

## SELECTION OF THE CONTENT OF MULTIMEDIA SOFTWARE FOR TEACHING A FOREIGN LANGUAGE

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**Abstract.** *The paper notes that the effectiveness of using multimedia and its implementation in foreign language teaching. There was reviewed and analyzed many proceedings of researchers from different recourses on this theme and were made conclusions how to use them effectively in teaching foreign language. The importance of using multimedia in teaching foreign language and its main aim was proved. Were analyzed the advantages and disadvantages of using multimedia. Analysis on problems arising from application for multimedia technology in foreign language teaching was discussed. Was researched the role of a foreign language teacher in the multimedia environment.*

**Keywords:** *primary education, efficiency, nurturing education, consciousness, visibility, functionality, develop ability, logical thinking, learning styles, curriculum, complexity, versatility.*

Education is a triune process characterized by the assimilation of experience, the development of behavioral qualities, and physical and mental development.

All elements of the content of education are interconnected and interdependent. Skills without knowledge are impossible. Creative activity is carried out on a certain content material. Education presupposes knowledge of the reality to which this or that relation is established.

The main goal of forming the foundations for the perception of foreign language speech with the help of multimedia software for teaching young learners is the communicative goal - the practical mastery of a foreign language as a means of oral and written communication. And also to contribute to the earlier introduction of young learners to a new language world for them at an age when children do not yet experience psychological barriers in using a foreign language as a means of communication.

Primary school acts as the first step in learning the first foreign language. The main tasks of learning English (as the first foreign language) include:

- creating conditions for early communicative and psychological adaptation of schoolchildren to a new language world, different from the world of their native language and culture, and for overcoming psychological fear in the future in using a foreign language as a means of communication in the modern world;

- the formation and development of verbal and logical thinking in elementary school students, which is carried out in the process of practical operating with specific language and speech material;

- formation of skills to communicate in a foreign language: elementary communicative skills in speaking, listening, reading and writing;

- acquaintance with the world of foreign peers, the peculiarities of their culture, with foreign children's song, poetry and fairy-tale folklore and children's fiction, with the world of new foreign-language games; developing students' interest in participating in theatrical performances in English; formation of a friendly attitude towards representatives of other countries;

- development of the child's personality, his speech abilities, attention, thinking, memory and imagination; motivation for further mastery of a foreign language;
- mastering elementary linguistic concepts available to younger students and necessary for mastering oral and written speech in English.

These tasks can be realized only if the teaching of English in elementary school is organized in the context of a student-centered approach to the development of schoolchildren. The student-centered approach is based on taking into account the individual characteristics of students, who are considered as individuals with their own characteristics, inclinations and interests. For each student, this or that way of carrying out activities to master a foreign language is typical.

Teaching in accordance with this approach involves:

1. Relying on the existing knowledge of students in various fields and attracting this knowledge before the teacher explains the material;
2. taking into account the sociocultural characteristics of students and their lifestyle, encouraging the desire to be "oneself";
3. taking into account the emotional state of students, as well as their moral, ethical and moral values;
4. purposeful formation of learning skills that correspond to the learning strategies characteristic of a particular student;
5. redistribution of the teacher's roles, assigning him the functions of an assistant, consultant, adviser;
6. use of authentic materials in the learning process. [45 p. 3]

In the first grade of general educational institutions, the selection of the content of education should be made taking into account the principles and criteria for selection.

The construction of a system of principles and selection criteria should be based on those principles that have already been formulated in domestic and foreign didactics and methodology, taking into account the target components of teaching a foreign language and the specifics of the subject "foreign language" and on new methodological principles.

One of the fundamental aspects in the content of training is communicative. The communicative aspect directly affects the selection of learning content. In addition, a review and analysis of didactic and methodological literature proves the rationality of selecting the content of education with the leading role of general didactic, methodological principles, as well as the principles of education, upbringing and development of first-graders by means of a foreign language. [31 p. 2]

Considering the historical context, I. L. Beam defines the content of education as language material, all skills, abilities, topics, texts, methods, techniques, teaching aids, exercises and A.A. Mirolyubov refers to the content of training the ability to work with a dictionary, suggests leaving only what serves as the basis for achieving the ultimate goal: topics, texts, appropriate language skills.

At the present stage, the content of training means the educational material that is selected in a certain way, methodically organized and intended for assimilation in the learning process.

The question of determining the functions of multimedia technologies in the process of teaching a foreign language to young learners is associated not only with the consideration of the fundamental possibilities of multimedia in the field of imitation of a person's speech and thought

activity in processing verbal information, but also with the modeling of certain aspects of his cognitive and professional activity in a certain area. , that is, the construction of functional models of the teacher and the student with their mutual adaptation.

Currently, numerous classifications and lists of functions performed by multimedia in the educational process in a foreign language are presented, the differences in which are due not only to a different assessment of the role of multimedia in learning, but also in individual multimedia functions depending on the type of programs being developed. There are two main approaches to the systematization of multimedia functionality in the learning process:

1. Orientation towards the classification of multimedia technologies in terms of the didactic purposes of their use. Multimedia technologies is the main functions of a teacher.

2. Other authors (Pery-Woodley M. R.), who consider the main purpose of multimedia technologies to be "learning support", propose to classify multimedia technologies depending on the specific learning tasks for which they are intended.

The issues of selecting the content of teaching English with the help of multimedia software in educational institutions of first grade students are currently among the most difficult issues in the theory and practice of teaching the subject "foreign language". The complexity of this problem is explained, first of all, by the lack of a coherent methodological system of teaching English in the first grade. In addition, methodologists have not yet come to a consensus on the selection of learning content using multimedia programs, the use of methods and techniques. There is also the issue of developing a clear system of educational multimedia exercises, the implementation of which could ensure that first-graders achieve a formed level of foreign language speech. Thus, as practice shows, the content of learning multimedia software has a direct impact on the success of the educational process, which takes place with the help of multimedia software.

In the first grade, the effectiveness of learning is characterized by the inclusion of students in simple situations of oral communication and the formation of elementary communication skills.

The selection criterion is understood as the requirement that the selected educational material satisfies.

We consider the system of selection criteria as a set of specific requirements for educational material in terms of its content, volume, logical sequence, methodological material in the school course, that is, in terms of the pedagogical significance and linguistic value of the material selected for teaching English. [31 p. 5]

Along with this, we propose to select the content of teaching a foreign language using multimedia software tools according to the following criteria:

- compliance with the general educational, developmental and educational goals of training;
- versatile use of educational material for the formation of the necessary knowledge, skills;
- selection of topics and situations, taking into account the psychophysiological patterns of the speech development of a younger student;
- compliance with the language material, the rules for its design and skills in operating with them;
- the content of the training should provide support for the existing complex of knowledge and ideas about the national and cultural characteristics and realities of the country of the language being studied, a minimum of etiquette-usual forms of speech for communication in various fields and situations.

The selection of the content of teaching English in the first grade of general educational institutions was carried out in strict accordance with the goals and objectives of teaching foreign language communication, taking into account the specifics of the subject "foreign language", which implies the practical significance of this academic discipline in modern society. [31 p. 6]

When selecting the content of training, we were guided by general didactic and general methodological principles of education. Let us consider those of them, the interpretation of which is largely indicative for teaching English with the help of multimedia software and is directly dependent on them.

The principles of learning are understood as the initial provisions that determine the goals, content, technology of learning and are manifested in interconnection and interdependence. In our case, the principles are designed to determine the strategy and tactics of teaching English at the initial stage of the educational process. From this follows the need and importance of their knowledge by the teacher and the ability to practically guide them in organizing and conducting the educational process in the subject.

The principles of teaching can be considered in two ways: theoretically (that is, research), which helps to penetrate into the essence of each of them, and practically - to use them as rules, requirements for the organization of teaching English.

Each academic subject implements didactic principles in its own way, based on its specificity, which allows different authors to single out didactic, general methodological, specific and other principles of teaching a foreign language

Let us dwell on the general didactic principles in teaching a foreign (English) language, which can be used in the development of multimedia programs. We do not set ourselves the task of describing in detail the general didactic requirements, we only outline those directions that allow us to approach the allocation of those particular didactic requirements that should underlie the teaching of a foreign language.

1. The principle of nurturing education. In domestic didactics, the leading role of the principle of educative education is emphasized, which, first of all, is manifested in the very setting of goals teaching various subjects at school and permeates the entire educational process.

This principle is also implemented in teaching a foreign language. The academic discipline "foreign language" has a great educational, educational and developmental potential, and therefore can contribute to the development of a harmonious personality. So, a foreign language contributes to the formation of moral, aesthetic education. Teaching a foreign language also contributes to the development of general learning skills (the abilities associated with the search, perception, memorization and processing of information, the ability to analyze and summarize material, etc.), since it belongs to the category of subjects that require a lot of systematic independent work on the part of students.

2. The principle of consciousness. The conscious assimilation of knowledge depends on a number of conditions and factors: the motives for learning, the level and nature of the cognitive activity of students, the organization of the educational process and the management of the cognitive activity of students, etc.

In teaching English at the very initial stage, the principle of consciousness should be implemented in the purposeful perception and comprehension of the studied phenomena, their creative processing and application by students in the course of performing speech actions, that is, when understanding the function of this phenomenon in speech communication.

Consciousness of students in learning should also be manifested in the understanding of the material being studied, that is, in the ability to logically connect the next with the previous one, highlight the main thing in the information perceived by ear or when reading, distinguish between the main and the secondary, essential and inessential, in the ability to use the acquired knowledge, skills and skills in solving emerging practical (communicative) tasks. Successful implementation of the principle of consciousness and activity of learning contributes to the development of schoolchildren's ability to take an initiative in learning activities, the formation of cognitive interests, the manifestation of responsibility in mastering knowledge, skills, and demands on themselves and others.

3. The principle of activity. Achieving students' consciousness in learning is inextricably linked with their activity. In teaching a foreign language, the principle of activity acquires a particularly important role, since mastering the target language is possible if each student becomes an active participant in the learning process, if he is involved in speech activity throughout almost the entire lesson. At the initial stage, intellectual activity is achieved by posing problematic questions, that is, those that put students in front of the need to think, analyze, compare, compare, generalize, in other words, connect the thinking of children.

4. The principle of visibility. The use of visual-auditory, screen teaching aids - it is known that a person perceives a much smaller amount of information through the hearing aid than through the organ of vision: we receive 80% of information through vision and only 12-15% through hearing. And a person remembers 25% of what he saw and only 15% of what he heard. If the trainee is presented with the same information at the same time and in auditory and visual images (and not so much in the form of text as in the form of an image), then 65% of the presented information is already remembered, and pronunciation of verbal information increases memorization up to 70%; provides at the same time the acquisition of knowledge by students, the development of logical thinking and the activation of mental activity of schoolchildren. The principle of visibility follows from the essence of the process of perception, comprehension and generalization of the material by students. Visualization can be defined as a specially organized presentation of language material and its use in speech in order to help the student in understanding, mastering and using it. Since students learn a foreign language outside its natural context, i.e. not in the same way as children learn their native language, visualization is designed to make up for its deficiency in learning, and performs various functions depending on the educational material. In some cases, visibility ensures the speed and strength of memorizing new material, in others it serves as a support in understanding the perceived material, in the third, it creates favorable conditions for its practical application.

Visually perceiving the educational material, while listening and watching how the teacher pronounces individual words or whole phrases, students acquire the necessary skills and abilities in oral speech: in intonation, the use of words and the grammatical arrangement of statements. With the help of various means of visualization, natural conditions are created for the implementation of the communicative function of the language. It is thanks to visualization that optimal conditions are provided for live, sensory perception and memorization of the material, its better understanding and active use by students of primary school age. So, at the initial stage, visual and auditory visualization and their combination are widely used in the formation of students' pronunciation, lexical and grammatical skills and in the development of all types of speech activity: listening, speaking, reading and writing.

5. Principles of accessibility and affordability provided accessibility and feasibility of education. Compliance with this principle requires that education be carried out at the level of the age capabilities of children, so that they do not experience insurmountable or difficult to overcome difficulties, which not only negatively affect the attitude of students to the subject, the motivation for learning the language, but also leads to undesirable overload.

Accessibility is ensured both by the amount of material, the forms of its presentation, and methodological techniques in the classroom and outside of school hours. This finds its expression in the strict selection of linguistic and speech material and its presentation in structures, in speech units, or samples of speech utterances included in communication situations, natural and understandable to students. This allows them from the very first steps of learning to be involved in communication in the target language and provides students with progress in mastering a new language. The feasibility is also manifested in the pace of progress in the assimilation of educational material and mastery of it.

6. The principle of strength for a long time, so the student can quickly remember the necessary units of the language whenever he needs to use them either in oral or written communication.

The strength of assimilation is ensured, first of all, by a vivid presentation of the material when students get acquainted with it, when they create living images, appropriate associations are established, when at the moment of acquaintance either feelings or thinking are affected, when the teacher activates the thinking of students at the moment of showing or explaining (they were faced with the need to carry out such basic mental operations as analysis, synthesis, comparison); secondly, a fairly large training in reproducing the material immediately after the introduction and in subsequent lessons, and then throughout the entire course of study with the simultaneous inclusion of various analyzers in the process: visual, auditory, speech-motor and motor;

7. The principle of an individual approach. When forming educational material, it is necessary to use differentiated tasks, taking into account age characteristics, possible interests and hobbies of younger students. It should be emphasized that the process of teaching foreign languages is so specific that it itself is a general educational value. In this case, it is not the result that is important, but the process of mastering a foreign language. [118 p.1].

8. The principle of communicative orientation of the educational process. Its substantive essence can be directed to the following: teaching a foreign language should be focused on the formation of a student's bicultural linguistic personality, making him able to equally and autonomously participate in intercultural communication. The leading methodological principle, since the result of teaching students English in primary school is the formation of communicative and speech skills necessary to use the language being studied as a means of communication, follows from the main functions of oral communication and is aimed at including communicators (students) in it. It involves a communicatively directed selection of language and speech material for oral speech, a didactically expressed and psychologically provided need for communication, learning through communication, creating learning conditions for mastering speech skills in four types of speech activity - listening, speaking, reading and writing; conditions of communication - motives, goals and objectives of communication. This principle involves the creation of conditions for the speech-cognitive activity of students, especially in mastering the basics of polite behavior. The implementation of this principle occurs through the creation of a model of the process of real communication, both in oral and written forms, according to the following criteria: creation of

communication motives, purposefulness, informativeness of the communication process, situationality, functionality, speech behavior of communicants, system of speech means. The game forms of work offered to students correspond to their age characteristics, which forms their need for communication.

9. The principle of taking into account the native language. It should not be forgotten that students in elementary school may not be familiar with a number of concepts that are used to characterize the system of their native language, so unfamiliar language terms should be avoided. An exception can only be those that have no analogues in their native language (for example, articles).

The degree of speech skills in listening, speaking and writing in the native language among schoolchildren can also be different, so the dynamics of the development of speech skills in a foreign language will not be the same for each of the students, in different classes of the same school stream. The principle under consideration is:

- preliminary diagnosis of the development of communicative skills in first grade schoolchildren (before they start learning a foreign language);
- selection of methodological techniques and accents in the content of teaching a foreign language, taking into account differences in the linguistic and communicative development of schoolchildren in a particular group in their native language;
- reliance on students' cultural awareness of works for children translated into their native language;
- didactically justified use of the Russian language in the teacher's speech.

So, at the initial stage, students master what is close to them, what is obvious to them, and therefore the material they learn does not cause difficulties in conceptual terms. And, finally, most of all, the consideration of the native language should be traced in the educational process itself: in the formation of pronunciation, graphic, spelling, lexical and grammatical skills.

10. Principle of functionality (when teaching types of speech activity, the specifics of functioning, in the process of communication, of each type of speech activity and each language phenomenon are taken into account);

In the content of teaching a foreign language, its thematic aspect is most fully represented. Corresponding to the real interests and abilities of students who are personally significant to them. As Galskova N.D. notes, within each area of interest, topics that are really of great importance for a younger student and stimulate his personal development can be selected. [30 p.4]. The specificity of teaching a foreign language at school lies in the fact that throughout the course, students study the same educational topics at different levels. For example, the educational topic "Family" is studied in both junior and senior grades. It should be noted that the topic "Family" is included in the list of exam questions in the final grades. Throughout the training, the volume of lexical material increases, the grammatical material becomes more complicated, the complexity of texts for reading and listening changes.

First of all, we note that all the didactic games presented in the work were tested in a multimedia version.

Teaching English in elementary school takes place in two stages: the textbook for the second grade is designed for the first and second grades, the textbook for the third grade is for the third and fifth grades.

At the first stage of training, students get acquainted with educational topics:

1. School.
2. Toys
3. Family
4. At home
5. My body
6. Food
7. Actions
8. Animals

At the second stage, training is conducted on educational topics:

1. Transport
2. Pets
3. Clothes.
4. Rooms
5. Meals
6. Activities
7. In town
8. On the farm

We see that some of the educational topics (“Food” and “Animals”) are studied both at the first and at the second stage, while, as mentioned above, the grammatical material becomes more complicated, the volume of lexical material increases and the texts and exercises for study. Each topic is developed in sufficient detail, for example, consider the educational topic “Animal” as an example.

The subject-thematic content of teaching a foreign language was organized on a plot-problem basis, which provides for:

- 1) the presence in the course of teaching a foreign language of several permanent, "cross-cutting" characters interacting in the context of the plot developing from lesson to lesson;
- 2) the solution of communicative, cognitive, game, moral problems in the course of the developing plot, which brings the simulated course of teaching a foreign language as close as possible to the conditions of natural oral communication.

With situationally conditioned speech contact, the topic does not act as a self-sufficient, existing category, but as a result of the convergence and interaction of the basic components of the communicative-speech situation (the environment, the personality of the communicants and their relationships, speech motives, the development of the contact itself). Thus, it is not the topic that generates the speech contact-situation, but the situation generates the topic.

The implementation of the communicative-speech situation is manifested in the game situation, which, in turn, is realized in two ways:

1. controls the verbal and non-verbal behavior of children;
2. acts as a principle of organization of language and speech material.

From this point of view, most methodologists distinguish two main types of situations:

1. Standard, learning situations, when the student's speech is uniquely conditioned by a certain context or external circumstances (visibility, objective situation) and the speaker's communicative task. They find their expression in microdialogues, in which individual actions and speech skills are formed.



Natural, dynamic speech situations, when the speaker is not bound by a rigid program of activity. The speech actions of the communicant are more or less free and are directed by the general task of the given situation, that is, they are not predetermined, there is a choice. The product of a natural, dynamic situation is a dialogue or monologue. [31 p. 5]

2. A change in the nature of the situation of a speech act leads to a change in his themes. This provision requires the introduction of a principle in the selection and construction of the content of teaching English using multimedia software in the first grade - the principle of situational-thematic construction of the content of education. The implementation of this principle involves the organization of language and speech material, taking into account various types of situations in the plot areas of communication.

In elementary school, the skills of using grammatical phenomena in speech are formed and practiced using speech patterns. The skills of recognizing and distinguishing grammatical phenomena in the text are formed after the students acquire the speech experience of their use in speech and on the condition that the grammatical concepts (used in both languages) are known to the student from the course of studying the native language in elementary school.

In accordance with the program of the mandatory minimum content of teaching a foreign language in secondary school, the psychological and pedagogical age characteristics of first graders, the content of training included language, speech skills and abilities that ensure the formation of elementary communicative competencies.

The program consists of three large blocks, which contain: a) the goals of teaching a foreign language at a certain level of education; b) the content of education at this level; c) requirements for the level of training of graduates. The content of education, in turn, includes three sections corresponding to the three main competencies being formed (language, speech and sociocultural).

"Speech competence" includes the communication skills of students in: Speaking:

1. dialogic speech, namely, the child should be able to: greet, say goodbye, get to know each other, introduce himself, a friend. Express agreement, disagreement, gratitude, desire, unwillingness. Wish, invitation, conducting an elementary dialogue in situations of everyday communication;

2. monologue speech, namely: a description of an object, a picture, an illustration for a fairy tale, a personal photograph, one's own drawing on a given topic. A short story within the subject of elementary school. Reproduction by heart of poems, songs and other works of children's folklore.

Listening: Understanding the teacher's speech. Understanding the speech of interlocutors in the process of dialogical communication in the classroom. Full understanding of small simple messages. Understanding the main content of messages, fairy tales, stories, humorous stories based on linguistic guesses and means of visual visualization (and in the experimental group - multimedia visualization).

Reading and writing: correlation of the graphic image of the word with the sound; proficiency in the graphics of the language being studied and copying words.

"Sociocultural competence" involves the assimilation of a certain set of sociocultural knowledge about the countries of the language being studied and the ability to use them in the process of foreign language communication, as well as the ability to represent one's country and its culture.

"Language competence" means mastering the pronunciation, lexical and grammatical sides of speech, as well as mastering graphics and spelling.

Graphics and spelling: knowledge of all letters and their order in the alphabet. Knowledge of sound-letter correspondences and basic letter combinations, transcription marks. Writing keywords within the topics studied. Mastering the skills of semi-printed writing of letters, letter combinations, words based on a sample, knowledge of the basic spelling of words in the English language.

The phonetic side of English speech: adequate pronunciation and aural discrimination of all sounds and sound combinations of the English language. Compliance with the norms of pronunciation: longitude and shortness of vowels, no stuning of voiced consonants at the end of a syllable or word, no softening of consonants before vowels. Stress in a word, phrase, lack of stress on function words (articles, conjunctions, prepositions), division of sentences into semantic groups, rhythmic and intonational features of narrative, imperative and interrogative (general and special question) sentences, the correct use of descending and ascending tones for registration various communicative types of sentences. Correct pronunciation of the transcription of key words on the topic.

The lexical side of speech: lexical units serving situations of communication within the scope of the first year of study, the simplest stable phrases, evaluative vocabulary and cliché remarks as elements of speech etiquette, reflecting the culture of English-speaking countries.

The grammatical side of speech: the main communicative types of sentences: narrative (affirmative and negative), interrogative, incentive. General, alternative and special questions with the words "what, who, when, where, why, how". Order of words in a sentence. Incentive sentences in affirmative (Help me, please.) and negative forms. Simple common sentences. Proposals with homogeneous members. Compound sentences with coordinating conjunctions "and" and "but".

Regular and irregular verbs in Present Indefinite (Simple). Use of verbs in Present Indefinite (Simple), Auxiliary verb "to do".

Adverbs of time (now, yesterday, tomorrow), degree (much, little, very), mode of action (well, slowly, quickly).

Proper and common nouns (names of people, names of places), names of objects and phenomena within the framework of educational topics. Plural of nouns (formation of the plural of nouns according to the rules, some special cases of the formation of the plural of nouns). Nouns with indefinite, definite and zero articles.

Cardinal numbers up to 100.

Pronouns: personal (I, he/she/it, we, you, they; me, him/her, us, you, them), demonstrative (this/these, that/those) and possessive (my, your, his/ her, its, our, your, their).

Prepositions of place and direction (in, on, at, into, to, under).

Thus, when studying English in elementary school, on the one hand, elementary communicative and speech skills are formed to listen, read, rewrite and complete the simplest foreign texts, speak using cliché samples, and on the other hand, acquaintance with the culture and life of foreign peers and their parents in the family. In other words, the process of forming elementary skills in listening, speaking, reading and writing with the help of teaching materials, as well as the content of educational and extracurricular work of schoolchildren, provide an intercultural background for educational communication.

The selected and methodically organized integral content of teaching a foreign language, like each part of it, can and should be addressed to an elementary school student as an individual, a subject of cognitive, communicative, gaming activity, personality, individuality.

### **REFERENCES**

1. Воспитание младшего школьника. // Сост. Л.В. Ковинько, М.: 2008. - 245с.
2. Концепция 12-летней школы по иностранным языкам / В. В. Сафонова, Е. Н. Соловова, М. З. Биболева и др.— М.: Иностранные языки в школе. — 2000.— № 6. с. 17-19
3. Нейссер У. Познание и реальность. Смысл и принципы когнитивной психологии. Благовещенск: БГК им. И.А. Бодуэна де Куртенэ, 1998. - 231
4. Поляков С.Д. В поисках педагогической инноватики М.,2009. - 166с.
5. Программа начального общего образования по английскому языку / Сафонова В.В., Соловова Е.Н. - М., 2006. – 50
6. Программно-методический материал. Иностранный язык для общеобразовательных учебных заведений. Начальная школа/ отв. Редактор Т.С. Головачева. - М.: Дрофа, 2008.
7. Dauletkul Zhanerke, Makhulber Aruzhan, Astaeva Ayzhan, Dosahmed Almat. Using multimedia in the process of foreign language teaching. Almaty 2017
8. Grunberg J., Summers M. Computer innovation in schools: a review of selected research literature//J. of Inf. Teacher Education. 2002. - 258p.
9. Healy J.M. Failure to connect: how computers affect our children's minds and what we can do about it. New York, 2009. - 284p.
10. Reusser K. Tutoring systems and pedagogical theory: representation tools for understanding, planning and reflection in problem solving // In: Lajoie S.P., Deny S.I (Eds). Computers as Cognitive Tools. 2003. PP. 143 -177. Hillsdale: Lawrence Erlbaum.
11. Shonazarova N.Q. Ta'lim-tarbiya jarayonida ijtimoiy-gumanitar fanlarning o'rni. TDPU ilmiy axborotlari 2020/7-son