon that emerged long before modern digital technologies. This position is reflected in our study. The course instructors invite future scholars to explore the theoretical and methodological approaches that are commonly used in teaching data analysis. Based on the analysis of studies of the last decades, a detailed analysis of the development of multiliteracy is provided and the diversity of communication is taken into account. The methods of data analysis, according to the teachers, correspond to the study of communication transformations.

The educational programme includes lectures and group activities to analyse data on diverse aspects of literacy transformation, complex social phenomena and pedagogical issues in the field. The graduate student is expected to achieve the following outcomes at the end of the course:

- have knowledge of current theoretical and methodological approaches to multiliteracy research in education;

- Evaluate and analyse theoretical concepts and methodologies used in multiliteracy research;

- use various methods of data analysis, master techniques for analysing information in large volumes.

This list of outcomes is based on the objectives of postgraduate education, i.e. training of future teachers and researchers, which is not directly related to multiliteracy skills, but it highlights such an important skill as data analysis and often in large volumes is an important part of learning.

The search for reasons to consider multiliteracy as a meaningful educational outcome led to the discovery of this phenomenon in the Finnish National Educational Standard [140]. The concept of multiliteracy education is being explored by the Faculty of Education Sciences at the University of Helsinki. This activity has led to the emergence of the Centre for Playful Learning at the Faculty. The programme implemented by the centre since 2017 is aimed at developing multiliteracy in children from 0 to 8 years old and is called "The Joy of Learning Multiliteracies" ("The Joy of Learning Multiliteracies"). The activities of the Multiliteracy Research Centre allow to capture and study new trends in this area.

The Centre's tasks include the development of methods for teaching and disseminating multiliteracy among children from zero to eight years old [163]. Mastering this experience allows to improve the qualification of teachers working in children's educational and cultural institutions.

Along with the development of methodologies, the Centre is researching the impact of the multiliteracy phenomenon on children's development and educational outcomes. Specialists working in kindergartens, schools and libraries are involved in determining the level of this development and monitoring the results.

In their descriptions of multiliteracy teaching methods, researchers pay special attention to their interdisciplinarity and their focus on overcoming social problems, such as overcoming cultural and gender inequalities.

A review of the Centre's programme identified four main objectives:

- Development of multiliteracy in children in the context of interaction between pre-school educational institutions, primary schools, libraries and cultural centres;

- Improving the professional training of educators, teachers, librarians and cultural centres;

- analysing the results of children's mastery of multiliteracy skills;

- dissemination of the experience gained and development of a set of measures for further improvement of the entire cultural and educational environment at the state level.

The set of measures developed by the Centre as a result of its research involves the exchange of information and experience between professionals from preschools,

schools, libraries, museums and other cultural centres. In addition, the results of the Centre's research are available to children and their parents.

The leaders of the research centre believe that "multiliteracy is the basis of everything" [163]. The communicative component of multiliteracy allows to apply a variety of tools and approach to communication, to analyse different types of texts in different environments and situations. It cannot be stated unequivocally that the proposed opportunities will fundamentally transform learning. It is important to note that in the articles presented on the results of the Centre's activities, these theses do not have sufficient argumentation. However, the long-standing practice of the development of the direction and the use of its principles in the Finnish educational standard show that some of the developed measures of multiliteracy development contribute to obtaining a high educational result.

Let's make a tentative conclusion.

Based on the information search of educational programmes devoted to the development of multiliteracy, it was revealed that as of 2022, only programmes of foreign universities, specifically devoted to the phenomenon of multiliteracy, were found in the public domain. The programmes are implemented both at the undergraduate and graduate levels. The subject of the study were educational programmes of three universities (universities of Melbourne, Newcastle, Oslo) and materials of the research centre of the University of Helsinki "The Joy of Multiliteracy Education". All programmes were found to be united by their cross-curricular focus. The authors identify digital, visual, information and media literacy as components of multiliteracy.

Programmes limit multiliteracy to digital aspects only. Considering multiliteracy as a principle of the educational process, we believe that digital reality facilitates the use of, but is not the only way to implement multiliteracy principles.

The planned educational outcomes include the development of interlingual and intercultural communication skills. Pupils master the experience of self-presentation taking into account the diversity of modalities. The tasks are oriented towards analysing data presented in different semiotic systems. The final work is related to conducting one's own research on the phenomenon of multiliteracy. As a result of the analysis of the

content of the presented courses, we can conclude that the types of activities specified in the description of educational programmes correlate with the multiliteracy skills identified by us in the theoretical part of the study in relation to the means, activities, modes of communication, modalities of perception, etc. The final work is related to conducting one's own research on the phenomenon of multiliteracy.

Table 1

Correlation of the activities indicated in the description of educational programmes with the multiliteracy skills identified in the theoretical part of the study

The nature of the text	Multiliteracy skills and competences that we have highlighted in the theoretical part of the study	Activities specified in the description of educational programmes
"Verbal Text."	Ability to comprehend, interpret, evaluate and produce verbal text;	Performing written work: describing research, writing an academic essay;
"Maths Text."	Ability to translate and comprehend information through graphs, charts, diagrams;	Presentation of research results in charts, graphs, diagrams;
"Visual Text."	Ability to read and create a visual representation of information;	Visualisation of the results of the study;
"Acoustic Text."	Ability to convert content into sounds, understand and interpret acoustic (auditory) information;	-
"Sensation Text."	The ability to express the ideas inherent in a text through the materialisation of meanings;	-

"Research Text."	The ability to find, compare, contrast and analyse information to gain new knowledge;	Conducting your own research in multiliteracy issues;
"Self-Knowledge Text."	The ability to project external information into one's own experience;	Reflection on the topics of the course;
"Text of Communication."	Ability to initiate and carry out communication in the context of the topic;	Completion of assignments taking into account mutual checking of fellow students' work, exchange of feedback;
"A text of philosophical reflection."	The ability to go beyond the literal meaning of a text, to identify ideas reflected in a text, to analyse what is not directly communicated in a text.	-

Comparing the content of tasks and course materials with the skills we have identified, we found that in the programmes we have found there is an orientation towards verbal, logical-mathematical, visual ways of working with information, there are tasks related to the research type of intelligence, and there is an opportunity to develop communicative skills. However, as a result of the analysis, the importance of such ways of interaction with new information as tactility, reliance on one's own experience, reflection and existential reflection was underestimated. We are convinced that the integrity of perception takes into account all nine ways of interacting with information and we record this as a basis for creating educational situations in which the existing diversity and different facets of experience will be taken into account.

2.2 Experiences of multiliteracy learning in a short-term distance course programme: a study in action

The task at this stage of the study is to analyse the researcher's own experience of taking the short online course 'Literacy Across Modalities: Communication and Education in the Digital Media Age'.

The courses and research programme presented in the previous paragraph give an idea of the scientific schools engaged in research on the phenomenon of multiliteracy. Educational practice is necessary for the formation and consolidation of skills and abilities. Such an opportunity was found on the Coursera platform.

The University of Illinois School of Education faculty developed an online course on Coursera with no specific target audience, Multimodal Literacies: Communication and Learning in the Era of Digital Media (20 hours). We believed that as a result of the course we could correlate the results planned by the authors with the actual results.

A significant characteristic of the course is its rating on the platform - 4.8 out of 5 points. Since 2016, learners have left 23 written comments about the course. The majority of comments (20) are positive about the experience. One learner who completed the course in 2020 expresses the hope that "in the near future, more and more people will be learning about multiliteracy. Knowing its main aspects, people can not only improve and accelerate the quality of learning or absorbing any information, but also strengthen interpersonal communications" [86].

Let us turn to our definition of multiliteracy. It is understood as an individual personal characteristic, which means that the study of one's own experience is related to the context of the research. To fulfil this task, we used the action research method. Let us specify some characteristics of this method. The method of "action research" was developed by a scientific school led by the American psychologist K. Levin in 1944, which included scientists from the USA and Great Britain. K. Lewin began to develop the method of action research with the purpose of "comparative study of conditions and consequences of various social actions leading to new social actions" [153].

The course "Literacy in Different Modalities: Communication and Education in the Digital Media Era" was chosen on the basis of its practical orientation, the authority of

the authors (members of the New London Group), who published it in 2017, which confirms the viability of the course. It is based on "big ideas" related to communication, representation (presenting what has been learnt in a mindful way) and meaning-making. Each of the four modules ends with a proposal to write an essay on an aspect of multiliteracy learnt. It is necessary to give a detailed answer (more than 300 words), using materials, additional resources to illustrate this or that thesis. Works are assessed through peer review, which allows you to familiarise yourself with the ideas of fellow students. The students' texts are published in the format of a blog and can be viewed by teachers and other participants.

The authors believe that as a result of the course, students will transform their ideas about literacy, learn how to search for and analyse contemporary multimodal texts, and use different ways of presenting ideas that are found in different social and cultural contexts. The skills listed are presented in a concrete, unambiguous way, and students are attracted to the opportunity to explore ways of presenting material in different modalities and contexts.

As you are expected to complete assignments on the platform itself, submit your own materials and work with multimodal texts, the online course itself is a practice of multiliteracy development. Building communication on a blog with fellow students from different countries, evaluating their work, and presenting your position using technical features are all part of taking a course on multiliteracy.

The authors note that the toolkit of communication and representation will increase with digital tools. For these reasons, literacy pedagogy needs to be expanded to encompass literacy in the plural (multiple literacy, multiliteracy - these terms are used synonymously).

Reading and writing are presented as resources of communication, intercultural interaction. The authors define literacy as a key skill of representation. They mention that the concepts of "literacy" and "representation" may not be clear and need to be clarified, which will be presented in the course. It is emphasised that learners will have to be multiliterate already when seeking and determining the best ways of learning, communicating, representing, etc., in order to learn.

The following ideas and statements were of interest to us in the course content. Writing is seen as a variety of approaches to understanding a small aspect of multiliteracy. Writing can be a process, an act of communication, or used for personal purposes. In this case, language is used as something that serves to develop mental abilities. In a multimodal sense, this idea takes on a broader interpretation. The idea of the course that the semiotic diversity of language can help us to extrapolate, frame and systematise ideas, opinions, knowledge is very close to us.

Another aspect of literacy is that it acts as a means by which meaning is conveyed in a particular sequence. Modern communication is not only about reading and writing, but also about creativity and the critical selection of information. Conceptions of literacy change according to how meaning is created.

As in the programmes of foreign universities, the online course pays much attention to communication, modern transformations of communication methods in interaction with society. The teachers are convinced that mastering and developing certain communicative patterns and structures begins in childhood. As learning progresses, the set of such patterns expands. Based on the content, we can conclude that this is a bidirectional process: on the one hand, the development of communication skills is necessary for communication with others, on the other hand, they can be applied to their own development because the process of intrapersonal communication is complex and ambiguous.

The authors point out the importance of semantics in the study of multiliteracy. The transmission of the semantic meaning of a text in different formats is defined as a creative intellectual action. The theory of hermeneutics is supplemented with new ideas about the methodology of interpretation. Multiliteracy, according to the teachers, is expressed in the initiation of interaction and perception of surrounding verbal and non-verbal messages.

A separate section of the course is devoted to the principles of constructing multiliterate texts while maintaining and respecting the norms of traditional literacy. The materials point out that there is no single template for creating a traditional written or

multimodal text. This is another argument in favour of multiliteracy: the diversity of text types, modalities and modes of communication enriches communication

We noticed that the term "design" was often mentioned in the lectures. Teachers understand this term as the creation of a text taking into account existing grammatical, semantic, phonetic and other constructions. The text is created from a specific idea, which is conveyed through the genre and composition of the text (introduction, main part, conclusion). Text construction acts as an active, complex process. Constructions can be rearranged and the structure of the text can be modified. A new result obtained by modifying the previous one is labelled as a "reconstruction". An example of such a reconstruction would be the creation of a video based on a verbal text. Initially, as a rule, a plan or a script is created, then during the filming process the idea can be transformed, and when perceived by another person the finished product is endowed with additional meaning. The presented example demonstrates a situation in which literacy becomes multiple, polymodal. The course pays great attention to the intrapersonal perception of the text through the demonstration of one's own self, knowledge, skills, attitudes, etc.

The importance of using all possible ways of transmitting information is emphasised: oral speech, writing with the use of verbal text and symbols, spatial images, tactile sensations - all these semiotic systems, according to the authors, are not only different but also interrelated. The ideology of the course is based on the belief that the higher the level of education, the more meanings appear in the student's semantic field. We observed that the curriculum of the course actively uses visual, verbal and auditory modalities. For example, students are given the task of recreating and reinterpreting a scientific experiment or historical event. This involves the ability to interpret the meaning of sounds, texts, images, spatial solutions in the context of a chosen story. In teaching, great attention is paid to digital technologies, which are presented as an opportunity to combine all sets of available formats.

An important part of the online course under consideration is the study of the rules of multimodal meaning construction. The teachers draw attention to the fact that in the modern world we find an extraordinary mixture of modalities, formats of information presentation. The following statements are cited as arguments in favour of the

multimodality of modern literacy: the history of the development of forms of information representation indicates that different ways of presenting information have always existed. However, the specificity of our time lies in the acceleration of interaction, interpenetration of these forms through digital technologies.

The course materials emphasise that texts can be 'filled' with different modalities to create effective communication or presentation of the material being studied, but that images and verbal text will always be closely related. This thesis can be considered one of the rules for creating a multimodal text. To confirm it, the authors cite the example of attending a lecture, when a student is simultaneously in a certain space and perceives the speech in a certain context. The lecturer's message itself can be supplemented with slides, images. This is in line with our ideas of creating a "text of a new nature".

In the content, the importance of tactile modality and auditory perception (gestures, facial expressions, tone of voice, appearance) is separately disclosed. It is emphasised that in the context of digital interaction, all of these should be taken into account when preparing an online course.

Part of the course is devoted to the study of the process of "changing modalities". The assignments suggest analysing the interaction and combination of modalities, ways of switching from one modality to another. In this context, the complex term "synaesthesia" (co-conception) is considered. In contrast to psychology, where the term "synaesthesia" is used in a narrow sense to describe a specific state where stimulation of one sensory system causes an involuntary response in another, in the course content this concept is used to describe situations in which people have strong associations and feelings in different sensory systems at the same time. This reflects the diversity of ways in which the world is perceived sensually. It is emphasised that changing modalities deepens thinking, improves understanding, and develops representational abilities in the process of cognition.

One of the modules looked at the variety of theories about literacy applicable to teaching children to read and write. In particular, the authors talk about N. Chomsky's transformational grammar and M. Halliday's functional linguistics. Theoretical approaches to understanding reading and writing processes allow analysing the

characteristic features of each modality. The presented linguistic, philological findings demonstrate that the processes of reading and writing are much more complex than it is customary to interpret them in ordinary consciousness. The practice of multiliteracy when working with a text allows to better study its essential characteristics, to deal with complex semantic structures.

We found significant and interesting the position of linguists who argue that meanings are formed by the text as a whole. If a text contains links, images, etc., it becomes multimodal and multiliteracy skills can be applied in its creation and perception.

Let's look at the preliminary conclusions we have drawn from our study of this course through the action research method.

The course provided an opportunity to get acquainted with new theoretical provisions, ideas from different areas of humanities science, on the basis of which the concept of multiliteracy is built. The format of the assignments and mutual verification implies the development of communication skills of the participants, and also gave an opportunity to get acquainted with the ideas of fellow students. The teachers tried to present complex aspects of linguistics in simple language and gave examples of complex phenomena in everyday life.

Despite the course title's emphasis on digital technologies, much of the lectures focus on text comprehension in traditional literacy.

The analysis of the researcher's own experience of the short-term online course "Literacy in Different Modalities: Communication and Education in the Digital Media Era" showed that it is designed for education specialists and is aimed at developing students' own teaching methods, taking into account the theoretical knowledge of the role of verbal and non-verbal ways of presenting information. The implementation of the course in the digital space simultaneously expands access to knowledge and narrows the range of opportunities for students, as the assessment is based only on written assignments, without taking into account the studied modalities.

The aim of the course was to introduce current theories concerning language, communication and media and to explore the ways in which these theories can be used in pedagogical practice. The authors indicated that participants who completed the course

would gain new insights into literacy, learn to create and analyse multimodal texts, and use different ways of representing ideas found in different social and cultural contexts. Interiorisation of the acquired knowledge was carried out through solving specific educational cases based on existing and new experiences.

Analysing the curriculum, we state that the use of images, verbal texts, oral speech and background sound is a traditional way to convey meaning. However, the course demonstrated the possibility of combining these modalities to learn and rethink any new material, taking into account the peculiarities of perception.

The majority of the materials were devoted to the transformation of literacy into multiliteracy. This was manifested at the level of both form and content. Video, texts, diagrams, images, and oral speech were actively used in the presentation of the material. However, we lacked reflexive tasks, the possibility of existential reflection and tactile sensations. Unfortunately, even the final task did not imply a complex manifestation of multiliteracy skills, which were discussed in the theory part. Thus, the "research in action" showed the strengths and "growth zones" in the approaches to the development of multiliteracy courses in the experience of foreign colleagues [57]. It seems necessary to find out the attitude of Russian teachers and schoolchildren to the phenomenon of multiliteracy in modern education.

2.3 Multiliteracy skills in the context of the Russian school educational process

At the previous stage we proved that multiliteracy is a stage of literacy transformation. At the same time, we have not found any publications and methodological materials indicating that this phenomenon is becoming the subject of attention in Russian schools. It is logical to assume that the phenomenon of multiliteracy is not yet widespread in the domestic sources, respectively, there is no purposeful work on the development of multiliteracy skills in the conditions of basic education.

It seems necessary to identify the attitude of teachers and schoolchildren to multiliteracy as an educational result and to determine to what extent the skills we have identified at the theoretical stage of research are in demand in the context of the educational process of the Russian school.

In order to complete the task presented it is necessary to:

1.   To develop a questionnaire for teachers and schoolchildren, which fulfils not only diagnostic but also educational function in relation to multiliteracy;

2.   Conduct a questionnaire survey on a representative sample of teachers and pupils;

3.   To analyse the results of the questionnaire in order to take into account the findings when developing a model of an educational situation that actualises multiliteracy skills.

A characteristic feature of the modern learning process is the tendency of interdisciplinary integration, which is becoming more and more evident in school education. The ability of students and teachers to integrate in this way, the ability to present a subject or phenomenon from different angles, is a kind of deficit. It can be assumed that multiliteracy is a system-forming factor that allows us to see the integrity of the multicomponent structure of new knowledge.

To develop the questionnaire, it was important for us to draw the attention of teachers and schoolchildren to multiliteracy as a component of modern education, to determine the nature of multiliteracy presence in the existing practice, to identify the needs and preferences of respondents regarding various multiliteracy skills. Thus, we intended to collect "touches to the portrait" of a multiliterate person.

The main provisions of the theoretical research were translated into questions and statements. We took into account that the phenomenon of multiliteracy is not familiar to the respondents. That is why the survey partly fulfilled an educational function. From the content of the questions, the respondents could get acquainted with multiliteracy, get initial ideas on the basis of which they could draw their own conclusions and determine their attitude.

The hypothesis of the study was the assumption that a multiliterate person navigates the diversity of information and uses it to interact with the surrounding reality.

The first item of the survey contained characteristics of multiliteracy, the participants were asked to respond to this list from the point of view of legality, expediency, relevance of the proposed characteristics in the context of the educational

process. The content of the task was formulated as follows: "The basics of multiliteracy can be described through four components: individual experience of working with information; a variety of forms of self-expression in the process of communication; a critical view that allows to relate information to the social context and individual needs; the practice of transforming a system of meanings and values from one context to another. Having learnt the basics of multiliteracy, a person will be able to engage in education in a more meaningful and successful way".

The answer options were ranked according to the Likert scale [19], which allowed to express the degree of agreement or disagreement (acceptance, non-acceptance), and there was also the option "I find it difficult to answer".

The second item was aimed at identifying the types of literacy that students and teachers believe are already being developed in the modern educational process. The plural nature of multiliteracy implies a multicomponent structure in which different types of literacy are present. In the logic of the theory of multiple intelligences, we focused on nine types of intelligence and their corresponding types of literacy. Respondents were asked to select the literacies that they had already managed to develop in school. The list consisted of the following items:

1. Communication Literacy;
2. Information Literacy;
3. Economic literacy;
4. Maths literacy;
5. Environmental Literacy;
6. Media literacy
7. Reading literacy
8. Science literacy
9. Visual literacy
10. Auditory literacy
11. Tactile literacy
12. Research literacy
13. Self-analysis and reflection literacy

14. Philosophical literacy

15. Literacy in writing

16. Oral literacy

17. Other...

In the third point, we wanted to find out what is the most important for Russian teachers and schoolchildren among the indicators of readiness to apply multiliteracy skills in the network space. We asked respondents to indicate their preference as to what should be studied at school:

1. Adherence to the rules of ethical communication on the Internet;

2. Knowledge of the principles of resistance to information manipulation;

3. Applying ways to "promote" their own texts;

4. Mastery of how to navigate media resources;

5. Copyright Compliance;

6. Mastery of information security rules;

7. Utilising basic programming skills;

8. Understanding the principles of creating and reading texts of new (online) genres;

9. Knowledge of criteria for assessing the quality and credibility of a text source;

10. Possession of skills in working with text programmes: "translator", "search", "anti-plagiarism".

In the fourth item of the survey, respondents were asked to identify, through multiple choice, the skills (not more than five) that, in their opinion, should be given more attention in school teaching:

1. Understand and evaluate verbal text

2. Comprehend information through graphs, charts, diagrams, and diagrams

3. Read and create a visual format for presenting information

4. Find, compare and analyse data

5. Create the optimal sound solution to convey the required content

6. Express the ideas in the text by materialising meanings

7.   Project external information onto their own experience

8.   Initiate and carry out communication in the context of the topic

9.   Go beyond the literal meaning of the text, highlighting the philosophical ideas reflected in the text

10.   Other...

In this way, the content of the survey questionnaire was designed.

We approached teachers of different subjects, 217 teachers responded. When interacting with schoolchildren, we focused on high school students aged 14-16 years old. 128 schoolchildren took part. In total, 345 respondents directly involved in practical educational activities took part in the study.

Let us consider the results obtained.

In our address to respondents, we outlined our position on the processes of literacy in the modern world. Among the main trends were indicated:

- The evolution of the concept of literacy;

- The need to master new forms and ways of communication;

- The multiple, polymodal nature of the "new" literacy.

As a result of the ongoing processes, it was proposed to consider the emergence of multiliteracy and to understand this phenomenon.

First question. It was important for us to agree with the respondents on the essence of the concept of "multiliteracy". Taking into account the novelty and ambiguity of interpretation of the term, we put in the wording of the question our principled positions, in which multiliteracy was supposed to be described through four aspects:

- Personalised experience with information;

- Diversity of expression in the communication process;

- A critical perspective to relate information to social context and individual needs;

- The practice of transforming a system of meanings and values from one context to another.

Since the question was of an educational nature, it was important for us that respondents saw the main characteristics of multiliteracy and responded to them. The participants of the questionnaire, according to our intention, were invited to dialogue

about multiliteracy problems, so the positions of understanding - misunderstanding, acceptance - non-acceptance were important to find a common language with them for further conversation.

We assumed that by understanding the essence of the new phenomenon through its characteristics, respondents would help us clarify the role of multiliteracy in modern education.

Comparison of the results of teachers' and pupils' answers allowed us to record that 53% of teachers and 66% of pupils demonstrated understanding and agreement with the proposed characteristics of multiliteracy. Assuming the risk of socially expected answers, we still assume that this choice was made consciously, as the questionnaire itself did not imply correct or incorrect answers. It is quite predictable that 28% of pupils found it difficult to define their attitude.
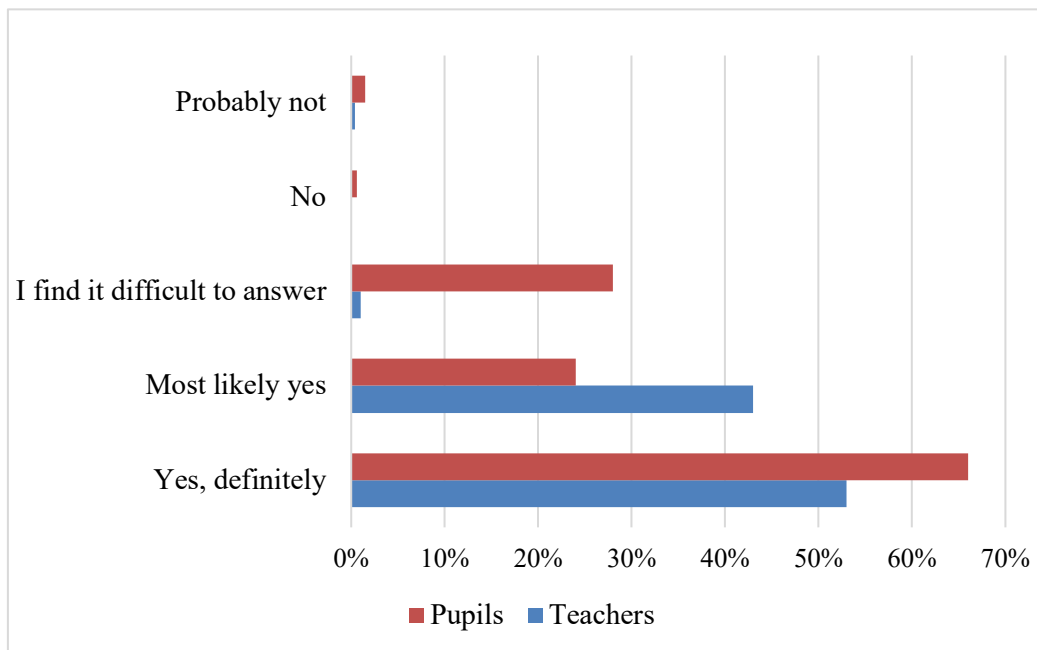
Figure 6 - Results of teachers' and pupils' answers

A minimal (statistically insignificant) percentage of respondents demonstrated disagreement with the presented characteristics, which can be explained by their own position or error. The remote form of the survey did not imply the possibility of specifying the reason for a negative answer, but its presence should be taken into account.

The respondents' support for our position on multiliteracy gave us reason to believe that further dialogue would be meaningful and substantive.

In the theoretical part we substantiated the polymodal character of multiliteracy skills, which (in the logic of the theory of multiple intelligence) included verbal, logical and mathematical, communication and research skills, visual, auditory, tactile perception, self-analysis and reflection skills, existential (philosophical) reflection. In order to determine the role of the above skills in the educational process, we suggested that the participants choose the ones that can be developed at school.

Our assumption was that the leading positions will be taken by the types of literacy directly related to the subjects studied at school - science (research), mathematical, verbal. While visual or auditory types of literacy are not developed within the framework of a particular subject. According to the obtained data, our assumptions were confirmed.
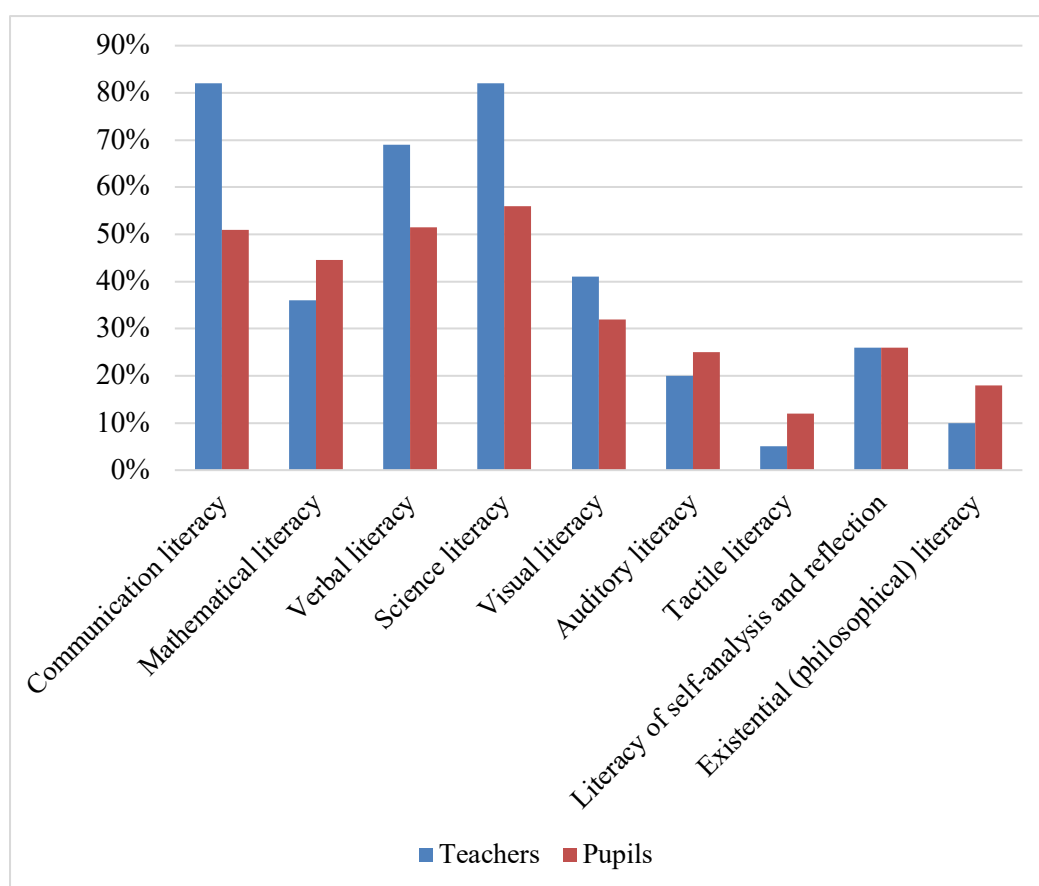
Figure 7 - Types of literacy that survey participants manage to develop in school

Special attention should be paid to the difference in pupils' and teachers' answers. Teachers note that the best way to develop communicative and natural-scientific literacy is in the educational process. At that, pupils distinguish verbal (62%) and natural-science (research) literacy. The skills constituting communicative, verbal, natural-scientific

(research) literacy in teachers appear to be completed, according to pupils these skills are less developed. Teachers exaggerate the success of development of communicative, verbal, research and visual groups of skills. While pupils' position on these issues is critical. In mathematical and auditory skills teachers underestimate the success of development and are critical about the success of development of these types of literacy.

The priorities of both groups include verbal, communicative and natural-scientific (research) literacy, while auditory, visual, tactile and existential (philosophical) literacy types are "falling behind", which is due to a rather traditional list of subjects, as well as the age characteristics of students (philosophy is not yet part of their education). The diversity of ways of perceiving and transmitting information needs to be popularised, taking into account the positions of all participants in the educational process. Many of the skills we include in multiliteracy are developed at school.

Question three. Considering multiliteracy as a set of skills, it was important for us to understand what are the norms and rules for using multiliteracy:

- compliance with ethical norms (observance of copyright norms when using other people's materials, observance of norms and rules of communication on the Internet)

- Ability to navigate in the information space (interaction with media resources, mastering basic programming skills, ability to resist information manipulation)

- Using all possible tools for working with text to achieve their own goals (processing and presenting information using digital resources (MS Word word processor, web services for translating and identifying spelling and punctuation errors, etc.).

 The proposed question aimed to find out what from this list (according to respondents) are the priorities for schooling.

Results were summarised on the basis of participants' multiple choice. We did not make specific assumptions regarding the prediction of the results. All the above skills are meta-skills and objectively necessary. Therefore, we were pleased that all of them were in the field of attention of the respondents.

It turned out that the answers of teachers and pupils differed in a number of points. Thus, teachers consider it necessary to develop skills related to the ethics of

communication on the Internet and orientation in media resources. At the same time, pupils put forward the skills of "promoting" their own texts (the last place in the rating for teachers) and resisting information manipulation (there is no contradiction with the teachers' choice here) (see Figure 8). Mastering basic programming skills turned out to be the least demanded skill for both groups. Probably, it is explained by the presence of "Informatics" lessons as a compulsory subject of the curriculum. Although this choice was a little more popular among teachers.
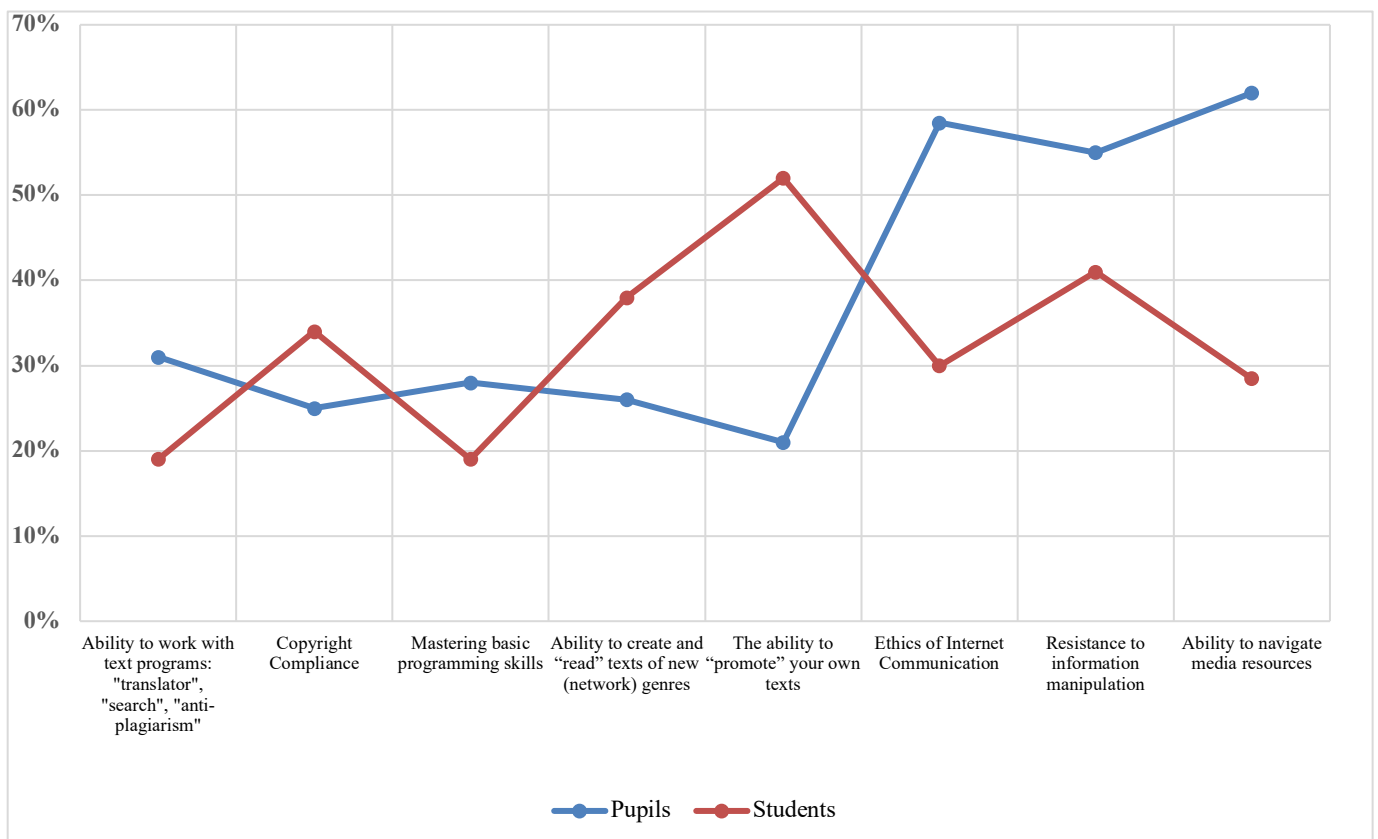
Figure 8 - Multiliteracy skills and competences that are appropriate to focus on in school education

It is obvious that pupils focus on the knowledge and skills needed for specific activities, while teachers see the problem more in terms of education. We were pleased that students want to learn how to create and "read" "texts of a new nature" because we believe that multiliteracy implies opportunities for interaction and creation of "texts of a new nature".

The skills listed above are conditioned by the norm of survival in the digital modern world. Multiliteracy in this world, in our opinion, is a value and a tool. The skills listed

above are a prerequisite for the full realisation of multiliteracy. Therefore, it is fundamentally important that both teachers and students understand the importance of learning these skills at school. It can be assumed that possession of these skills will allow students to realise multiliteracy both in the educational process and in solving life tasks.

Fourth question. As it was already mentioned in the previous part of the study, our attempt to identify and systematise the skills that make up multiliteracy on different grounds (in relation to means, activities, modes of communication, perception modalities, etc.) comes down to modelling the structure of this personal new formation on the basis of G. Gardner's theory of multiple intelligence [33]. This allows us to identify and describe the following groups of skills: the ability to understand, interpret, evaluate and create a verbal text; the ability to translate and perceive information through graphs, schemes, diagrams; the ability to read and create a visual format of information presentation; the ability to transform content into sounds, understand and interpret information of acoustic (auditory) nature; the ability to express the ideas embedded in the text by means of materialising meanings; the ability to find, compare, contrast and analyse information for the purpose of the study; the ability to understand, interpret, interpret and analyse information; the ability to understand, interpret and interpret information; the ability to understand and interpret information in a visual format; the ability to understand and interpret information of an acoustic (auditory) nature. Respondents were asked to choose no more than five skills from the list provided by.
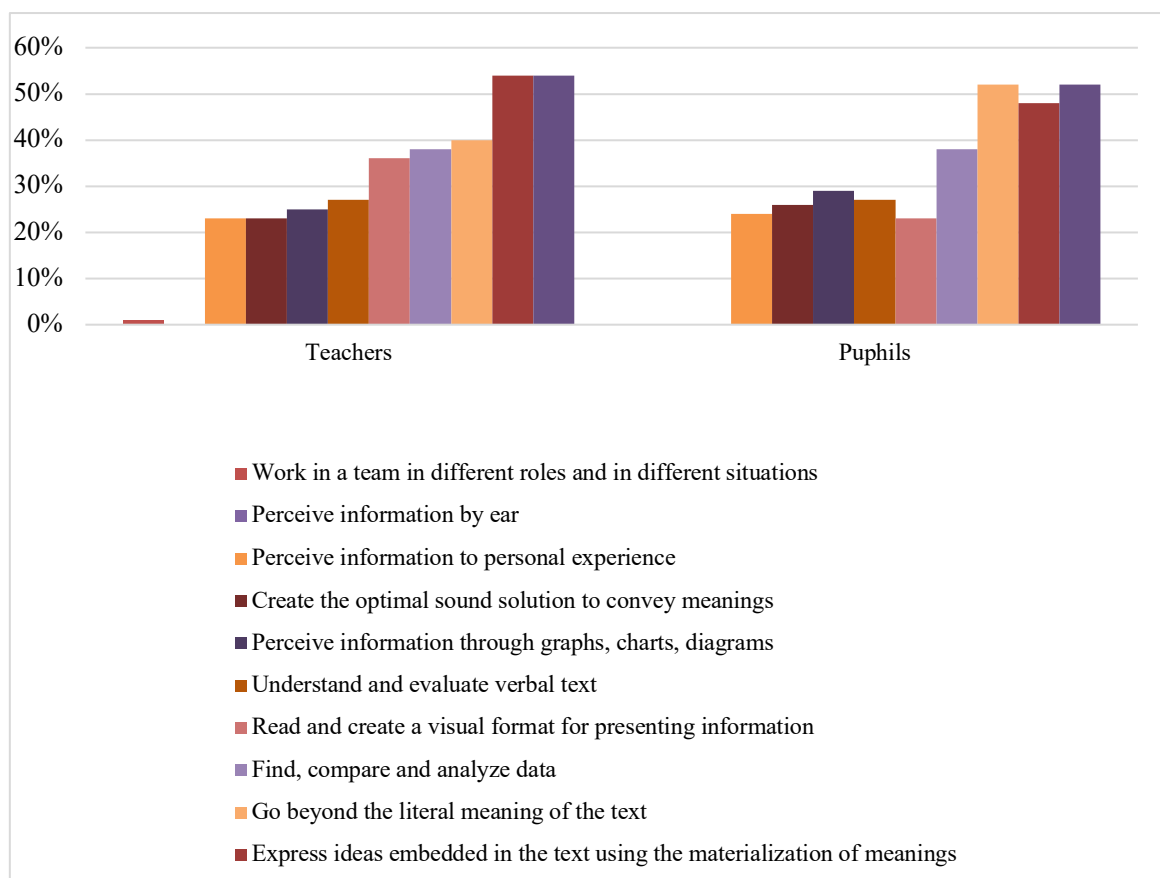
Figure 9 - Multiliteracy skills that respondents think should be developed and improved in school

The results of the survey showed that the most "demanded" in both groups was the skill of expressing the ideas inherent in the text by means of materialisation of meanings, as well as the ability to go beyond the literal meaning of the text, to highlight the philosophical ideas reflected in the text. It can be assumed that the first choice is explained by the habitual deficit of tactile, bodily-kinesthetic sensations when mastering new information. The second one indicates the desire for deep, meaningful perception, search for meanings and values. It is good to see that these positions are common for both teachers and pupils. The desire to learn to find, compare, contrast and analyse information to obtain new knowledge proved to be more attractive for pupils than for teachers. However, the ability to read and create a visual format for presenting information was selected as equally important for all respondents. A significant gap was found with regard to the ability to initiate and carry out communication in the context of the topic. More than a third of teachers labelled it as a priority, while among pupils this position was much

less popular. Both groups are in solidarity in the choice of ways of working with verbal text. Schoolchildren are slightly more interested than teachers in skills of translating and perceiving information through charts, diagrams and diagrams. They would also like to improve their skills of understanding and interpreting acoustic information. Pupils more actively than teachers chose the ability to project external information into their own experience. Perception of information by ear, teamwork took the last positions in the rating, probably, because these skills are quite actively used in the educational process. In general, the obtained sample confirmed the need for variant approaches in the organisation of the educational process, taking into account the diversity of preferences of different types of learning activities. This approach sympathises with our pedagogical views and has been instrumentally embodied in the technologies of semiotic didactics. It is logical to assume that educational practices, having a rich digital resource of audio and video content, wide opportunities in the organisation of individual and group interaction, turn out to be an effective way to develop multiliteracy, on the other hand, the communicative code of multiliteracy becomes a necessary condition for the successful use of digital educational practices.

The aim of this stage of the research was to identify teachers' and schoolchildren's perceptions of a multiliterate person. The results obtained made it possible to clarify the essence of the phenomenon of multiliteracy, identify and describe the norms and principles, existing experience of multiliteracy development among modern schoolchildren.

Respondents agree with the statement that a multiliterate person has individual experience of working with information, takes into account the diversity of expressions in the communication process, critically evaluates information, can transform meaning systems in different contexts and relate information to the social context and individual needs. Certainly, certain skills and abilities are formed in practical activities.

From the proposed typology of multiliteracy components (individual experience of working with information; variety of forms of self-expression in the communication process; a critical eye that allows relating information to social context and individual needs; practice of transforming a system of meanings and values from one context to

another), the types of literacy that teachers and students believe are already developing quite successfully at school were identified. These included verbal, communicative and scientific (research) literacy. This indicates a certain deficit in the development of other components of multiliteracy, which should be taken into account when designing the educational process.

Differences in pupils' and teachers' attitudes towards the skills that determine a person's readiness to develop and apply multiliteracy in the conditions of modern communication became obvious. The pupils' priority was the ability to "promote" tests and resist information manipulation, while the teachers' priority is the ethics of communication on the Internet and the ability to navigate through media resources. At the same time, the whole range of skills was in demand, which indicates that respondents have a meaningful attitude to multiliteracy development.

The attitude of teachers and schoolchildren to multiliteracy as an educational result was revealed and it was determined to what extent the skills identified at the theoretical stage of research are in demand in the context of the educational process of the Russian school. The perspective of multiliteracy development requires the actualisation of these skills in the minds of students and teachers and their inclusion in the practice of modern schools. Multiliteracy as a category of literacy, contains aspects necessary for understanding and creating texts of different modalities [141]. Involving both teachers and pupils, we managed to analyse the positions of the participants of the educational process in relation to the phenomenon of multiliteracy. Based on the totality of questionnaire results, we believe that multiliteracy skills are present in the educational process, but they are not formalised and have no evaluation criteria. All this creates prerequisites for further development of multiliteracy in practice, which can be taken into account when developing an educational situation that actualises multiliteracy skills.

Conclusions of the Second Chapter

Chapter 2 identified and described educational practices of multiliteracy development as a goal orientated and spontaneous outcome to substantiate the validity of the proposed characteristics of a multiliterate person. The following methods were applied: content analysis of the content of educational programmes devoted to multiliteracy and implemented in the universities of Newcastle, Melbourne (Australia), Oslo (Norway) and Helsinki (Finland) analysis of the educational result of self-study of the online course on the Coursera platform "Literacy in Different Modalities: Communication and Education in the Age of Digital Media" using the method of "Research in Action" [57], and identification of the existing educational practices of multiliteracy development. [57], and revealed the existing experience of developing individual multiliteracy skills in the traditional educational process of the Russian school.

The obtained data indicate that multiliteracy is considered as a significant educational outcome. The experience of developing its constituent skills is formed in the process of multimodal communication, interpretation and analysis of data presented in different formats. As promising directions for further study of multiliteracy should be highlighted: improvement of ways to assess multiliteracy as an educational outcome and refinement of its constituent skills.

In order to identify the existing experience, we conducted a questionnaire survey of teachers and schoolchildren, the results of which allowed us to draw the following conclusions: both groups of respondents agree that the phenomenon of multiliteracy is relevant for the modern educational process at school, and they mostly share the characteristics of this phenomenon that we have proposed. Thus, we agreed with the respondents in understanding the essence of multiliteracy as an integrative personal characteristic, which involves the use of verbal and non-verbal means of interaction with new knowledge.

Considering multiliteracy as an integration of multiple literacies, we found out what types of literacy are already being developed in the practice of domestic schools. The first three places in the rating were taken by communicative literacy, logical-mathematical literacy and science literacy.

In the choice of indicators of readiness to apply multiliteracy skills in the network space, there is a difference in the priorities of teachers and pupils. Schoolchildren focus on knowledge and skills necessary for specific activities ("promote" their own texts, resist information manipulation), while teachers see the problem more in educational issues (compliance with ethical norms of communication on the Internet, ability to navigate in media resources).

The proposed multiliteracy skills, identified by us in the logic of the theory of multiple intelligence, were distributed by respondents according to the degree of importance in the educational process. Both teachers and pupils ranked the skills of expressing the ideas contained in the text by means of materialising meanings, the skills of reading and creating a visual format for presenting information, the skills of working with a verbal text and going beyond the literal meaning of the text, the skills of identifying philosophical ideas reflected in it as the highest priority. The comparative analysis of the questionnaires of the two groups allowed us to trace that for students the priority skills include: to find, compare, contrast and analyse information to obtain new knowledge, to translate and perceive information through graphs, schemes, diagrams, to understand and interpret information of acoustic character, to relate the acquired knowledge to their own experience. The skill most prioritised by teachers is the ability to initiate and carry out communication in the context of the topic.

The results of the diagnostic stage of the research confirmed the presence of spontaneous and purposeful practices of multiliteracy development and the validity of the proposed characteristics of a multiliterate person. The main conclusions were presented in the author's publications [28, 29]. Taking into account the importance of multiliteracy as an educational result, we moved to the development of the model of an educational situation focused on the actualisation of multiliteracy skills.

CHAPTER 3. A MODEL OF AN EDUCATIONAL SITUATION OF INTERACTION WITH A "TEXT OF A NEW NATURE" "MULTILITERACY: PUZZLES OF MEANING"

The aim of the transformative stage of the research is to develop and implement a model of an educational situation aimed at mastering the experience of multiliteracy to create "texts of a new nature". The mentioned goal will be achieved through the solution of the following tasks:

− to consider the possibilities of designing educational experience in relation to the practice of mastering multiliteracy skills;

− to identify the main components necessary in an educational situation when designing the experience of mastering multiliteracy skills;

− to describe a model of an educational situation oriented on mastering multiliteracy skills;

− to test the model through three different formats of its implementation (short-term educational programme, master classes and mini-course), using the practice of reader's reflection;

− analyse the results of approbation of the model of educational situation aimed at designing educational experience of multiliteracy.

The empirical base of the study was the charitable reading project "Reading Volunteer School", the "Literary Creativity" programme of the Sirius Educational Centre and the educational environment "School in the Palm of Your Hand", which is part of the "Digital Nanograd". The choice was determined by two factors. Firstly, all the above mentioned bases of the research are united by the possibility to create non-standard educational situations using the methodology of forming multiliteracy experience. Secondly, interaction with the phenomenon of multiliteracy implies interdisciplinarity, which corresponds to the concept of these projects and programmes. Our theoretical developments presented in the previous sections of the research needed practical implementation with a mandatory stage as a recorded feedback, which is not always possible in the conditions of a lesson in a secondary school. Participation in master classes

and taking an online course involved the use of digital opportunities, which allowed us to get answers to pre-formulated questions and then analyse the data obtained.

3.1 Theoretical substantiation of the model of educational situation "Multiliteracy: Puzzles of Meaning"

The paragraph solves the problem of theoretical justification and description of an educational situation aimed at forming the experience of multiliteracy. For this purpose it is necessary to:

–   to consider the possibilities of designing educational experience in relation to the mastering of multiliteracy skills;

–   to identify the main components necessary in an educational situation when designing the experience of mastering multiliteracy skills;

–   to describe a model of an educational situation oriented on mastering multiliteracy skills.

Let's consider each of the points in sequence.

In the theory of educational experience, this category is most fully defined in the work of S.V. Khristoforov: "the integration of existing knowledge with new knowledge on the basis of the subject's reflexive activity, obtained as a result of practical interaction with the objects of surrounding reality at three levels - cognitive, technological, and orientational - while preserving the emotional background of the event" [125].

We speak of designing educational experiences because at this stage of the research we are considering the task of actualising multiliteracy skills without systemic development. It is necessary to actualise multiliteracy skills in order to show the pupil the possibilities and to enable self-assessment.

On this basis, I.Y. Lerner's ideas about the content of education are relevant for us. Under this phrase he understands "a pedagogically adapted system of knowledge about the world and ways of activity, experience of implementation of ways of activity, experience of emotional and valuable attitude to the world, to activity, to people, to oneself, assimilation of which ensures the formation of a well-rounded, harmoniously developed personality, prepared to participate in the creation (preservation) and

development of culture" [66]. This definition contains the category of experience, which is considered at this stage of the research. Applied to the experience of multiliteracy it means:

–   Knowledge of multiliteracy as a new category of literacy;

–   Experience of working with text using different modalities;

–   experience of emotionally valuable attitude to multiliteracy possibilities in interaction with text and to oneself as a multiliterate person.

In order to identify the main components of an educational situation, let us clarify what we put into the concept of an educational situation. We share the position of scientists who consider the concept of "educational situation". According to their works, circumstance, situation can be considered educational if the following criteria are met:

(a) The goal of the situation is to increase the learners' cognitive, operational or motivational resources;

b) the situation is specified as to the time of its beginning and end, as well as its place in the educational process;

c) inclusion and jointly distributed activity of participants of the educational process is assumed [51].

Within the framework of the research we focused on the educational situation as a local and time-limited element of the educational process, considering it as a first step towards solving the problem of multiliteracy development.

The educational situation of mastering multiliteracy experience assumes joint activity of participants on creation of "texts of new nature" as a form of reading reflection. Its aim is to increase cognitive, operational resources in relation to multiliteracy skills, including different time frames from a one-off workshop to a mini-programme.

The model of an educational situation oriented at mastering the experience of multiliteracy was developed by us in the logic of the system-activity approach. The presented approach in pedagogy assumes that the learning process is organised taking into account the main role of active, independent cognitive activity of the student.

Designing a model of an educational situation involves identifying key components. Three components of the educational content are identified: knowledge, activity, and the identification of attitudes to these categories and the world in general. On the basis of these formulations, the content of the educational situation is developed.
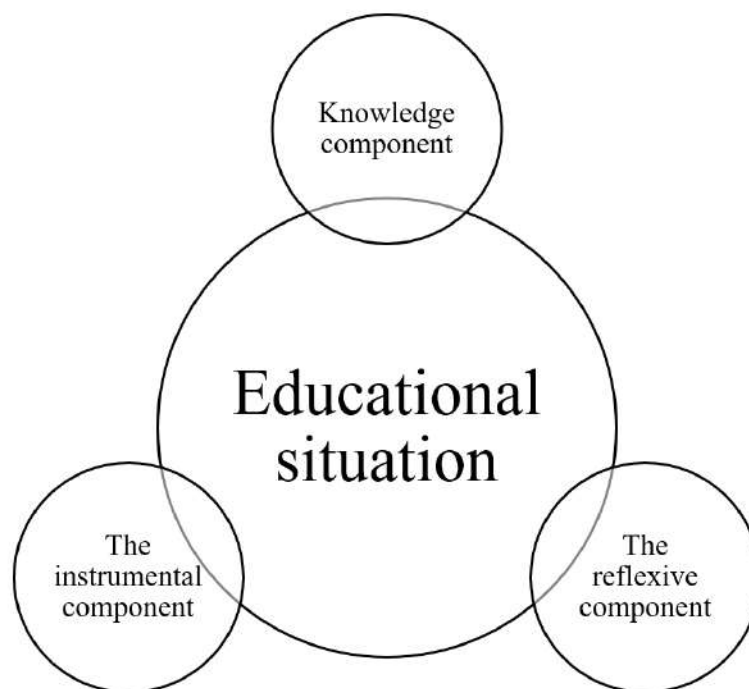
Figure 10 - Components of an educational situation in the logic of the system-activity approach

The knowledge component is expressed in the knowledge students acquire about a subject. It can be both familiarisation with new material and development of the knowledge they already have. In developing an educational situation devoted to multiliteracy, the knowledge component consists in familiarising students with the phenomenon of multiliteracy, with the possible semiotic diversity of the text, which is reflected in the conventional designation of this part as "Harmony in Diversity".

Types of activity at this stage: actualisation of existing knowledge about the semiotic diversity of life, listening to a lecture, independent study of materials.

The instrumental-activity component of the educational situation implies the student's work with the text. In order to give this activity a multimodal character, a toolkit "Text Palette" was developed, where various techniques and ways of working with a text of a new nature, selected in the logic of multiliteracy skills, were presented.

Figure 11 - "Text Palette"

- skills of working with verbal text oriented to understanding, interpreting, evaluating and creating a text: creating a traditional, written text (articles, notes, academic essays), working with terms, thesaurus, etc.

- skills of working with mathematical text, aimed at translating and perceiving information through charts, graphs, formulas, diagrams: creating mind maps, studying statistics, numerical data, etc.

- visual text skills means reading and creating a visual format for presenting information: creating a slideshow, comic book, photo story, infographic, video sequence, animation.

- skills of working with acoustic text are connected with the transformation of content into sounds, with understanding and interpretation of information of acoustic (auditory) character: choice of musical accompaniment, expressive reading of a text fragment, reading by role, audio recording, podcast.

- skills to work with the text of feelings are based on the expression of ideas inherent in the text by means of materialisation of meanings: presentation of an object-symbol (mascot, totem) of the text, conducting mobile games on the plot of the text, pantomime.

- skills of working with the research text imply searching, comparing, comparing and analysing information to obtain new knowledge: using methods of observation, experiment, survey (questionnaire), interview.

- skills of working with the text of self-knowledge include the projection of external information onto one's own experience: writing an essay, a story about oneself, working with the text using the "double diary" methodology, self-observation, self-analysis of one's attitude to the topic.

- skills of working with the text of communication are revealed in the initiation and implementation of communication in the context of the topic: formulation of problematic questions in order to organise a discussion, debates, dramatisation, preparation and implementation of a game.

- skills of working with the existential text imply going beyond the literal meaning of the text, determining the philosophical ideas reflected in it, analysing what is not directly communicated in the text: selecting quotations, aphorisms, referring to parables [28].
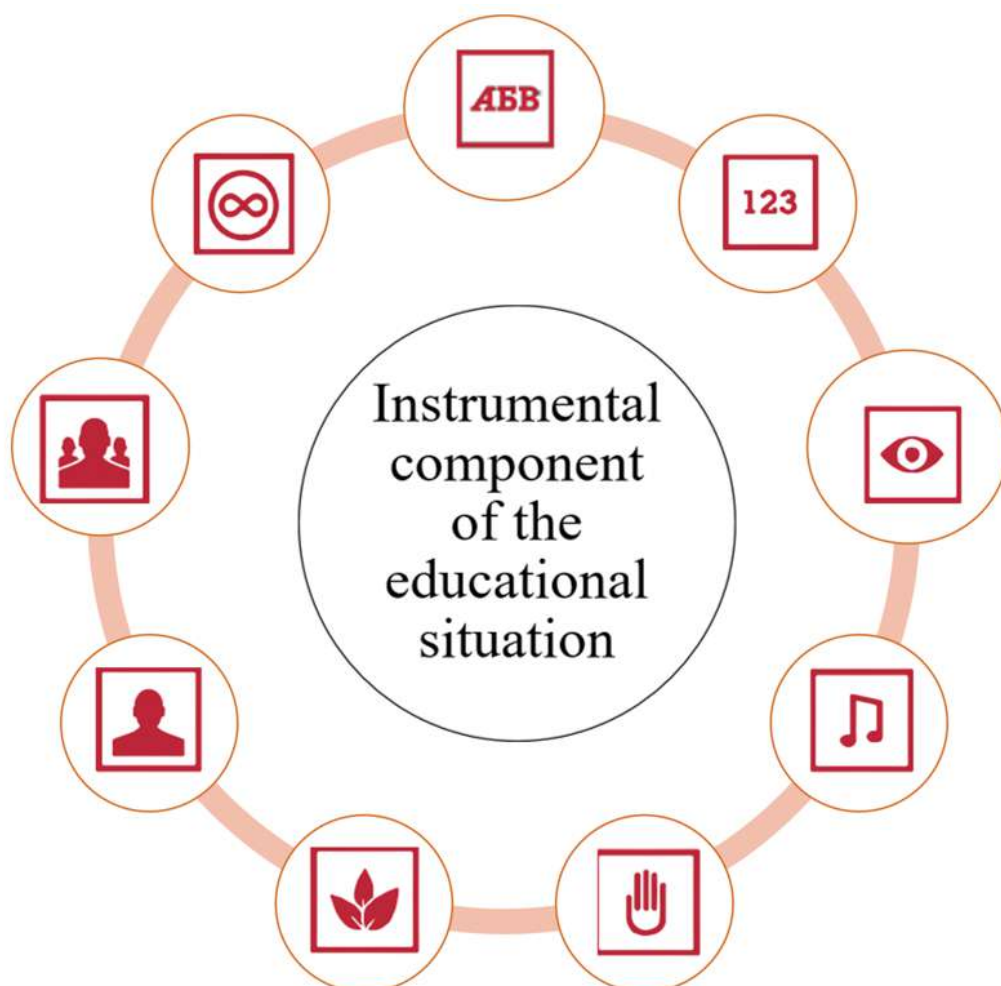
Figure 12 - Content of the instrumental-activity component of the educational situation

Type of activity at this stage: creating a "text of a new nature" on the basis of the read verbal text using the proposed tools. The minimum requirement is to translate the verbal text into one of the proposed formats, the maximum is to use the capabilities of all the proposed tools in an integrated way.

The third component of the educational situation - "Multiliteracy Experience" - is necessary for students to realise and reflect on the results of their experience. This involves reflection on how the proposed toolkit can be used in future learning and life situations.

Type of activity: reflexive tasks, participation in a questionnaire, the content of which allows students to determine their own attitude to the phenomenon of multiliteracy, tools and the resulting experience. As tasks, pupils were asked to give their own definition

of multiliteracy, describe positive or negative emotions from the experience, and suggest whether they could use it in the future.

Thus, the model of the educational situation "Multiliteracy: Puzzles of Meaning" consists of three components:

- knowledge component "Harmony in diversity" (introduction to the phenomenon of multiliteracy);

- instrumental component "Text Palette" (mastering the tools to activate various multiliteracy skills, creating a reader's response in the format of a "text of a new nature");

- reflexive component "Multiliteracy Experience" (pupil's self-assessment of the experience).

The use of a systemic-activist approach allowed us to create a model in which multiliteracy is presented as a goal and a means. The viability of this model will be tested in three different formats: a master class, a digital mini-course, and a module of a short-term additional education programme.

Knowledge component "Harmony in diversity" (introduction to the phenomenon of multi-literacy);

The model of the educational situation "Multiliteracy: puzzles of meaning" Instrumental component "Palette of text"

Instrumental component "Palette of text" (tools that allow you to activate various skills of multiliteracy, creating a reader's response in the format of a text of a new nature);

The reflexive component "The experience of multiliteracy" (self-assessment of oneself as a multi-literate person).

Figure 13 - Designing multiliteracy experiences in the logic of the systemic-activity approach.

3.2 Piloting a model of an educational situation within the framework of the "Reading Initiatives" module of the "Literary Creativity" programme and a series of master classes

Approbation will make it possible to formulate the strengths and weaknesses of the educational situation model, to identify the risks of its use, to assess its effectiveness, and to formulate areas of improvement, if necessary.

The objectives of the approbation include:

1. Development of methodological materials for two formats of educational situation - the training module "Reading Initiatives" within the framework of the "Literary Creativity" programme at the Sirius Educational Centre; a series of master classes with student volunteers and high school students.

2. Conducting a module and master-classes that involve introducing participants to the phenomenon of multiliteracy ("Harmony in Diversity"), studying proposed texts and choosing one to work on, creating a reader's response using multimodal tools ("Text Palette") and reflecting on the results of the work ("Self-Assessment of Multiliteracy Experience").

2. analysing the results obtained in terms of the viability of the model based on the following indicators:

- the interest of the participants in the proposed activity;

- presence of a creative product (reader's response in the format of a "text of a new nature"), prepared in accordance with the requirements of the task: disclosure of the theme of the source text, use of multimodal tools;

- willingness and readiness to use the acquired experience in the future to solve life and educational tasks.

When developing the approbation programme, we were guided by the methodological recommendations of the RAO [7].

The methods of organising and conducting the approbation had to meet the following requirements:

–   Ensure sufficiency, reliability and objectivity of the information received;

–   allow the results obtained to be interpreted unambiguously;

‒ be minimally time-consuming and costly in data collection and processing.

Thus, we have chosen as methods:

‒ included observation;

‒ analysing the products of the activity;

‒ questionnaire.

Let us consider the implementation of the model "Multiliteracy: Puzzles of Meaning" in the format of the module "Reading Initiatives".

The work was conducted in March 2021 as part of the short-term programme "Literary Creativity" at the Sirius Educational Centre. The study involved 84 philologically gifted schoolchildren and older teenagers (15-17 years old) from different regions of Russia. In the traditions of the Literary Creativity programme, the participants are usually called trainees. This group of participants was chosen for the following reasons:

The labour intensity of the module was 10 hours.

1. Development of methodological materials.

Three lectures "Harmony in Diversity" were prepared for the module, during which multiliteracy was presented to students as an opportunity to look at the text from the position of semiotic diversity, to touch the text of a new nature. The materials of the lectures outlined the basic theoretical ideas about multiliteracy, the connection between the theory of multiple intelligence and multiliteracy, and the possibilities of reader's reflection.

The set of methodological materials includes a system of tasks, a list of techniques for each type of intelligence, and questions for reflection.

2. Carrying out approbation (in module format).

As source texts, the participants were offered the publications of the Almanac of the Literary Creativity Programme. The materials of the Almanac, collected over several years, represent various genres: short stories, novellas, essays, fairy tales, and poems by young authors participating in the Literary Creativity programme of previous years.

The trainees were asked to prepare a reader's response to one of the selected works of the Almanac. At this stage it was important for us to show the possibilities of

multiliteracy to translate a text into different modalities using the Text Palette toolkit. The trial allowed the choice of one of the proposed formats for response (verbal, auditory, mathematical, visual, exploratory, interpersonal, intrapersonal, tactile, existential). As a first experience, we offered participants to practise the skill of translating a text from one format to another without using the whole semiotic diversity.

The possibility of choice was manifested at every stage of this task: students could choose any text of the Almanac at their discretion, determine the format of their response or combine several, try different techniques and tools for working with the text. Children created a response to share their impression of what they had read and to draw the attention of other participants to this particular text.

In addition to lectures, the module included independent work of the trainees. At the end of the module, an exhibition was held where children's creative works were presented as a clear example of using the multiliteracy experience.

3. Analysing the products of the activity.

At the end of the work, 84 reader responses were received and analysed, each of which represented a complete author's 'statement'. The rating of the selected formats is presented in the following graph:
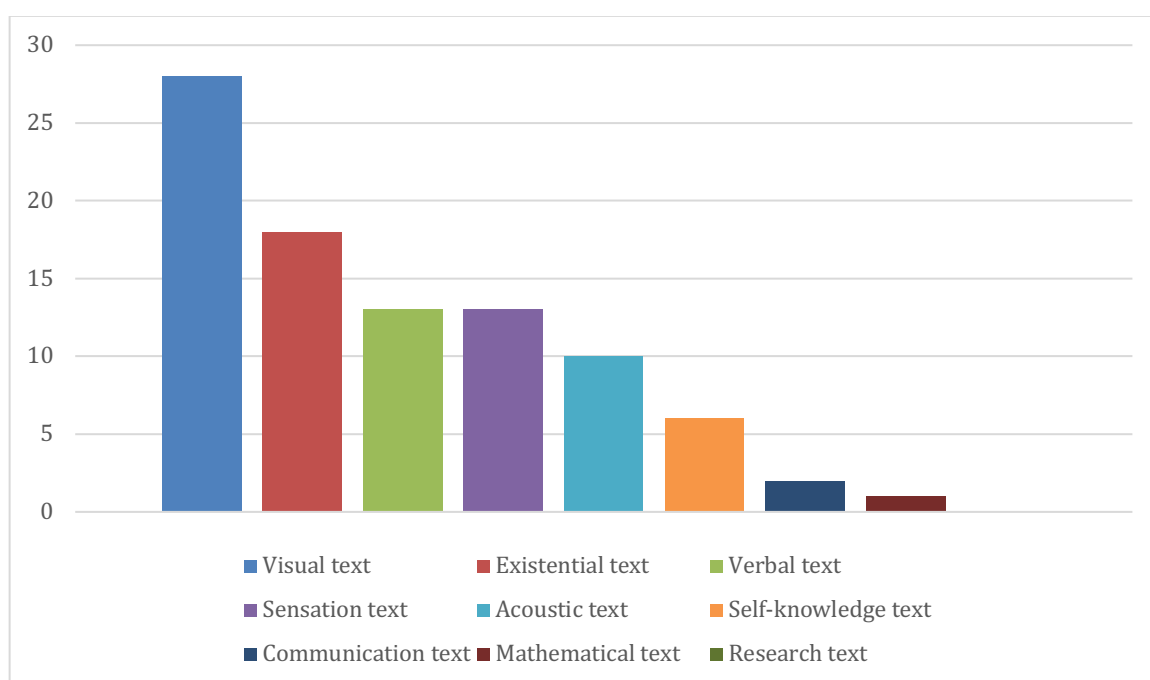
Figure 14 - Ranking of "text types" in reader responses

Taking into account the specifics of the participants' composition (Literary Creativity programme), it was possible to assume that verbal text would take the leading position. However, the most popular format was "visual text" (28 responses). Perhaps this is due to trends in contemporary culture, the growing demand for visualisation. By selecting this "text", interns demonstrated the ability to read and create a visual format for presenting information. Among the results of working with this type of "text" were collage, comic book, video, and photographs. Our attention was attracted by a comic strip based on the story "The Mystery of the Torn Page" by D. Abdullina. An unexpected solution was a graphically designed response using a background and different fonts based on the text from M. Sevastyanova's work "The Philologist in Me Speaks". A collage based on A. Semyonova's work "L'offence" aroused interest.

The second place in the rating is occupied by "existential text" (18 responses). The authors tried to comprehend the selected works through philosophical reasoning and questions: "Who am I?", "Who are we?", "What is the meaning of life?". The "text of philosophical reflection" ("existential text") allowed participants to express ideas that were not expressed directly, to go beyond the literal meaning of the text. Examples of responses using this format include "stream of consciousness" based on D. Ushanova's essay "About adults, goals and swings", a series of philosophical questions based on Ksenia Romanicheva's essay "I seem to be missing something...".

The third place was shared by "verbal text" and "text of feelings". "Sensation text" (13 responses) allowed participants to materialise the meanings seen in the selected work. Trainees who chose this type of 'text' noted that the physical sensation of the symbol helped them to better convey the meanings they saw in the work. Examples of responses using this type of "text" include an apple that could be moved around the paintings (response to the essay "Why did he put his hands down?" by A. Kolchina); an installation in the form of a three-dimensional postcard based on K. Prokazova's essay "The Case of Six Nights ("But isn't it all a dream?")"; and an unusual artefact - a juice box similar to the juice carton from A. Shulga's story "The Orchard".

"Verbal text" (13 responses) is traditional, especially within the Literary Creativity programme. Perhaps that is why it did not become the most selected one. The interns

decided to go beyond the classical structure and try their hand at new kinds of text. Even if this assumption is correct, it does not diminish the significance of the chosen format. Works in the genres of essay and story conveyed ideas and meanings important to the reader, seen in the works of the Almanac. Our attention was attracted by a longread based on S. Fedorov's work "Guide to Charm". The fanfic for N. Kuznetsova's story "The Bread Tree" was no less interesting.

"Acoustic text" (10 responses) allowed the trainees to transform the content into sound. Thus, audio recordings of expressive reading were created, and musical accompaniment to the works was selected. The authors of the responses used the opportunity to let the text "speak" on its own. As a result of this process, D. Panova's poem "A Girl Sang in the Morning in an Empty Apartment" was voiced, and the play "CHAD0" was revealed in more detail through the audio diary of one of the actors - an artificial intelligence.

"Self-knowledge Text" (6 responses) suggested the possibility of making sense of one's own experience, inner life through a work of fiction. The trainees experimented with stream of consciousness, personal essays, and also presented pages from their personal diary. As examples we would like to cite: reflection of their own life experience based on K. Kotchenko's essay "Isn't it better to leave poetry alone?", diary entries describing their own memories inspired by M. Kilina's story "Aurora borealis".

"Communication text" (2 responses) was expressed through dialogues. The author of one of the responses noted that "only a multi-layered fiction text can be better than a fiction text". One of the responses was presented in the form of a conversation with the characters of the story "Dialogue" V. Skobeleva. This allowed to present fictional characters as real people, to describe their feelings and moods.

"Mathematical text" (1 response) was created based on the author's impression of the ideas about the movement of life described in the work. Through diagrams and graphs (see Figure 15) the creator of the response presented the ideas of development that he found in P. Kazakova's essay "Celebration of Life. Statics and Dynamics".
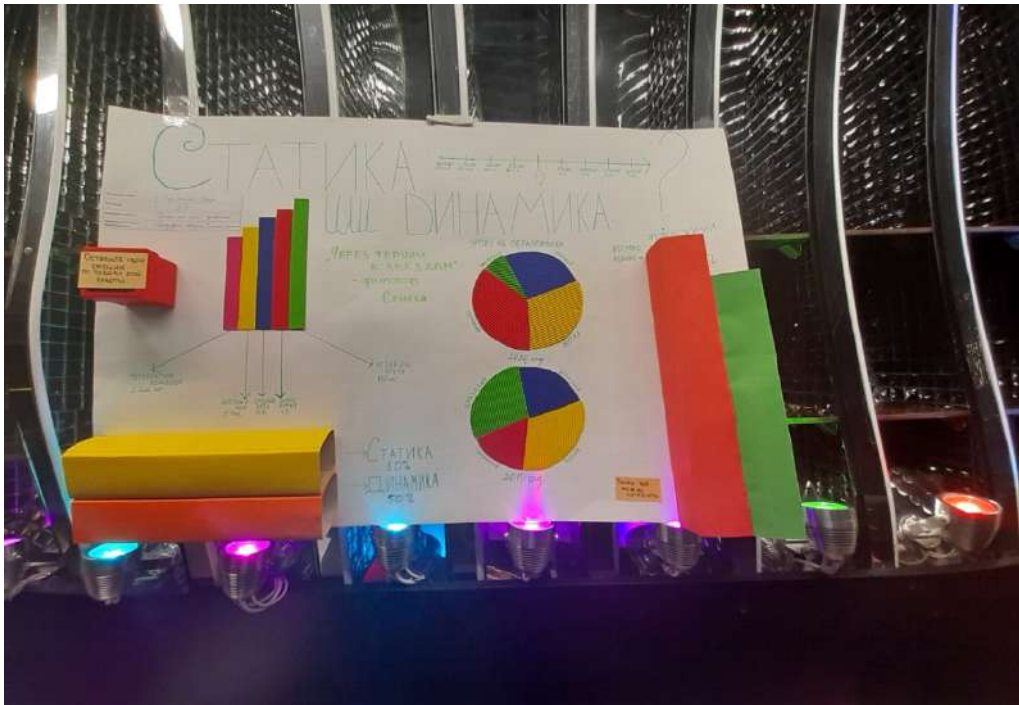
Figure 15 - "Mathematical text", creative work by a participant in the Literary Creativity programme, Sirius Centre (March 2021).

The "research text" was not covered, which may be due to the specificity of the artworks of the Almanac selected for response.

A number of works were a combination of visual-acoustic (5), visual-verbal texts (10). Given a certain artificiality of division into types of "texts", which we use in the "palette" as a tool, it is understandable that the authors themselves came to integrate and reflect a combination of formats that can often be found in real life.

Interns exhibited a variety of multiliteracy skills when creating a response: creating a response in the form of text, video, comic strip, audio recording, exhibit, etc.

Evaluating the results obtained for the viability of the model according to the highlighted indicators it should be noted:

1) *Interest: the* trainees demonstrated active interest in this task. Our observations allowed us to record a creative boost in almost all participants. They asked for advice, clarified details, the task became a subject of discussion even in their free time. The atmosphere of enthusiasm persisted throughout the module. At the same time, out of 84 participants, five people did not show interest, remained passive. As it turned out as a result of the conversation, they had difficulties in choosing modalities. The need to choose

one modality limited their creativity. Allowing them to use multiple modalities solved the problem.

As "pluses", the trainees pointed out the possibility to create their own work taking into account their peculiarities and preferences. Some participants pointed out that describing a work through different modalities allowed them to understand themselves better, to visualise more vividly the ideas and meanings they saw in other people's texts.

2) *Presence of a creative product, a reader's response in the format of a "text of a new nature" that meets the requirements (disclosure of the theme and use of multimodal tools): the* author's works reflected the content of the selected works quite fully and accurately. At the same time, trainees often added their own interpretation, offered an unexpected interpretation that added to and enriched the original idea.

The responses created show a positive attitude towards textual diversity. In all the works the proposed toolkit "text palette" was fully used. As noted above, 79 people completed the work strictly according to the assignment, focusing on one modality. The remaining five people expressed a desire to use more than one modality. It should be noted that these works fully and multifaceted disclosed the text. From this we concluded that in the future it is not necessary to limit ourselves to one modality. This conclusion was further used in the development of the mini-course programme.

3) *Desire and readiness to use the gained experience in the future to solve life and educational tasks:* answering the question "Will you be able to use the presented toolkit

in the future?" 64% of respondents chose positive answer options: "Yes" (42%) and "Rather yes" (21%).
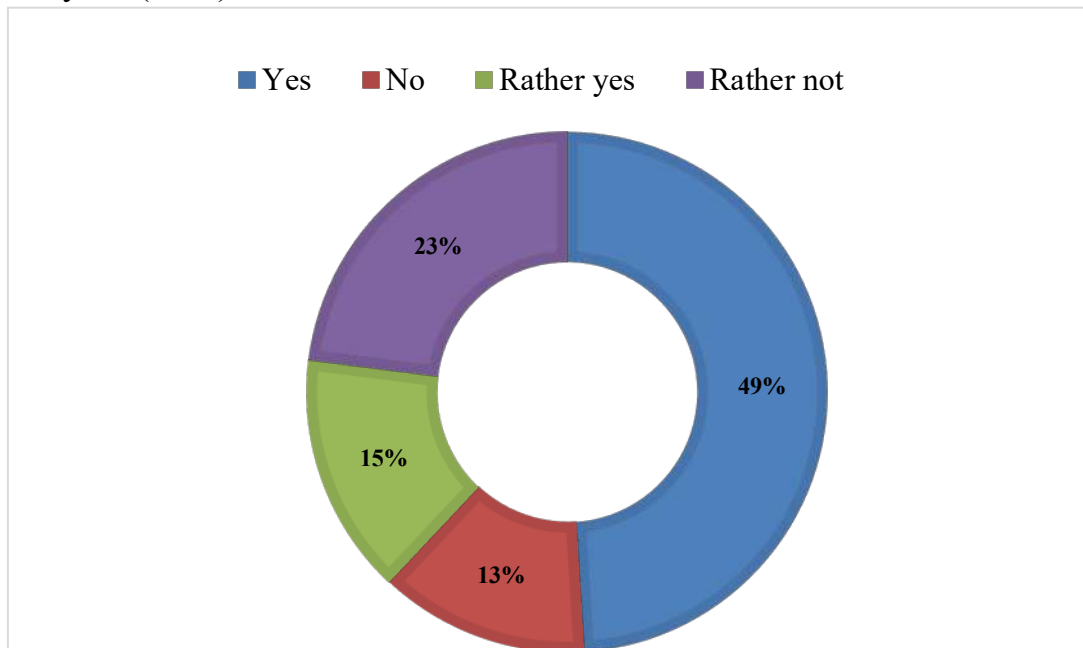
Figure 16 - Self-assessment of trainees' readiness to use the acquired experience of working with text in further solution of educational and life tasks

This advantage indicates a positive attitude to the phenomenon of multiliteracy learnt at the masterclass, the satisfaction of creating a reader's response. Pupils noted that this approach allows them to better understand the topic, memorise the material.

36% considered it impossible to use the experience gained when learning new material. Explaining their position, the participants noted that most of the texts they have to work with are "classical", i.e. expressed in traditional verbal form. So, in their opinion, it is not possible to "read" them in any other way. The tasks offered at school rarely require a variety of forms of fulfilment. This once again confirms the importance of interacting with semiotic diversity not only in everyday life, but also when interacting with educational texts.

Based on the results, we concluded that most of the trainees had a positive attitude towards the experience gained, noting its usefulness for future application, despite the limitations that exist in traditional school practice.

Let us consider the results of approbation of our model "Multiliteracy: Puzzles of Meaning" in the format of a master class. It was conducted on two categories of listeners:

1) interns of the Sirius programme; 2) students-participants of the programme "School of Reading Volunteers", future teachers.

The programme "Homo legens. The programme Homo legens (August 2021) implemented at Sirius Centre differs from others in that it is not related to specific genres and directions. The children conduct and participate in the "Bead Game", show themselves as talented writers and readers, project meanings from literary works, build logical connections between art forms.

1.   Development of methodological materials.

The traditional set of materials (lectures, tasks, questions for reflection) was supplemented by the author's motivational video in Tik-Tok format. Three fragments (one for each group of participants) from A. and B. Strugatsky's story "Monday Begins Saturday" were used as a text for reader response. Strugatsky's "Monday Begins on Saturday". The choice of the work is not accidental, because the whole programme is a living memorial to the Strugatsky brothers, the book "Monday Begins on Saturday" is included in the list of literature on the eve of the shift, so the content of the fragments for the participants was familiar and attractive. The plot of the selected fragments mentions mathematical calculations, philosophical reflections, technical inventions, and animals.

2. Carrying out approbation (in the format of a masterclass).

The masterclass on developing multiliteracy skills was organically integrated into the discourse of the "Bead Game". In order to enable everyone to participate, the masterclass was held three times on the content of different text fragments while maintaining the general logic. The duration of the masterclass was two academic hours. A total of 35 children took part in the masterclasses.

The implementation of the knowledge component of the model - introduction to the phenomenon of multiliteracy - "Harmony in Diversity" took place as follows: the participants of the master-class themselves spoke about the diversity of literacy types; they agreed that the definition of literacy as the ability to read and write is not exhaustive in modern conditions.

At the practical stage of the masterclass "Text Palette" we presented the participants with a toolkit consisting of a collection of techniques for each type of text and suggested

that they create their own "Text Palette". The work could be done independently or in a small group. It was necessary to have a total of nine formats, which were also distributed according to the children's choice. At the stage of distribution of "text types", preferences in favour of one or another modality were already visible. When planning the masterclass, we assumed that the verbal text would be the most "popular". In practice, this type of text did not arouse much interest. Perhaps the participants of the Literary Creativity programme wanted to try new "types of text" (mathematical, visual, tactile, etc.).

Thirty minutes were allocated for independent work, some responses were ready earlier. The text of the story by the Strugatsky brothers was expressed in a variety of ways.

Participants were asked to answer a traditional questionnaire to express their attitudes, evaluation of the experience, and plans for future use.

3. *Analysing the products of the activity.*

During the allotted 30 minutes, students created their own visual images based on Strugatsky's text as a response-creative product, conducted relevant small investigations, found surprising facts about different physical phenomena mentioned in the text. When presenting the results of their work, they recited a poem in Spanish and acted out small skits based on the plot of the passage. Some of the interns recorded interviews or role-play readings of the passage. Graphic images were created to represent different aspects

of the text. The same passage in the group was presented from the most unexpected angles. The "existential text" is given as example.

Figure 17 - "Existence Text", creative work by a participant in the Literary Creativity programme, Sirius Centre (August 2021).

Each of the presented fragments of the "text palette" was given its own unique sound or vision.

Evaluating the results obtained for the viability of the model according to the highlighted indicators it should be noted:

1) Interest: we note that the participants of Sirius educational programmes are winners and prize-winners of All-Russian Olympiads, which indicates their initially high motivation. At this stage of approbation, it was especially valuable for us to see the confirmation of the relevance of the research into the phenomenon of multiliteracy. The trainees themselves noted the variety of emerging types of literacy, their confusion, the lack of systematisation and clear requirements for each of the "literacies". Multiliteracy, in their opinion, allows for a better understanding of semiotic diversity.

Interest is also evidenced by the uniqueness of each type of text presented. The trainees did not just find links to materials on the Internet, but created unique creative products themselves.

2) Presence of a creative product: to create a reader's response in the format of a "text of a new nature" the trainees used all the proposed tools. In the process of work they asked clarifying questions, which allowed them to create responses that fully reflect the meaning and content of the proposed fragments of the Strugatsky brothers' story.

3) Willingness and readiness to use the gained experience*: the* key aspect of the reflection was the assessment of the degree of usefulness of the gained experience. The participants of the masterclass evaluated the usefulness on a five-point scale, where "1" is the minimum evaluation and "5" is the maximum degree of evaluation.
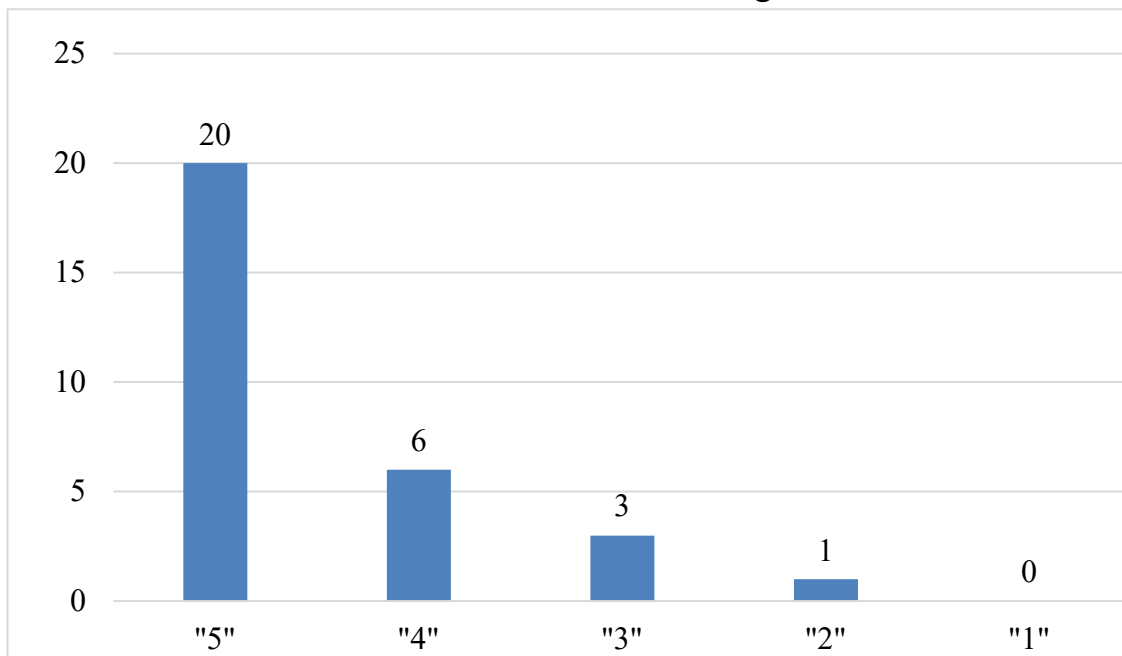
Figure 18 - Participants' assessment of the usefulness of their experience

The majority of trainees (87%) gave a high score to the experience. 13% of participants gave a lower score, which can be explained by the difficulties encountered.

Taking into account the peculiarity of the audience, the philological nature of the educational direction, we offered the participants of the master-class to give their own definition of the term "multiliteracy".

Let us present some of the most interesting formulations in our opinion.

Statement 1. "Multiliteracy is a characteristic of a person that determines the degree of development of his/her ability to engage all available ways of information perception in cognition of the world". The presented position can be a reason to consider the assessment of educational experience of multiliteracy taking into account the number of involved opportunities for learning or creating a text.

Statement 2. "Playing with layers of text in relation to different channels of perception" is a definition that reflects a vision of multiliteracy as a sum of skills needed to interact with text of a new nature, as a kind of game rather than a set of universal rules. The "strata" most likely refers to "text types" and indicates that not every content can be presented in every modality, it is necessary to combine the content of the fragment with the peculiarities of each "text type".

Statement 3. "Basic knowledge in different spheres of life, ability to apply knowledge in different modalities, in different ways" - the participant reflected the connection of multiliteracy with life.

Based on the presented statements, we can conclude that there is no single interpretation of the phenomenon of multiliteracy. At the same time, in each definition the trainees reflected their understanding of semiotic diversity and multiliteracy as a necessary condition for interaction with "texts of a new nature". Different "types of text" did not cause surprise, judging by the semantics of the senior students' statements, for them it is a fact that does not cause doubts.

At this stage, the approbation of the educational situation "Multiliteracy: Puzzles of Meaning" was realised among high school students. We decided to hold a master class for a group of students-future teachers and to consider the relevance of the experience gained for them.

1. Development of methodological materials.

The aim of the lesson is to familiarise students with the new quality of literacy and its practical application in pedagogical activities. Taking into account the specifics of the contingent of participants, we strengthened the theoretical part of the lesson. To prepare the lecture we used materials of the article "Multiliteracy Pedagogy: Designing the Social Future" (1996, the first scientific substantiation of the term), texts of the resolution of the UNESCO International Bureau of Education, documentation of the Finnish National Board of Education.

The content of the lecture included practical examples of multiliteracy: a project of Finnish specialists on the development of multiliteracy in children from 0 to 8 years old,

a Russian example - the course "Apple to thee/k/st culture" (the apple was meant as a symbol that can be considered in different cultural practices).

The final theoretical block contained our definition of multiliteracy taking into account the pedagogical potential of the phenomenon and a description of the skills of a multiliterate person, which we made on the basis of G. Gardner's theory of multiple intelligence.

Another preparation task was to select a text for the participants to create a reader's response. We focused on the work of A. and B. Strugatsky "Picnic on the Sidewalk". Strugatsky's "Picnic on the Sidewalk". The selected passage was devoted to a dialogue about what is the mind.

Reflection questions were developed with the pedagogical focus of the audience in mind.

2. Carrying out approbation (in the format of a masterclass).

Eight participants of the approbation were students of different courses of Moscow City Pedagogical University. They were united by their work in the project "School of Reading Volunteers". Our meeting was held online for two academic hours.

The interactive type of the lecture implied dialogue and maximum involvement of the students, which was ensured through the use of various ICT opportunities (working on the Padlet platform, filling in the table).

A separate stage of the lesson was devoted to familiarisation with the Text Palette toolkit. The practical part involved working with a fragment of the Strugatsky brothers' work "Picnic on the Sidewalk" and composing their own reading response. The chosen text was an illustration of a large-scale theme about the essence of mind. In the assignment we were interested in the response not so much to the text as to the theme embedded in it.

The class continued in a self-paced format. Each participant chose several preferred formats to respond to. Our condition was that all nine formats of the Text Palette would end up being used. The class ended with a presentation of students' creative works, which allowed us to see the multifaceted, polyphony of the phenomenon of "human mind" in their understanding and interpretation of the problem raised in the Strugatsky text.

At the end of the lesson, a questionnaire was conducted. In addition to the questionnaire conducted with schoolchildren, we added a question about the essence of multiliteracy. We were interested in the opinion of colleagues, future teachers, to clarify their understanding of the pedagogical potential of the phenomenon of multiliteracy.

3. Analysing the product of the activity.

The activity product was a collective response to the theme "human mind". On the basis of their own associations and memories, the listeners reflected their understanding of the essence of the human mind by means of: Zack Hemsy's musical work "Mind Heist", Auguste Rodin's sculpture "The Thinker", a funny animated picture of a thinking monkey, the cartoon "Puzzle". The "text palette" included literary works such as the novel "We" by E. I. Zamyatin and the fantastic story "The Girl from Earth" by Kir Bulychev. A separate perspective was presented by the films "Dead Poets Society" (*1989, USA*), "Requiem for a Dream" (2000, USA) and "Mind Games" (2001, USA).
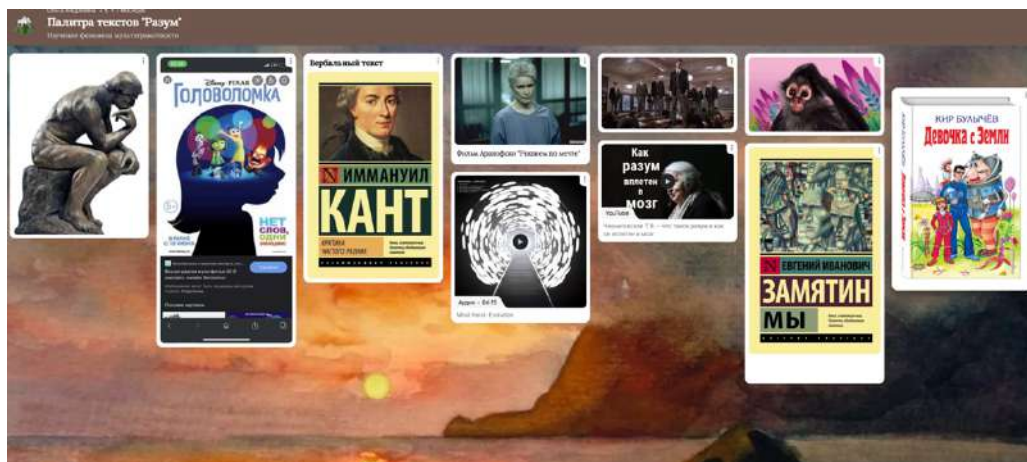
Figure 19 - "Text palette" created as a result of the masterclass

Let us examine the results obtained for the viability of the model with respect to the highlighted indicators.

1) Interest: our observations allowed us to state that the participants were genuinely interested in studying the phenomenon of multiliteracy and its role in the educational process. They readily answered our questions, expressed their assumptions, shared their emotions and asked many clarifying questions. Students were willing to do more work than was required, and the results of reflection and their definitions of multiliteracy indicate their interest in the proposed experience and the knowledge gained. Thus, a high degree of interest of the participants can be stated.

2) Presence of a creative product of reader's response in the format of a "text of a new nature" that meets the requirements (disclosure of the theme *and use of multimodal tools): the* theme of the human mind proposed for reflection received the fullest possible disclosure, was supplemented with personal associations from the field of culture, art, science, design, literature, cinema, animation.

The resulting overall "text palette" turned out to be polymodal, reflecting all types of text. Explaining their choice of one or another format, the participants demonstrated their understanding of the principles of the proposed toolkit.

3) Willingness and readiness to use the acquired experience: in the process of reflection in the form of a questionnaire, all participants recognised the need for future teachers to learn multiliteracy skills. It was noted that the experience of multiliteracy gives an impetus to further personal development and will allow to improve the teaching process in the future. A positive effect of the experience was a deep understanding of the material, which occurred in a fairly short time.

The participants of the masterclass planned to use the experience gained in future when interacting with children as part of their volunteer and pedagogical practice.

An additional question for students, taking into account the experience gained, was a request to describe the nature of multiliteracy through the prism of their own understanding of this phenomenon. Consider the results of the completed assignment (wording is given in the author's edition).

Statement 1. "Multiliteracy is the ability to see a subject more broadly, to know more about it, and to use that knowledge. Multiliteracy needs to be developed both to strengthen neural connections and to increase productivity: more associations - easier to give an example or complete a task". Research comment: this definition, given by one of the participants, reflects the multiple basis of the phenomenon under investigation, touching on the relationship between literacy and the development of brain activity. In addition, we noticed a new aspect that had not been considered before - multiliteracy skills speed up and make it more familiar to interact with different channels of information presentation.

Statement 2. "We love books because their authors manage to create an extensive world of emotions, feelings, actions or inactions. Imagine if a book revealed only the plot without lyrical digressions, descriptions and reflections. I think it would be boring. This ability to think three-dimensionally and create three-dimensional pictures is multiliteracy; developing it definitely makes life more interesting". Research comment: although we have introduced participants to only a few approaches to multiliteracy, this definition addresses the multiplicity of meanings that can be reflected in one work in different ways.

Statement 3. "Multiliteracy is the ability to see all 'facets' of the subject of discussion, the ability to engage creative thinking". Research comment: this judgement suggests that our idea put forward in the first unit of the lesson "Harmony in Diversity" is partially confirmed. In addition, this definition reflects the multidimensionality and interdisciplinarity of the phenomenon under study.

Speaker 4. One of the participants tried to formulate a child-centred formulation, describing multiliteracy as "the ability to look at objects, words, people as broadly and deeply as seeing the whole palette of colours in a ray of sunlight". Research comment: the proposed metaphor successfully translates a scientific term into a language understandable to children.

Statement 5. "Multiliteracy is a great way of perceiving information through its different presentation and design. Multiliteracy helps us to delve deeply into a topic, to create something unusual and individual. When we use the technique of multiliteracy, we learn and discover new meanings." Research comment: this definition reflects the plurality of ways of presenting information, takes into account the individuality and uniqueness of each person when working with text, and refers to the plurality of meanings that can be embedded in different subjects.

Statement 6. "Multiliteracy is a skill of receiving information and cognition of the world through the sum of perception channels". Research comment: the statement confirms the relevance of describing this phenomenon through the sum of skills. Despite the brevity, we see here a multiplicity of perceptual channels. The author focused on receiving information, while creating, analysing and other processes are also part of multiliteracy.

In addition to verbal definitions, we asked listeners to share their visual associations. The resulting associative series was as follows: we were lucky enough to see what multiliteracy looks like for the participants. In particular, there was an image of the Hindu deity Shiva, who symbolises the beginning of the universe and is often depicted with four hands, which is associated with the plurality of the literacy aspect being studied. Another interesting association was Jackson Pollock's abstract painting of paint splatters applied haphazardly. Abstract Expressionism, the genre in which the artist worked, involves looking at works from different perspectives and encourages freedom of expression and analysis, which in a sense echoes the idea of multiliteracy.

One of the class participants drew an analogy between multiliteracy and a rare atmospheric phenomenon - a fire rainbow. This beautiful natural phenomenon occurs when several factors come together, and we hypothesise that multiliteracy will also produce amazing results by combining multiple skills. Multiliteracy has also been linked to a series of pictures of people putting together jigsaw puzzles and a human figure made up of particles. The natural multiple nature of multiliteracy for humans is reflected here. Vivid, figurative associations reflect the diversity of perception of the phenomenon and testify to the rich cultural experience of the participants, which, thanks to the task, proved to be in demand.

A brief response to the presented judgements - word cloud - in the content analysis of the statements we used the visual word cloud method and obtained the following representation:
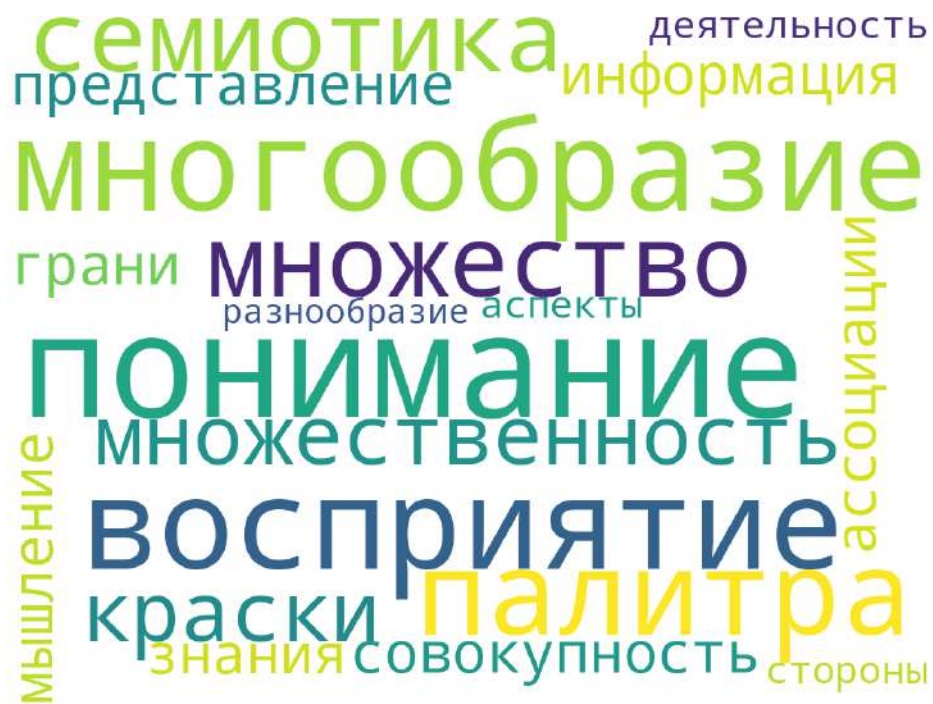
Figure 20 - Word cloud resulting from content analysis of participants' statements

Given the pedagogical background of the participants, we asked them to give examples of multimodal information presentation and the use of multiliteracy skills. The examples given were:

(a) Presentations, with a selection of "possible images, phrases, audio recordings that best characterise what is described in the presentation";

(b) Images that would precede what is happening in the text. "The multiliteracy skill will help to enter the story and introduce the text beforehand and then already familiarise yourself with it";

(c) The student's use of the multiliteracy toolkit to design their work in unusual ways. Multiliteracy skills will also be useful in serious interdisciplinary research.

The testing of the model of the educational situation "Multiliteracy: puzzles of meaning" in the master-class format showed that our explanation of the phenomenon of multiliteracy, its theoretical prerequisites are clear to future teachers. This is confirmed by their definitions of the term "multiliteracy".

The proposed toolkit was mastered in a short time (2 ac.h.), the resulting text of a new nature reflects the diversity of consideration of the given topic. The whole session was held in an interactive, creative environment. Besides theoretical ideas about multiliteracy, practical skills were obtained, which the volunteers plan to use in their work with children.

Despite the successful completion of the task by the students, we do not exclude that in work with schoolchildren it is better to use a specific fragment of a fiction or popular science text, as the "theme" may be too difficult due to its abstract nature.

The conditions of educational process organisation proposed by the participants to actualise students' need for multiliteracy were diverse. In particular, it was suggested to "popularise the presentation of information in several forms and their harmonious combination: to include in the process not only visual and auditory type of interaction with information, but also to expand the view on certain subjects (for example, to explain the spelling rule with the help of a mathematical formula)". This idea is echoed by other participants' views on the need for meta-subject (cross-curricular) lessons, with the addition of "research and project activities". According to the trainees, this would allow them to see the subject from different perspectives at the same time.

The analysis of the activity products and reflection of the participants of the master class for students allows us to speak about their high interest. The created product meets the requirements to the text of a new nature due to its polymodality and multifaceted nature. Future teachers expressed a conscious desire to use the obtained experience in the future in their work with students.

Let us consider the conclusions we have drawn from this stage of the research.

In the participants' understanding, multiliteracy was perceived as a universal interdisciplinary characteristic. The meanings, ideas, which the students saw in the proposed texts, were presented in a multifaceted way. We recorded that both students and pupils realise that the multiliteracy toolkit has a two-track orientation, can help to collect meaning and allows to parse the text.

The approbation made it possible to identify the strengths and weaknesses of the model of the educational situation "Multiliteracy: Puzzles of Meaning". The results

obtained in the course of approbation of the model of the educational situation "Multiliteracy: Puzzles of Meaning" in two formats (module and master class) proved the viability of the model consisting of three proposed components: knowledge, instrumental-action and reflexive. Irrespective of age and status, the audience (students and schoolchildren) demonstrated interest in mastering the multiliteracy experience. Reader responses reflected the full range of multiliteracy skills. The approbation used online or offline format and we found no significant differences, which suggests the possibility of using a distance mode of interaction including.

The risks and challenges to be identified are:

–   Motivation of the audience. The participants of the approbation (literary gifted schoolchildren and students-future teachers) had a high level of motivation. At the same time, we realise that the situation may be different in the conditions of a mass school.

–   Digital resource orientation. It was recorded that students were mainly focused on the use of digital resources when creating a creative response. We are saddened by the reported lack of live interaction skills, but we envisage this limitation to be turned to our advantage in the development of the distance course.

–   Low probability of demand for multiliteracy experience in mainstream school education. This conclusion was recorded on the basis of participants' feedback. We share this concern and see the space of additional education as a resource.

–   Labour intensity. It was found that the duration of the masterclass (2 ac. hours) is not enough to study each type of text from the presented "palette". This format can be a reason for independent mastering of the proposed tools.

Taking into account the findings and results, we moved on to approbation of the model "Multiliteracy: Puzzles of Meaning" in the format of an online course.

3.3 Design and implement an online course based on the model "Multiliteracy: Puzzles of Meaning"

At this stage of approbation, a digital mini-course programme was developed and implemented for students in grades 7-9. It seemed necessary for us to consider the viability of the model of the educational situation "Multiliteracy: puzzles of meaning"

with the participation of younger teenagers in the situation of asynchronous online learning. Let us consider the process and the result of the approbation.

1. Development of methodological materials.

The task of designing the online course was determined by the clear requirements of the School in the Palm of Your Hand platform and the terms of reference. The School in the Palm of Your Hand staff provided support for the development of the first Russian-language online course for schoolchildren on multiliteracy. The project was built and implemented with methodological and expert support from the platform's specialists.

The target audience was identified (pupils of 7-9 grades), questions were prepared for pupils that allowed them to answer for themselves "what skills will this course help to develop?", the goals and objectives of the course were formulated in the logic of "from the pupil", i.e. what the pupil will get as a result of successful mastering of the course.

In the programme description we have provided a clear algorithm, the order of actions to be followed to complete the course.

The name of the course corresponded to the name of the educational situation model - "Multiliteracy: Puzzles of Meaning". This short title, containing a metaphor, revealed our academic definition of multiliteracy in the logic of semiotic didactics. "Types of texts" as "puzzles" ran through the whole course.

Humorous questions were developed for a humorous quiz, to conduct a student self-assessment of the student's understanding of the secrets of multiliteracy.

According to the tradition of "School in the Palm of Your Hand", the course participants were accompanied by a guide - the legendary Nanokot, who created a certain emotional mood and gave a humorous explanation of the material. Each "type of text" was embodied not only in a detailed description, but was supplemented with a specific example of a multidimensional presentation of the topic, with the image of a cat as the theme.

As a final task, we offered participants a project task (purposeful organisation of actions to obtain a practical result new to the participant). In order to create a reading response, the students were offered a choice of three excerpts from Strugatsky brothers' novels ("What to Do, How to Be?", "Courage", "The Future") and three fragments of

children's popular science books ("Cats and Paradoxes", "The World Ocean", "Volcanoes"); they had to choose one. The selection criteria took into account the natural science orientation of the School League programmes, entertaining for teenage readers, and the genres of fiction and popular science literature. We outlined the need to extract meaning from the selected text that was valuable to the student. Students were instructed to select the following text

The development of the results assessment system caused a certain difficulty, it had to meet the following requirements - transparency, specificity, understandability. When mastering the course, the works of fellow students had to meet the formal requirements of volume and copyright compliance.

We have determined that the assembled "puzzle" should:

- reflect the meaning and content of the text;

- consist of five or more formats for response;

- be organised according to the methodological descriptions of working techniques and tools presented in the "text palette";

- conform to the norms of syntax and grammar of the literary language.

Each criterion was scored from zero to twelve points. Each feedback received an appropriate rating and a comment from the teacher. A feedback system was designed to take into account possible "points of growth" (Appendix 2).

All collected materials were structured into a single document and posted on the platform.

2.Conducting piloting (in the format of an online course).

The course was advertised on the platform. The learning process was designed for three months, the guys worked autonomously, if necessary they could contact us as supervisors, usually these questions were of technical nature.

26 participants fully mastered the mini-course and created "texts of a new nature". Out of the 20 offered, they chose popular science texts as a response text and 6 chose fiction texts. At the end of the course term we received the works for evaluation. Each text was evaluated according to the criteria presented earlier. In addition to formal

assessment, we also gave feedback, where we noted what had worked and clarified what remained unclear.

Two weeks after the end of the course publication, the participants were sent a questionnaire with questions to assess their attitude to the experience and possible use of the obtained tools in the future. The results of the questionnaire are presented in the section "Analysis of Activity Products".

To clarify the identified trends, we asked several graduates to give detailed answers to the questions. identify monographic characteristics (see Appendix 3). We received two responses, based on which we can draw a generalised portrait of a participant of the online course "Multiliteracy: Puzzles of Meaning". They noted that on the course they understood how to "convey their thoughts with the help of comparisons, descriptions and find different approaches to the consideration of the topic, and also thought about the principles of working with information", and "the experience of interacting with a text of a new nature was interesting and important".

Consider the results of analysing the products of the activity.

3. Analysing the products of the activity.

We had 26 works at our disposal as products of creative activity. Most of the "texts of a new nature" were designed in the format of presentations, where a separate slide was dedicated to one of the text types.

18 out of 26 responses were for scientific texts. This may be due to the fact that such texts are more concrete, their content is easier to present in the format of diagrams, illustrations, audio statements.

Scores for created responses indicate a high quality of reader reflection within the proposed educational situation.
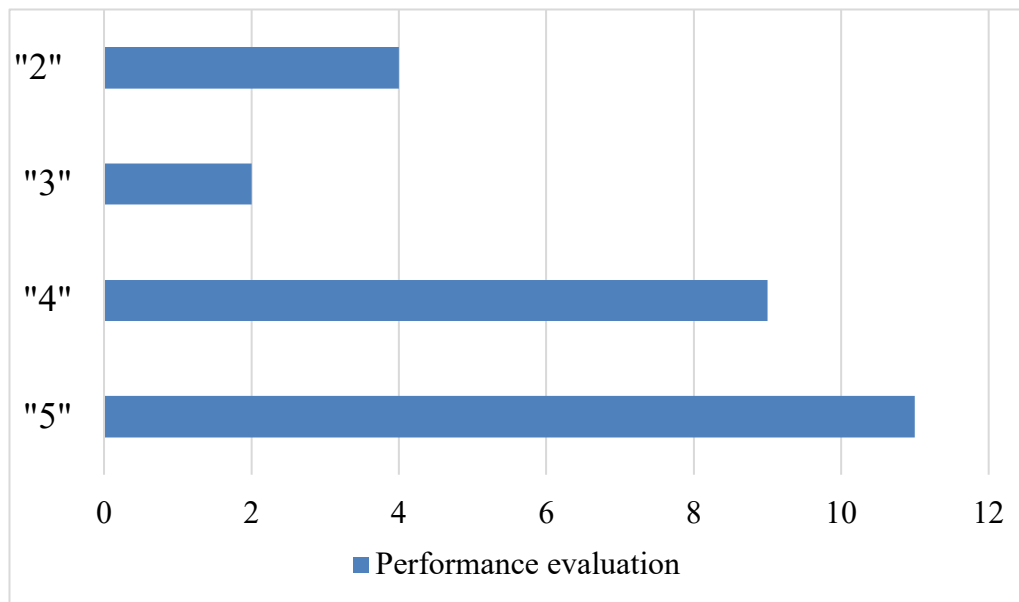
Figure 21 - Evaluation of the digital mini-course Multiliteracy: Puzzles of Meaning

20 papers were highly rated, "texts of a new nature" were created in compliance with the criteria specified by the course authors.

Some of the works that received less high marks did not fulfil one or another criterion. The greatest difficulty was caused by the reflection of the understanding of texts, non-compliance with the culture of authorship.

As part of the study, the 'texts of a new nature' created by the students were evaluated in terms of their mastery of the tools presented. In the absence of live interaction, it was important for us to consider the extent to which the participants were able to understand the techniques presented in the 'text palette'. We were pleased to see that in the bulk of the papers each fragment corresponded to the type of text described. In some pieces of work it was further explained what the picture or graph meant.

Let's consider the results of course mastering according to the criteria for assessing the viability of the educational situation model.

1) *Interest:* we were interested in whether the participants chose our course independently or on recommendation. It turned out that 18 out of 26 participants chose Multiliteracy: Puzzles of Meaning on their own. Answering the question "why this particular course?", participants indicated that they were "interested in the course description and title".

Self-assessment of the readiness of the participants of the online course to use the acquired experience of working with text in further solving learning and life tasks showed the following picture:
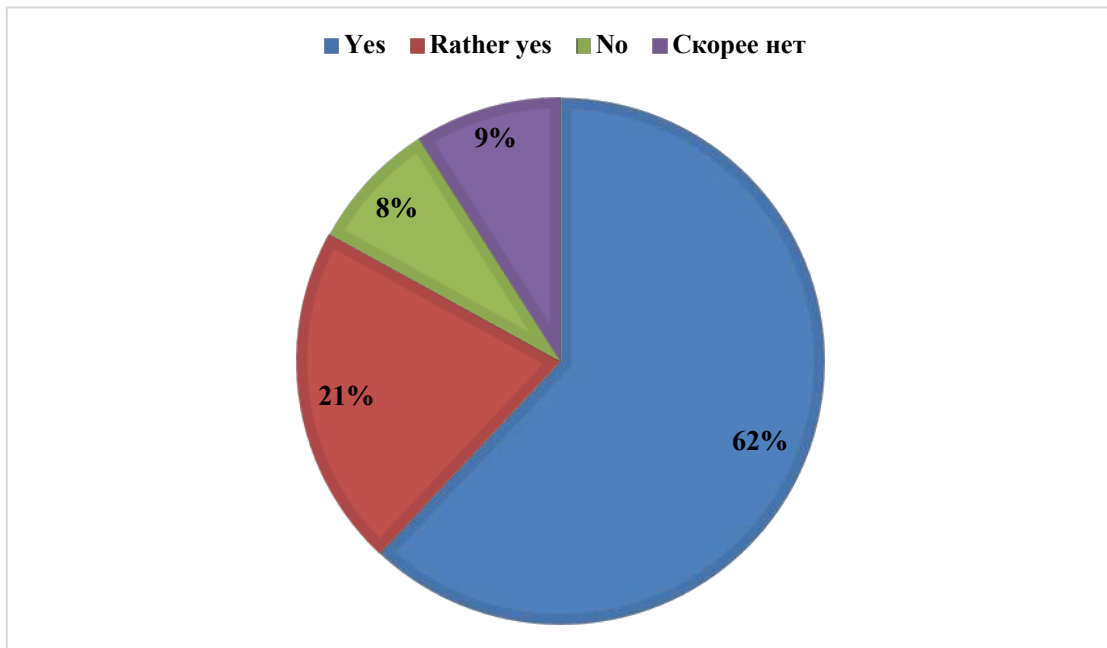
Figure 22 - Self-assessment of online course participants' readiness to use the acquired experience of working with text in further solving learning and life tasks

The results obtained seem optimistic to us. Unfortunately, we had no opportunity to find out the reasons for negative answers in a personalised way. We assume that they are of a negative nature, similar to what we have identified earlier with other masterclass participants.

In the practice of "Schools in the Palm of Your Hand" the rating of courses is carried out according to the parameter of success rate of completed works. Our course was among the leaders (100% out of 100%) together with such courses as "Invention Formula", "Perfect Alarm Clock", "Citizen Science".
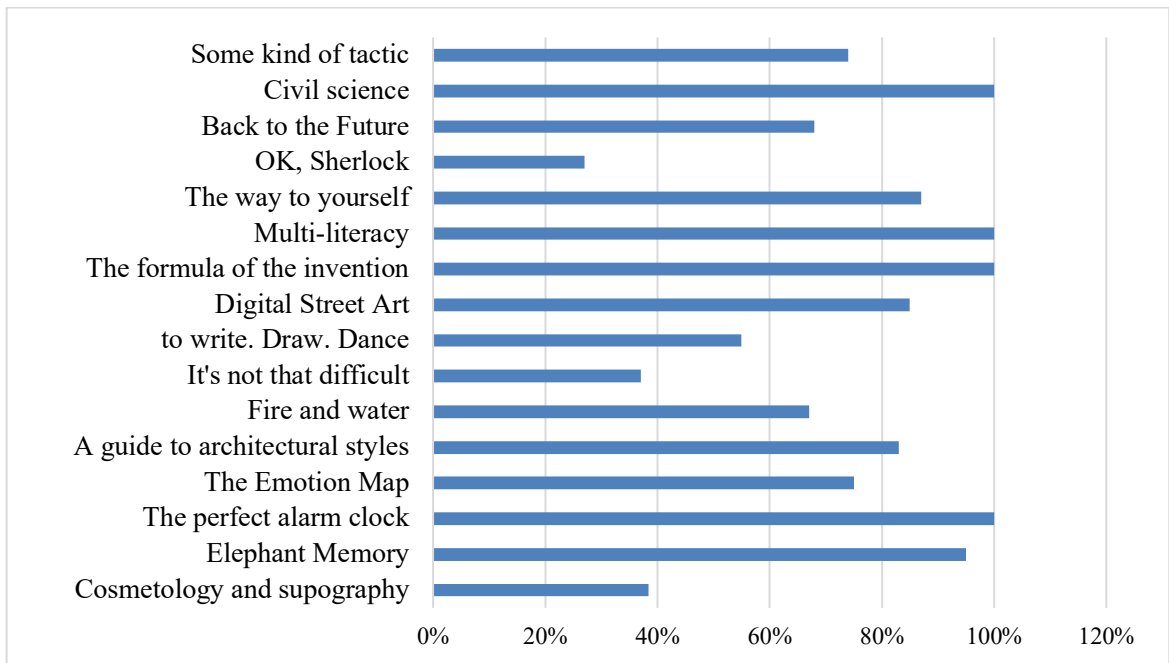
Figure 23 - Success rate of uptake of School in the Palm of Your Hand online courses for the 2021-2022 school year

We consider this high educational outcome as an argument in favour of interest.

2) *Availability of a creative product*: we had 26 creative works at our disposal. All the submitted works met the requirements we had outlined, the participants managed to reflect the meaning and content of the selected texts. The responses were composed using five or more text formats, i.e. they could be categorised as "texts of a new nature". The greatest difficulty was the need to respect copyright, which we pointed out in the feedback.

3) *Willingness and readiness to use the gained experience:* 78% of participants who completed the online course plan to use the gained experience in the future. The proposed toolkit was evaluated by schoolchildren as useful when interacting with traditional, verbal text. The monographic characteristics (see Appendix 3) confirm the findings. We should separately note that our conclusion about the high degree of willingness and readiness to use the obtained experience is confirmed not only by the results of the questionnaire, but also by the high quality of pupils' work. For the first time in the process of approbation, participants noted that the creation of the "text palette" led to a better understanding of the logic of structuring the studied material.

Thus, the approbation of the model in the format of a digital mini-course can be considered successful. The peculiarity of this stage of approbation is that they had enough time to familiarise themselves with additional materials, and the absence of the teacher did not prevent them from creating beautiful independent solutions.

Conclusions of the Third Chapter

Based on the results of the theoretical and empirical stages of the research, in the logic of the system-activity approach, the model of the educational situation "Multiliteracy: puzzles of meaning", oriented to the mastering of multiliteracy experience, was developed.

The main components necessary in an educational situation when designing the experience of mastering multiliteracy skills are identified: knowledge (acquaintance with the phenomenon of diversity), instrumental (preparation of a reader's response using multimodal tools to create a "text of a new nature"), reflexive (awareness and comprehension by the student of the obtained experience of multiliteracy).

Proved the viability of the model based on its validation in three different training formats:

- module "Reading Initiatives" as part of the short-term educational programme "Literary Creativity" at Sirius Centre (10 hours);

- a series of master-classes "What it means to be literate in the 21st century" for different categories of participants: students and high school students (1 hour);

- mini-course of additional distance education on the platform "School in the Palm of Your Hand" (16 hours).

Design methods, questionnaires, and the monographic characterisation method were used.

The viability was proved by the results of the results of the approbation according to three criteria: the interest of the participants, the presence of a creative product that meets the requirements for a text of a new nature and the desire and willingness to use the experience gained.

Consider the aggregate of the data across the three approbation formats.

Analysis of reading reflection and feedback from over two hundred participants revealed that over 80% of students demonstrated interest and positive attitudes towards the multiliteracy experience.
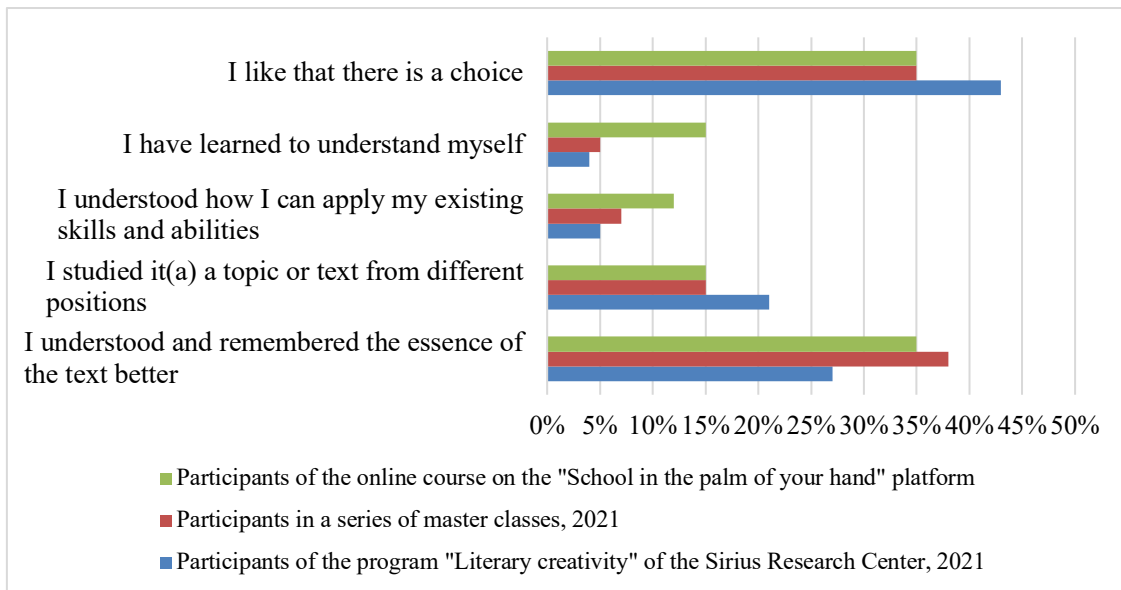
Figure 24 - Student responses indicating interest in the experience

They justify this by the possibility of choice, the availability of a variety of different communication formats, and the interesting content of the texts.

Quality of creative products. Children's creative works meet the requirements for texts of a new nature. The reader's responses are meaningful, imaginative, indicating an understanding of the meaning of the original text or the proposed theme. The full potential of the multimodal toolkit "text palette" was used.

Willingness and readiness to use the acquired experience. More than 80% of students believe that they will be able to use the acquired multiliteracy experience in the future to solve learning and life tasks.
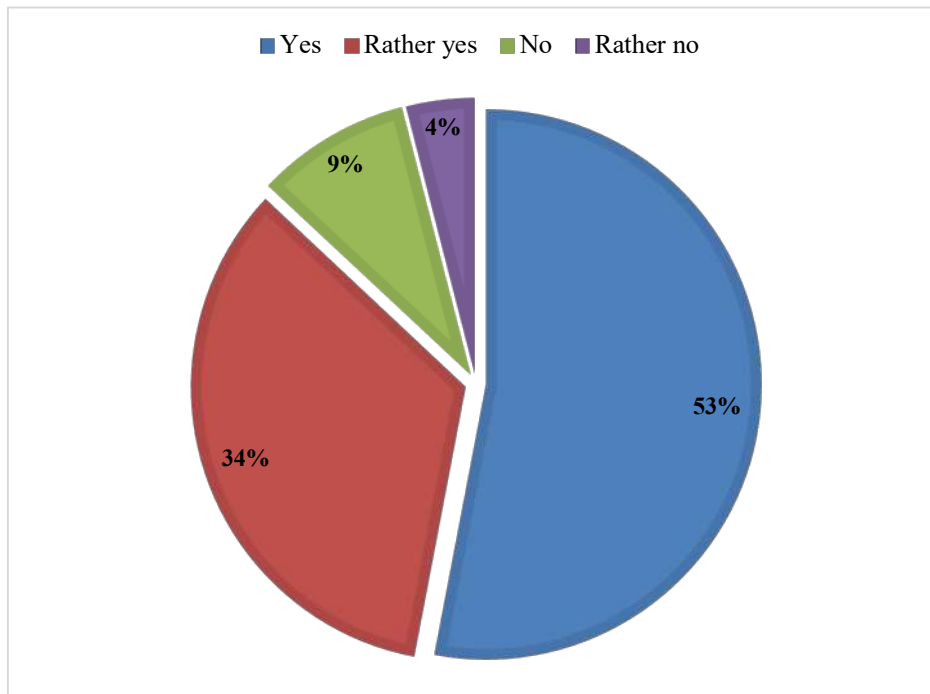
Figure 25 - Students' assumptions about whether they will use the proposed toolkit to solve learning and life problems in the future

The viability of the model in the conditions of additional education has been proved. The possibility of its application in the structure of basic education suggests further research.

CONCLUSIONS

The study focused on justifying the appropriateness of using multiliteracy experiences to engage with 'texts of a new nature'.

Let's review the main results of the research tasks.

1. Based on the analysis of theoretical prerequisites of literacy transformation, we propose a definition of multiliteracy taking into account its pedagogical potential. We consider multiliteracy as an integrative personal characteristic, which involves the use of verbal and non-verbal means of interaction with new knowledge.

2. The comparative analysis of domestic and foreign works for the period from 1996 to 2021, devoted to the problems of multiliteracy development in the educational process, allowed us to formulate a list of skills that define a multiliterate person:

- The ability to interact with traditional verbal text, involving the ability to understand, interpret, evaluate and create such text;

- The ability to structure and model, and to translate content into a logical and mathematical format;

- The ability to read and create a visual image of information;

- The ability to transform content into sounds, to understand and interpret acoustic (auditory) information;

- The ability to express the ideas inherent in the text through the materialisation of meanings;

- Skills related to searching, comparing, contrasting and analysing information to obtain new knowledge;

- The ability to reflect and project information from the world around them onto their own experience;

- The ability to initiate and carry out communication in the context of the topic;

- The ability to go beyond the literal meaning of a text, to identify ideas, to analyse the meanings embedded in the text.

We admit that the presented list of skills can be supplemented or expanded depending on the pedagogical context. However, the conducted research allows us to say

that the presented set of skills is necessary and sufficient for students' interaction with "texts of a new nature".

3. Based on the content analysis of the content of educational programmes on multiliteracy implemented in the universities of Newcastle, Melbourne (Australia), Oslo (Norway) and Helsinki (Finland) (no domestic analogues were found), the analysis of the educational outcome of self-study of the online course on the Coursera platform "Literacy in Different Modalities: Communication and Education in the Age of Digital Media" using the method of "research in action", the data were obtained indicating that multiliteracy is considered to be a multimodal communication, interpretation and analysis of data presented in different formats. The experience of developing its constituent skills is formed in the process of multimodal communication, interpreting and analysing data presented in different formats. The following promising directions of programme development are highlighted: improvement of ways to assess multiliteracy as an educational result and refinement of its constituent modalities.

4. As a result of the questionnaire survey of pupils and teachers (354 people), a positive attitude of respondents to the phenomenon of multiliteracy and its manifestation in the teaching process was recorded. From both groups we received understanding and support for our interpretation of the essence of multiliteracy. The participants shared our opinion that a person who is ready to master and demonstrate multiliteracy skills should be able to work with information, take into account the possibility of a variety of forms of self-expression in the communication process, critically evaluate information, transform meaning systems into different modalities and relate information to the social context and individual needs, while respecting the culture of authorship.

Differences in pupils' and teachers' attitudes towards the skills that determine readiness to develop and apply multiliteracy in the conditions of modern communication became obvious. The pupils' priority is the ability to "promote" their own tests and resist information manipulation, while the teachers' priority is the ethics of communication on the Internet and the ability to navigate through media resources. At the same time, the whole proposed range of skills was in demand, which indicates that respondents have a meaningful attitude to multiliteracy development.

The types of literacy (components of multiliteracy) that teachers and students believe are already developing quite successfully at school were identified. These include verbal, communicative and scientific literacy. At the same time, there is a deficit in the development of other types of literacy (components of multiliteracy). This applies to tactile, existential and reflexive literacy, the development of which should be taken into account when designing the educational process.

Based on the totality of the questionnaire results, we believe that multiliteracy skills are spontaneously present in the educational process of a modern school, but are not purposefully developed.

5. The model of an educational situation aimed at designing the experience of mastering multiliteracy skills for interaction with "texts of a new nature" was developed, which is a set of the following components: the knowledge component "Harmony in Diversity" (introduction to the phenomenon of multiliteracy); the instrumental component - the technology "Text Palette" (mastering the tools that allow activating various multiliteracy skills); the reflexive component "Reader's Reflection" (creating a reader's response in the text); and the reflexive component "Reading Reflection" (creating a reader's response in the text).

The results of approbation of the proposed model in three formats: a short-term module programme "Nine Ways to the Text" (10 hours), a master class "What it means to be literate in the 21st century" (1.5 hours), a digital mini-course "Multiliteracy: Puzzles of Meaning" (12 hours) confirmed the viability of the model and the possibility of its variable use. Feedback from the participants indicated that the proposed multiliteracy experience was perceived positively, they considered the possibility of further use of the presented tools. The analysis of the products of pupils' creative activity demonstrated that most of the works meet the characteristics of "texts of a new nature". The formats of reading reflection included semiotic diversity: verbal forms, infographics, charts, diagrams, multimedia fragments (audio, video). As a rule, all the works were characterised by a conscious refusal of linearity and an orientation towards a holistic polymodal expression of meaning.

The presented practice of mastering multiliteracy experience does not replace classical work with the text, it is only an additional way of interacting with the "text of a new nature", additional possibilities of presenting a reader's response, revealing a theme or concept.

At the same time, the limitations of this model were identified, which may lead to its lack of use in mass schools. These limitations are related to the fact that the creation of a "text of a new nature" is a labour-intensive process that requires the motivation of all participants. It is assumed that both the student and the teacher are ready to make cross-cultural connections when exposing a topic, and this is a skill of a high level of education. However, we believe that this educational situation can become a reason to develop interest in mastering multiliteracy skills.

The analysis of the obtained results of the study allows us to conclude that it is expedient to use in the educational process a set of multiliteracy skills to interact with "texts of a new nature". Thus, we can consider that the goal of the study was fulfilled. As a prospect, we note the possibility of further study of such directions as: the implementation of the educational model in the practice of mass school at different age stages; the influence of multiliteracy skills on learning new material; the relationship between multiliteracy and the culture of modern reading.

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Annex 1

"Reader's talent" in the context of multiliteracy

Dear friends, the concept of literacy is evolving. In addition to the basic skills of reading and writing, new forms and modes of communication have to be learnt. Literacy is becoming multiple, polymodal. This phenomenon has acquired the name "multiliteracy". Let us try to understand this process and find out what is the "talent of the 21st century reader".

- Your social role at this stage
    - High school student
    - Educator
    - Other...
- The foundations of multiliteracy can be described through four components: individual experience of working with information; a variety of forms of self-expression in the process of communication; a critical eye that allows one to relate information to social contexts and individual needs; and the practice of transforming a system of meanings and values from one context to another. Having learnt the basics of multiliteracy, a person will be able to engage in education in a more meaningful and successful way.
    - Yeah, no doubt about it
    - More like yes.
    - Probably not.
    - No
    - I can't answer that
- Select the types of literacy that you feel you are successful in developing in school
    - Communication literacy
    - Information literacy

- Economic literacy

- Maths literacy

- Environmental literacy

- Media literacy

- Reading literacy

- Science literacy

- Visual literacy

- Auditory literacy

- Tactile literacy

- Research literacy

- Self-analysis and reflection literacy

- Philosophical literacy

- Literacy in writing

- Oral literacy

- Other...

- Select the skills and abilities that you think should be taught at school (up to a maximum of 5 items)

  - Ethics of communication on the Internet

  - Resistance to information manipulation

  - Ability to "promote" own texts

  - Ability to navigate media resources

  - Copyright compliance

  - Compliance with information security rules

  - Mastering basic programming skills

  - Ability to create and "read" texts of new (online) genres

  - Ability to assess the quality and credibility of a text source

  - Ability to work with text programmes: "translator", "search", "anti-plagiarism"

- What skills would you like to develop and improve in yourself? (max. 5)

– Understand and evaluate verbal text

– Comprehend information through graphs, charts, diagrams, and diagrams

– Read and create a visual format for presenting information

– Find, compare and analyse data

– Create the optimal sound solution to convey the required content

– Express the ideas in the text by materialising meanings

– Project external information onto their own experience

– Initiate and carry out communication in the context of the topic

– Go beyond the literal meaning of the text, highlighting the philosophical ideas reflected in the text

– Other...

Digital mini-course "Multiliteracy: Puzzles of Meaning"

Развиваем навыки чтения

Хороший читатель способен найти, понять, интерпретировать и оценить информацию.

Мы получаем знание не только из бумажных источников, но и с экранов компьютеров, смартфонов. Появление текстов новой природы, требует новых способов взаимодействия с информацией.

Успех в общении (устном или письменном) зависит от умения человека передавать информацию и понимать другого. Для этого есть много способов, мы с ними познакомимся.

Наш курс поможет тебе:

- определить свой стиль обучения;
- научиться делать самостоятельный выбор;
- а главное – получать удовольствие от самообразования.

< НАЗАД   ДАЛЕЕ >

Навыки

Курс поможет в развитии навыков:

Коммуникация   **Чтение и письмо**   **Самообразование**

< НАЗАД   ДАЛЕЕ >

Слайд 1

Ресурсы

Мультиграмотность: пазлы смысла

Привет!

В названии нашего курса есть необычное понятие - «мультиграмотность». В русском языке есть и другие сложные слова, которые начинаются с «мульти». Как ты думаешь, что может означать эта часть слова?

- ○ хорошо
- ○ много
- ○ забавно
- ● быстро

МУЛЬТИФРУКТ   МУЛЬТИВИЗА   МУЛЬТФИЛЬМ
МУЛЬТИВАРКА
МУЛЬТИЗАДАЧНОСТЬ   МУЛЬТИМЕДИА   МУЛЬТИПЛИКАТОР

ОТВЕТИТЬ

СЛАЙДЫ

- ▼ Мультиграмотность
  - ▼ Для кого этот курс?
    - Навыки курса
    - Развиваем навыки чтения
    - Приветсвие автора
    - Знакомство с авторами
  - ▼ Мультиграмотность - что это?
    - Мульти+грамотность
    - Теория Говарда Гарднера
    - Теория множественного интеллекта
    - Типы интеллекта
    - ▶ Что ближе тебе?

Слайд 2

Ресурсы

Мультиграмотность: пазлы смысла

Мульти+грамотность

Когда я проходил курсы «Школы на ладони» то понял, что грамотность – это больше, чем умение читать и писать. Изучая научные статьи, я нашел слово «мультиграмотность».

Оказалось, что...

Разные люди по-разному воспринимают окружающий мир.

Мультиграмотный человек может выразить смысл с помощью слов, цифр, схем, картинок, звуков и т.д.

То есть использует самые разные средства взаимодействия с информацией.

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СЛАЙДЫ

- ▼ Мультиграмотность
  - ▼ Для кого этот курс?
    - Навыки курса
    - Развиваем навыки чтения
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  - ▼ Мультиграмотность - что это?
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    - Теория Говарда Гарднера
    - Теория множественного интеллекта
    - Типы интеллекта
    - ▶ Что ближе тебе?

Слайд 3

Ресурсы

Мультиграмотность: пазлы смысла

Мульти+грамотность

Мы убеждены, что мультиграмотность связана с теорией множественного интеллекта, разработанной современным психологом, Говардом Гарднером.

Посмотри видео далее, чтобы понять идею автора.

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СЛАЙДЫ

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  - ▼ Для кого этот курс?
    - Навыки курса
    - Развиваем навыки чтения
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    - Знакомство с авторами
  - ▼ Мультиграмотность - что это?
    - Мульти+грамотность
    - Теория Говарда Гарднера
    - Теория множественного интеллекта
    - Типы интеллекта
    - ▶ Что ближе тебе?

Ресурсы — Мультиграмотность: пазлы смысла

Что необходимо тебе для усвоения новых знаний? Выбери три самых важных способа взаимодействия с информацией.

- ☑ Прочитать
- ☐ Узнать структуру
- ☑ Увидеть
- ☐ Услышать
- ☐ Прикоснуться
- ☐ Исследовать
- ☐ Обсудить
- ☐ Определить своё отношение
- ☑ Разгадать смысл

ОТВЕТИТЬ

СЛАЙДЫ

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  - ▼ Для кого этот курс?
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    - Типы интеллекта
  - ▼ Что ближе тебе?

Ресурсы — Мультиграмотность: пазлы смысла

Типы интеллекта

Нажимай на иконки символы типов интеллекта чтобы узнать о них подробнее

Типы интеллекта

< НАЗАД   ДАЛЕЕ >

СЛАЙДЫ

- ▼ Мультиграмотность
  - ▼ Для кого этот курс?
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    - Теория Говарда Гарднера
    - Теория множественного интеллекта
    - Типы интеллекта
  - ▶ Что ближе тебе?

Ресурсы — Мультиграмотность: пазлы смысла

Пазлы смысла

Текст-рассуждение: рассуждение, отражающее философские, нравственные аспекты текста, подбор цитат, афоризмов.

Умение выходить за грань буквального значения текста, выделять философские идеи, отраженные в тексте, анализировать то, что не сообщается в тексте напрямую

Вербальный текст | Математический текст | Визуальный текст
Акустический текст | Текст ощущений | Текст исследования
Текст самопознания | Текст общения | Текст-рассуждение

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СЛАЙДЫ

- Навыки курса
- Развиваем навыки чтения
- Приветсвие автора
- Знакомство с авторами
- ▼ Мультиграмотность - что это?
  - Мульти+грамотность
  - Теория Говарда Гарднера
  - Теория множественного интеллекта
  - Типы интеллекта
  - ▼ Что ближе тебе?
    - Определи свой тип
  - ▼ Разные тексты

Слайд 1

Критерии оценки

Оценка за освоение курса ставиться по результатам итогового задания. Курс считается пройденным, если ты набрал не менее **40 баллов**; пройденным с отличием, если ты набрал **80 баллов.**

Максимальный балл 100

- Собранный "пазл" отражает смысл и содержание текста – 0-12 баллов;
- Использовано не менее 5-ти форматов для отклика – 0-12 баллов;
- В работе соблюдены нормы синтаксиса и грамматики литературного языка – 0-12 баллов;
- Продемонстрирована культура авторства (на картинки, музыку, аудиофайлы, видеоролики есть ссылки) – 0-12 баллов.

СЛАЙДЫ:
Теория Говарда Гарднера
Теория множественного интеллекта
Типы интеллекта
▼ Что ближе тебе?
Определи свой тип
▼ Разные тексты
Пазлы смысла или текст о Коте
Мультиграмотное представление Кота
▼ Финальное задание: собери свой «Пазл смысла»
План действий
Уточнение к заданию
Критерии оценивания

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Слайд 2

Что нужно, чтобы собрать «пазлы» смысла правильно? Уточняю:

- Используй не менее пяти «пазлов» (вербальный, математический и др.);
- В каждом «пазле» выбери приём (инструмент) работы с текстом. Например, из математического текста следует выбрать что-то одно: интеллект-карта, схема, статистика);
- Используя чужие материалы (иллюстрации, тексты, аудио и видео фрагменты) обязательно указывай источник;
- Проверь орфографию и синтаксис;
- Убедись, что представленные материалы отражают ключевую идею текста.

СЛАЙДЫ:
Мульти+грамотность
Теория Говарда Гарднера
Теория множественного интеллекта
Типы интеллекта
▼ Что ближе тебе?
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Пазлы смысла или текст о Коте
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▼ Финальное задание: собери свой «Пазл смысла»
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Слайд 3

Поздравляю! Ты получил первый опыт мультиграмотности. Как же его применить? Он будет полезен тебе в решении учебных и жизненных задач.

Теперь ты знаешь, что любой смысл может быть передан разными способами: звуком, текстом, картинкой и т.д. Это многообразие можно применить при создании презентации, страницы в социальной сети, блога, лонгрида и других полезных целей.

СЛАЙДЫ:
Теория множественного интеллекта
Типы интеллекта
▼ Что ближе тебе?
Определи свой тип
▼ Разные тексты
Пазлы смысла или текст о Коте
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▼ Финальное задание: собери свой «Пазл смысла»
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Критерии оценивания

Где применить полученный опыт?

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Отрывок «Вулканы»

Если прогуляться по горной тропе, может показаться, что окружающий пейзаж выглядел так всегда. Горы поблескивают вечными снегами, да и реки будто журчали здесь с начала времен. Но если вы пойдете гулять в компании геолога, то услышите совсем другую историю, историю постоянного движения и перемен. Горные породы вокруг рассказывают о жизни нашей планеты: о столкновении континентов, разрывах и перемалывании земной коры, об извержениях вулканов и о мощных землетрясениях. Тип размер и форма горных пород могут рассказать о постепенных изменениях, создавших новые земли, сдвинувших континенты, и о масштабных катастрофах, таких как падение астероидов, враз преобразивших облик всей планеты.

Пожалуй, вулканы - самое наглядное и драматичное свидетельство изменений на поверхности Земли. Вулканические извержения удивительным образом формируют нашу планету. Каждый континент образовался благодаря движению магмы. Многие прекраснейшие природные места, такие как Йосемитский национальный парк, Скалистые горы, национальный парк Йеллоустоун или Камчатка, являются результатом постоянного движения магмы из недр Земли к поверхности. И многие острова, такие как, скажем, Гавайи, - результат вулканической активности на морском дне.

Чад, Д. Вулканы. Научный комикс / Д. Чад. — Москва : Манн, Иванов и Фербер , 2018. — 128 с. — С. 6.

Фрагменты произведений для выполнения итогового задания

Отрывок «Коты и парадоксы»

Улыбка, висящая в воздухе, когда сам кот уже исчез, — это так называемый логический парадокс, то есть противоречие: ведь улыбка — это выражение лица (морды), а значит, без лица (морды) существовать не может (заметим, что улыбающийся кот — сам по себе парадокс: где это вы видели улыбку на кошачьей морде?). Парадоксы в науке очень полезны, потому что показывают, что научная теория, в которой они обнаруживаются, может оказаться ложной (как, строго говоря, всякая теория). И хотя это еще не повод немедленно от нее отказываться, но уже повод задуматься о новой теории, в которой такого парадокса не возникнет.

Ранее мы выяснили, что свет — одновременно волна и поток частиц (фотонов). Но сейчас ученые знают, что так устроен не только свет, но вообще любая материя. Частицы, проявляющие волновые свойства, называются квантами (фотон — это одна из разновидностей кванта).

Как такое возможно? Каким образом свет (и любая другая материя) может одновременно быть волной и потоком частиц (представим их себе как очень маленькие твердые шарики)? Кроме того, волна — это колебания, распространяющиеся в какой-нибудь среде (например, в воде или воздухе). Как же свет проходит через космическое пространство, где нет ни воды, ни воздуха? Похоже, мы снова имеем дело с логическим парадоксом! К концу XIX века ученым более или менее удалось прийти к общему согласию, что волны света распространяются в особой среде — мировом эфире. Но почти сразу выяснилось, что никакого мирового эфира не существует. Этот парадокс окончательно не разрешен и до нашего времени. Вот такой улыбающийся кот!

Баюк, Д., Виноградова Т., Кноп К. Алиса в стране наук / Д. Баюк, Т. Виноградова, К. Кноп. — Москва : Манн, Иванов и Фербер, 2017. — 96 с. — С. 38.

Отрывок «Мировой океан»

«Мне нужно море, потому что оно – мой учитель», – писал чилийский поэт Пабло Неруда о дорогом его сердцу Тихом океане. Его процитировала Генеральный директор ЮНЕСКО Одрэ Азуле по случаю Мирового дня океана, который отмечают в ООН 8 июня. Она призвала отнестись к нему как к учителю – с уважением и желанием черпать новые знания.

«Мы должны... лучше изучить эти глубины, которые во многом еще не изведаны и таят множество секретов...», - считает глава ЮНЕСКО. Но то, что нам уже известно, позволяет понять, насколько велика роль океанов и какая им угрожает опасность.

Мировой океан - источник продовольствия и средств к существованию нескольких миллиардов жителей планеты. Океан – это наши транспортные и торговые пути. Мы называем океаны «легкими Земли», потому что они являются крупнейшими поглотителями углекислого газа. Эта их способность играет жизненно важную роль в регулировании глобального климата, но из-за неуклонного потепления и закисления океанов они могут утратить эту способность. Эти же процессы угрожают морской флоре и фауне: сокращается биоразнообразие, нарушаются пищевые цепочки и целые экосистемы.

«Океаны – это безошибочные барометры здоровья планеты», - утверждает Одрэ Азуле. Прямую опасность для людей представляет и повышение уровня моря, в результате которого могут быть затоплены прибрежные районы и целые островные государства.

Мировой океан – барометр здоровья планеты и его показания вызывают тревогу. — Текст : электронный // Новости ООН : [сайт]. — URL: https://news.un.org/ru/story/2020/06/1379692.

Отрывок «Мужество»

В девятнадцать ноль-ноль Андрей Т. произвел второй экспериментальный глоток всухую. Положение оставалось прежним. Тогда Андрей Т. спустил ноги с кровати, нашарил тапочки и потащился в ванную полоскать предательское горло раствором календулы в теплой воде. Задрав голову и уставя в потолок бессмысленный взгляд, клокоча и булькая, он продолжал размышлять. Собственно, что такое мужество? Мужество — это когда человек не сдается. Бороться и искать, найти и не сдаваться. Когда у человека ангина, бороться и искать невозможно, остается одно: не сдаваться. Например, можно послушать приемник. Можно тщательно и со вкусом перелистать альбом с «марками. Есть новенький сборник научной фантастики. Есть старенький томик «Трех мушкетеров». На худой конец, есть кот Мурзила, которого давно пора потренировать на вратаря. Нет, мужественный человек, даже больной до беспомощности, всегда найдет себе применение.

Мир немного посветлел. Андрей Т. поставил пустой стакан на полку и вышел в прихожую.

Стругацкий, А. Н., Стругацкий Б. Н. Парень из преисподней. Повесть о дружбе и недружбе / А. Стругацкий, Б. Стругацкий. — Москва : Издательство АСТ, 2018. — 224 с.

Отрывок «Что делать, как быть?»

Андрей Т. никогда не был трусом. Просто иногда он ратовал за разумную осторожность. Вот и сейчас он отчетливо понял, что минута действия временно прекратила течение свое и уступила место минуте здравого смысла. Перед нами как будто подземелье? Отлично. В таком случае не следует ли заняться сначала изготовлением смоляного факела? Не следует ли сменить зимние ботинки на болотные, скажем, сапоги? И вообще не пора ли вовлечь в события дедушку, боевого офицера, имеющего, кстати, опыт преследования врага в тоннелях Берлинского метро? Или еще лучше — позвонить замечательному человеку, классному руководителю Константину Павловичу, бывшему танкисту и кавалеру ордена Славы.

Известно, что есть лишь один способ делать дело и множество способов от дела уклоняться, так что трудно сказать, как бы все обернулось в дальнейшем […].

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Отрывок «Будущее»

— Янус Полуэктович, разрешите, я вам задам один вопрос?

Подняв брови, он некоторое время внимательно смотрел на меня, а потом, видимо вспомнив что-то, сказал:

— Пожалуйста, прошу вас. Только один?

Я понял, что он прав. Все это никак не влезало в один вопрос. [...] Выйдет ли из меня толк? Найдут ли рецепт всеобщего счастья? Умрет ли когда-нибудь последний дурак?... Я сказал:

Можно, я зайду к вам завтра с утра?

Он покачал головой и, как мне показалось, с некоторым злорадством ответил:

Нет. Это никак не возможно. Завтра с утра вас, Александр Иванович, вызовет Китежградский завод, и мне придется дать вам командировку.

Я почувствовал себя глупо. Было что-то унизительное в этом детерминизме, обрекавшем меня, самостоятельного человека со свободой воли, на совершенно определенные, не зависящие теперь от меня дела и поступки. [...] Теперь я не мог ни умереть, ни заболеть, ни закапризничать («вплоть до увольнения!»), я был обречен, и впервые я понял ужасный смысл этого слова. Я всегда знал, что плохо быть обреченным, например, на казнь или слепоту. Но быть обреченным даже на любовь самой славной девушки в мире, на интереснейшее кругосветное путешествие и на поездку в Китежград (куда я, кстати, рвался уже три месяца) тоже, оказывается, может быть крайне неприятно. Знание будущего представилось мне совсем в новом свете...

Плохо читать хорошую книгу с конца, не правда ли? - сказал Янус Полуэктович, откровенно за мной наблюдавший. - А что касается ваших вопросов, Александр Иванович, то... Постарайтесь понять, Александр Иванович, что не существует единственного для всех будущего. Их много, и каждый ваш поступок творит какое-нибудь из них... Вы это поймете, - сказал он убедительно. - Вы это обязательно поймете.

Позже я действительно это понял. Но это уже совсем-совсем другая история.

Стругацкий А. Н., Стругацкий Б. Н. Понедельник начинается в субботу / Аркадий и Борис Стругацкие. - Москва : N : АСТ, 2019. – 283 с.

Monographic characteristics

After completing the online course Multiliteracy: Puzzles of Meaning, participants were asked to answer three questions: about their current stage of learning; was the course interesting and can the participant characterise the experience as positive; has it become easier to work with text in different modalities? The questions were asked via a personal email sent on behalf of the course instructor to the participant's address listed on the School in the Palm of Your Hand platform. The mailing was conducted two to three months after the end of the online course publication on the platform.

It seems necessary to formulate monographic characteristics on the basis of pupils' answers to the received letters and the results of analysing the products of their creative work. In total, two answers were received. It should be noted that the authors of the texts that received the highest score responded to the letter.

Let us consider the obtained results. V.G., a tenth grade student noted that the course interested her with its abstract and content. She received a lot of positive emotions, improved the skills necessary for creating a presentation. The participant learnt how to present data with the help of graphs, charts built in the "Power Point" programme.

As a result of the course, she realised that she could communicate her thoughts through comparisons, descriptions and find different approaches to a topic, as well as reflecting on the principles of working with information.

She sees her experience of mastering the course and interacting with a text of a new nature as positive and meaningful in furthering her learning.

V. G.'s final assignment was one of the first ones received after the course was published on the platform, which confirms the indicated interest in the course. As a ninth grade student, she created a text of a new nature based on a fragment of A. and B. Strugatsky's work "The Boy from the Underworld. Strugatsky's "A Boy from the Underworld. A Tale of Friendship and Not Friendship." "Is everything predetermined or do we create our own destiny?" - this was the title of the participant's text. The author presented seven of the nine proposed text types. The visual format was presented through

a painting by British illustrator D. Lawrence and was accompanied by a characterisation of the participant.

The mathematical text was realised on the basis of VCIOM data on attitudes to the concept of "fate". V.G. translated the found statistics into a diagram format, which was also accompanied by the author's explanation of the text.

In the verbal text, the participant mentioned that the future is often represented on the pages of science fiction writers' works. An example is "one of the worst versions of the future" described in J. Orwell's novel "1984". The author of the text presents her critical response to this novel, not only referring to it.

The text of the study was devoted to the analysis of survey data of the generation of people born between 1997 and 2012 ("generation z"). The results of answers to different questions about how respondents see 2030 were presented in the form of graphs. The participant translated the found information into several graphs and expressed her own attitude to them.

In her text of a new nature, V. shared that the theme of the future is an exciting one for her, so the acoustic text was presented through the song "Beautiful Far Away" from the film "Guest from the Future", which "talks about the near future that so frightens, encourages and mesmerises us".

The self-knowledge text presented reflections on the future. The participant thought it was important to think about what the people of the future would be like, she posed a series of questions about what personal qualities the people of the future would have.

The reasoning text was based on M. Y. Lermontov's drama "Strange Man". The pupil was invited to reflect on whether the future is predetermined or does it depend on the person?

The assignment met all the assessment criteria and received the maximum score. In the work, the topic of the future was indeed presented from different angles. Each of the texts was accompanied by the participant's personal attitude to this or that material. Due to the feedback received, the experience of the course is positive and productive.

The next participant E.Y. is currently a ninth grade student. He noted that he enjoyed the course very much and that the final assignment was interesting to do. Like

V., he points out that he "got a different perspective on some aspects of working with information".

In this case, the participant noted that he or she had previously found it "easy" to work with different formats and ways of presenting data and could not identify a particular aspect that the course had helped to improve. However, the experience of interacting with text of a new nature was interesting, important and applied by the participant in the educational process.

E.Y. presented the work in the form of a table, where he reflected six fragments of the "text of the new nature".

The verbal text quoted was an excerpt from the course authors' proposed work by D. Chad, "Volcanoes. Science Comic". This did not fulfil the criteria of the assignment, so the score was slightly reduced.

The mathematical text was presented through statistical data about volcanoes and by showing the structure of this geological formation.

The painting "The Eruption of Vesuvius at Night" by the English painter G. Peter was a manifestation of the visual text. The participant noted that the depiction of volcanoes in paintings reflects "the formidable power of planetary nature and thus attracts courageous and brave people".

The research text was brought to life through historical scholarship. A participant in an online course presented the story of a volcanic disaster on the island of Martinique in 1902. The tragedy killed almost the entire population of the island, but the author notes that two people survived and speculates on how they did so.

Within the communication text, E.J. suggested the topic "Why are volcanoes steeper than mountains?" for a geography lesson or a team game and debate.

In the discussion text, the author noted that volcanoes are an object of interest for tourists, as well as an object of scientific research for scientists, poets and artists. The participant noted that sometimes volcanoes are also talked about by politicians, which he confirmed by quoting Charles Maurice de Tylerand-Périgord, a French politician and diplomat of the 18th and 19th centuries. - "some mountains give birth to mice and others to volcanoes".

The work was well evaluated, the participant as a result of mastering the online course presented a text of a new nature, revealing the topic of volcanoes from different angles. Text descriptions were not only studied in the course materials, but also presented in practice. Based on the analysis of the final assignment and the answers received, the participant of the online course evaluates the experience gained as valuable and the emotions gained as a result of mastering the course as positive.

Like the first author, E. J. indicated that he looked at the ways of working with information in a different way. This aspect was not within the scope of our study, but may be the subject of further research. It seems important to find out what exactly the participants mean by this - ways of presenting a text or the differences between different types and ways of working with each type of text.