

Web-Quest of Multicultural Content as a Means of Forming Information Literacy Among Primary School Children

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ABSTRACT

The article deals with the need for information literacy formation among primary school children under the conditions of modern educational space. Considering this personal neoplasm as a metasubject and subject result of mastering the basic educational program of primary General education, the authors suggest using the pedagogical potential of multicultural materials during the supplementary classes of "Culture of the peoples of the Nizhny Novgorod region". Taking into account the modern requirements of the information educational environment, the Web-quest is considered as a priority technology for implementing the program. The article analyzes the possibilities of a system of various Web-quests that make it possible to form primary school students' information literacy components in the process of performing reproductive, problematic and creative nature tasks. The experimental research, the effectiveness of this work is confirmed by comparing the results of the ascertaining and control stages of the experiment.

Keywords: *information literacy, primary school age, Web-quest, multicultural education*

1. INTRODUCTION

Due to the rapid expansion of the educational space, the increase in the range of various information sources, modern people are to deal with huge flows of information. An important question of the modern education system is the growing conflict between the volume of information and limited opportunities for its assimilation. In this regard, the task of educational organizations is to form the students' ability to underline the necessary information from a variety of sources and meet their information demands.

Information skills should be developed at the initial stage of training. The skills connected with searching, analysis, processing, storage and distributing are the basis for forming information literacy among primary school children. In the Federal State Educational Standard of Primary Education it is defined as the metasubject and subject results of mastering the main educational program. Various aspects of the problem of forming this personal neoplasm in primary school age are considered in the works of V. B. Antipova [1], I. N. Vashchuk [2], N. I. Gendina [3], O. A. Gorobets [4], E. V. Zakirova-Zieva [5], I. A. Pogodina [6], J.I. Rossova [7], H. Hall, P. Cruickshank, B. Ryan [8] and others. A review of research on this issue shows the absence of works highlighting the possibilities of forming information literacy by means of familiarization with the cultures of the peoples living in

Russia. Thus, forming information literacy among primary school children actually excludes the content that is most understandable and close to children, based on regional characteristics.

At the same time, multicultural material can be included in the content of various academic disciplines, as well as in the content of extracurricular activities. Significant characteristics of this material from the point of view of forming pupils' information literacy are the following: information richness, providing the possibility to realize intersubject communications; intellectual and emotional intensity, suggesting the response from the pupils; availability for understanding (tales, proverbs, sayings, color and graphic symbols etc.); variability of representation forms (diagrams, tables, infographics, etc.). These characteristics make it possible to develop and maintain the pupils' interest to different cultures and motivate them to study their history, way of life, way of life, traditions and shrines.

At present, it is particularly important to deepen and expand students' understanding the culture of the peoples who inhabit the region where the child lives. In this regard, in our research, the program of the "Nizhny Novgorod region Peoples Culture" supplementary course was developed and tested, one of the implementation technologies is the Web-quest technology.

2. RESEARCH METHODOLOGY

The era of Informatization objectively caused a significant change in the requirements of society towards the results of education. Functional literacy is now recognized as one of the priority outcomes of primary school education. We rely on the idea proposed By N. F. Vinogradova to distinguish integrative and subject components in the composition of functional literacy, depending on the share of their participation. One of its integrative components, without which the subject achievements are impossible for students, is called information literacy.

The term was first used in 1977 in the US national higher education reform program. In the early 2000s, a significant impact on doing a research in the field of learning how to work with information was made by a UNESCO program called "Information for All Programme" (2001), "Alexandria Proclamation on Information Literacy and Lifelong Learning" (2005). During that period, the works of A.V. Goryachev [9], I. N. Vashchuk [2], B. B. Konstantinov [10], T. Ye. Sokolova [11], J. V. Batenova, V. I. Dolgova, I. Ye. Yemelyanova [12] it is scientifically proved that primary school education serves as the first stage of forming information culture of the individual, and results in information literacy. This integrative personal neoplasm, the foundations of which develop in primary school age, is attributed to the prerequisites for forming information competence at the subsequent stages of education in High school.

In the Federal State Educational Standard of Primary Education the ability to work with information is considered both as the metasubject and subject results of mastering the object-oriented programming [13].

According To N. F. Vinogradova's position stated in the Concept of Primary Education "Primary school of the XXI century" (2017), information literacy includes "...awareness of the need to expand its information field; the ability to navigate the information flow; a set of skills that ensure the following aspects: a) effective search, selection, interpretation and information application in accordance with the educational task or everyday problem; b) analyzing, critical assessment of the accuracy and reliability of selected information, taking into account the ethical standards of its use" [14, p.33].

Forming such an integrative personality will be possible if the information and educational environment in Primary school is purposefully created. It will provide a variety of models of real behavior of the child in the information field, requiring not only knowledge, but also a set of skills necessary for independent interaction with the environment.

One of the means of implementing the meta-subject approach in the educational process at Primary schools is using multicultural material. The relevance of its use is enhanced by the fact that the modern information and educational space is characterized by an ever-increasing volume of information resources containing components of different peoples' cultures, their increasing accessibility to students, and, consequently, their ability to enter into a dialogue with representatives of different ethnic groups

freely. However, it is necessary to take into account the negative impact on younger students' minds which have a multiplicity of meanings, changing the hierarchy of values, the lack of clear authority and moral values in the information field. It is the purposeful multicultural education on the part of the teacher, based on the concept of dialogism of M. M. Bakhtin, that can largely neutralize the actions of these factors.

For schoolchildren, getting acquainted with other cultures is a world of unknown facts and events and bright impressions. If it becomes close and understandable from childhood, the child will develop the need to learn historical information as well as cognitive activity and a desire to appreciate the advantages of other cultures.

The relevance of this work is also due to the importance of introducing regional cultural values to junior schoolchildren. Today, the multicultural component of the educational process is mainly implemented in secondary schools through the content of academic subjects [15,16]. The volume of the material presented in the multicultural theme in a variety of educational-and-methodic complexes is significantly different. We focused our attention on the "Perspektiva" (transliteration for «Prospective») academic and methodical complex as the most different from other ones concerning the content of a multicultural nature. In particular, the subject "The World Around us " examines the values of traditional family culture ("culture of family harmony") in the section "Home as the World"; issues of cultural and confessional diversity are considered at the lessons on the topic of the section "In Search of World Heritage " (The World Around us (3,4 grades). At the Literary Reading and Russian language lessons the features of folklore works of different peoples are thoroughly studied.

Since the above-mentioned complex is designed to implement the Federal component of education content, it is natural that the regional component of the multicultural heritage can be mastered by students during non-school hours. Therefore, the addition and expansion of the teaching content was organized through the "Culture of Nizhny Novgorod region" group, whose goal was the to enrich younger pupils' views concerning the cultural heritage of the peoples living on the territory of Nizhny Novgorod region. Taking the psychological characteristics of Primary school children into account, we consider it appropriate to introduce them to the cultures of the most numerous peoples of the Nizhny Novgorod region: Russians, Tatars, Mordvins, Chuvash, Mari. The program includes the following thematic blocks:

1. Preserved areas of Nizhny Novgorod land.
2. "Shrines" of the Nizhny Novgorod land.
3. Festival of crafts of the Nizhny Novgorod region.
4. Games of the peoples of the Nizhny Novgorod region.
5. Nizhny Novgorod Toy.
6. National costume. Embroidery, ornament as symbols of the culture of the peoples living in the Nizhny Novgorod region.
7. Great people of the Nizhny Novgorod land.
8. Cultural heritage of the peoples of the Nizhny Novgorod region.

Each of the presented blocks significantly reflects the cultural heritage and identity of the peoples we study.

The modern generation of schoolchildren who grew up under the influence of gadgets, focused more on the perception of visual information and requiring constant visual stimulation, aims teachers to find appropriate approaches and tools. The teacher must manage the information flow by using digital technologies.

Currently, due to the development of Web technologies, there has been an expansion of opportunities for information interaction on the Internet. Their basis is a hypertext information system of the "client - server" type. Web-technologies expand opportunities for improving the efficiency of the educational process, using various forms of providing information using electronic educational tools [17].

One of the modern digital educational technologies that contributes to the primary school children information literacy development is the web-quest technology. The theory and practice of its use is revealed in the works of O. V. Volkova [17], G. A. Vorobyov [18], Ye. I. Baguzina [19], S. F. Katerzhina [20], I. V. Robert [21], S. V. Mironova, S. V. Napalkov [22], N. V. Nikolaeva [23], Y. Krylovoj-Grek [24], and others. The theoretical provisions of these works served as the methodological basis for our research; we relied on them when developing the content of the course.

A web quest can be an Internet page, a website on the Internet, or an educational content based on hyperlinks that students use to solve a variety of educational tasks. Educational web quests are based on independent search for most of the information. They can cover both a separate problem and a subject, or a separate topic of the course, and can also be intersubject [25].

The study of scientific and methodological literature shows that there are different classifications of Web-quests. In our experimental study, we relied on their classification according to the type of tasks: Web-quests for retelling, compilative tasks, riddles, journalistic tasks, plans, creative tasks, consensus-building, persuasion, self-knowledge, analytical, evaluative and scientific tasks. In accordance with the given typology, each thematic block of the Program was studied through a set of Web-quests [26].

The block " Preserved areas of Nizhny Novgorod land" includes consistent work with web quests: "Protected route", "Magic forest", "Amazing and wonderful near us". According to the type of tasks, they are focused on retelling, studying and reproducing information, selecting and processing and presenting it in a new format ("Map of protected places of different peoples", "Mini-encyclopedia of the Magic forest", "Photo Album". Within each quest, groups were working in accordance with the culture of the designated peoples (Russians, Tatars, Mordvins, Chuvash, Mari). The wording of tasks, the algorithm for completing them, information sources, and requirements for the final results (educational product) were set by the teacher.

The block devoted to the shrines was implemented through the following Web-quests: "The magic power of Holy springs", "Rattlesnake key", "Mysterious lake", "Holy

defenders of the Nizhny Novgorod land". The content side of the quests was based on riddles, situations of a detective or scientific nature, involving the study, analysis, generalization and comparison of the proposed information from several sources. As the final product of the activity, students could offer a video report, presentation, or message that revealed a news story, a problem or a topic.

"Festival of crafts of the Nizhny Novgorod region" assumed activity schoolchildren's activity, organized through the following creative Web-quests: "Magic Shine of silver", "Riddles of Nizhny Novgorod masters", "Craft Secrets", "Craft Workshop or how to create a miracle". A set of quest tasks was aimed at creating a specific creative product (a product drawing, a product within the available artistic techniques (clay, dough, plasticine, quilling, etc.), a video story, a video interview) after working with an array of information selected by the students themselves.

The block devoted to the games included Web-quests: "Games Navigator", "Folk fun", "Rites of the peoples of the Nizhny Novgorod land", which were aimed at self-discovery, involving studying the information related to forming the personality (moral and ethical issues, life goals, self-improvement, attitude towards art, the development of strong-willed and physical qualities of an individual, etc.).

The block "Nizhny Novgorod Toy" was studied through the following Web-quests-plans: "Secrets of a wooden toy", "What different dolls!", "Magic of a musical toy". All of them involved determining the sequence of actions aimed at completing a specific task, taking into account the set goal and limitations (budget, legality, time frame, etc.) as a result, each group created economic and creative projects.

The "National Costume" block, implemented through working with analytical quests ("The magic power of the pattern", "Golden Khokhloma", "Secrets of painting", "the Amazing world of colors"), in which students studied the proposed information resources on the features of embroidery, ornaments as a symbol in the culture of the peoples of the Nizhny Novgorod region, reflecting the connections, differences, similarities, etc. The results were presented in the form of diagrams, tables, drawings, drawings, and photographic materials.

Evaluation quests, such as "We remember, we admire", "The Master's Legacy", "Unknown Hero", " Heroes of yesterday, today, tomorrow... " are presented in the block "Great people of the Nizhny Novgorod land", provided for comparison, analyzing different points of view on the problem, situation, and facts. The evidence base of points of view and the process of discussing the results is significant. The format of the educational product differed: wall newspaper, "Memory Book" and laptop.

The final block of the circle's Program was the block "Cultural heritage of the peoples of the Nizhny Novgorod region". It consisted of one Web-quest "Our native Nizhny Novgorod region". A distinctive feature of the work within this block was the independent modeling of fragments (components) of the quest tasks by students. Its purpose

was to summarize the students' knowledge, skills and abilities acquired while implementing the course Program.

3. RESULTS AND DISCUSSION

Taking into account the theoretical grounds of our research, we propose to justify and test the pedagogical potential of Web-quests based on multicultural content in forming junior schoolchildren information literacy in its empirical part. In order to identify the level of information literacy among primary school children, the following criteria identified by S. Yu. Prokhorova, Ye. A. Khasyanova, and N. M. Fomin were used:

- working with information sources, including knowing information sources, being able to find and use various sources of information, including real life situations and using computer technology;
- processing and presenting the results, including the ability to find unreliable and doubtful elements, replace it with additional and alternative information, generalize, compare and contrast data, interpret the received information and make a judgment on the topic and also present the results of the work;
- using computer technologies, being able to read text documents on a computer, work with text in various formats, enter and design text on a computer and work with the Internet [27].

To study the level of forming the above-mentioned criteria, a comprehensive diagnostic work on the surrounding world was used in accordance with the content of multicultural orientation.

The empirical study included three stages: ascertaining, forming and control experiments. The study involved primary school students, 89 children in total. We compared the results of cross-sections diagnostics of the schoolchildren information literacy level at the stages of the ascertaining and control experiments.

The method of primary schoolchildren information literacy research was adapted on the material of the surrounding world, proposed by S. Yu. Prokhorova, Ye. A. Khasyanova and N. M. Fomin. We included multicultural information in the content of the methodology. Students were asked to complete 12 tasks. For each of the tasks in accordance with the selected criteria, students scored a certain number of points, reflecting the levels information literacy: high, medium and low.

During the research of the first criterion of information literacy -working with information sources, the following results were obtained: 24 students (27%) at the stage of the ascertaining experiment and 40 children (44.9%) at the stage of the control experiment showed a high level of information literacy - 40-43 points (the maximum number of points for this criterion is 43). The group of primary school children with an average level of information literacy was 46 students (52%) and 37 children (41.6%), respectively. These subjects scored 20-34 points on the aggregate of completed tasks; 19 people (21%) at the stage of the ascertaining experiment and 12 respondents (13.5%)

at the control stage of the study showed a low level of the ability to work with sources of information (12-14 points). The results of the research on the criterion "Working with information sources" are presented graphically in Figure 1.

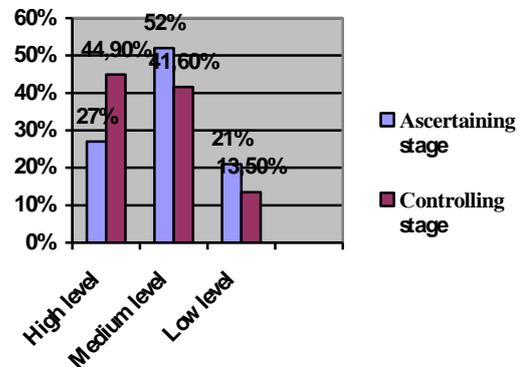


Figure 1 Forming the "Working with information sources" criterion of information literacy among primary school children.

According to the results of the study on the second criterion of information literacy-processing and presenting the results, 12 students (13.5%) had a high level of development of information literacy – a n ascertaining experiment and 21 children (23.6%) – a control experiment. Subjects from this group scored the maximum number of points was 20. The average level of information literacy was demonstrated by 41 schoolchildren (46%) at the first survey and 48 children (53,%) at the control stage. The number of points scored by respondents was 12-15 points. 36 respondents (40.5%) and 20 schoolchildren (22.5%) had a low level of information literacy, respectively. The number of points scored by this group of students was 8.

A small number of primary school children at the ascertaining stage, who have a high level of information literacy, and most of the children at a low level may indicate that students are not sufficiently aware of the history, culture, features, customs and traditions of the peoples living in the Volga region, which caused difficulties in finding inaccuracies in the texts. Graphically obtained results of identifying the information literacy level among schoolchildren according to the second criterion are shown in Figure 2.

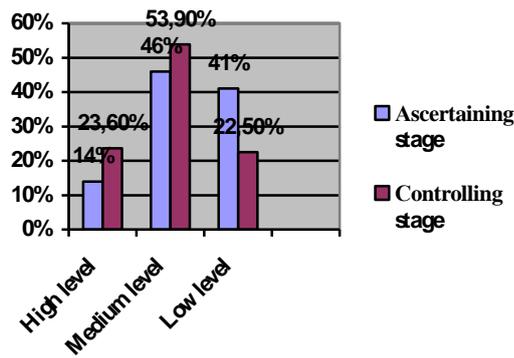


Figure 2. Forming the "Processing and presenting the results" criterion of information literacy among primary school children.

In the context of studying the third criterion - using computer technologies, the following results were obtained: at the ascertaining stage, 33 children (37.1%) were at a high level (14-15 points); 39 schoolchildren (43.8%) had an average level (7-12 points) and 17 students (19.1%) – a low level (3-5 points). As for the control stage, these indicators were as follows: 47 children (52.8%) showed a high level of information literacy, 28 schoolchildren (31.5%) - the average level, 14 students (15.7%) - a low level. Graphically obtained results on the identification of the level according to the third criterion are shown in Figure 3.

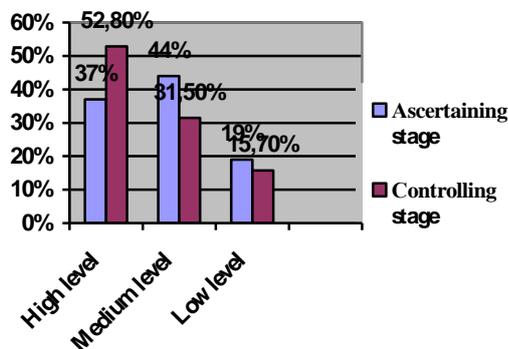


Figure 3. Forming the "Using computer technologies" criterion of information literacy among primary school children.

The comparative diagnostics carried out at the ascertaining and control stages makes it possible to make conclusions about the effectiveness of the work carried out on using Web-quest technologies based on multicultural content concerning primary school children information literacy development.

4. CONCLUSION

Approbation of the program of the circle "Culture of the peoples of the Nizhny Novgorod region" confirm the effectiveness of the Web-quest as a means of forming components that are parts of information literacy, and show that they make possible to systematize knowledge,

form the skills of junior pupils to search, collect, analyze and present information independently as well as and organize their activities. At the same time, the student becomes a subject of the educational process, independently and creatively working on the solution of educational information tasks.

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