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The Latest Digital Information Technologies and Computer Programs in Integration and in Improvement with the Method of Training and Education of Froebel and His "Gifts"

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"Improvement of the design of the cotton separator in order to improve the quality of its raw material"

Annotation: This article shows the integration of the latest information technologies and computer programs with the methodology of F. Fröbel in the early period of children's education in children's educational institutions. The famous method of teaching F. Fröbel, his exercises and "gifts" are known, with the help of which the child begins to learn about objects and the world around him in general, learns the forms of the object, gets acquainted with spatial figures, which further help him master mathematics, geometry, take the initial step into spatial stereometry. He beginsto get acquainted with objects, understanding their properties of smoothness, roughness, and then roundness, sharp edges, that some figures roll, and others fall to their faces, there are figures with which you can do both. "Gifts" by F. Fröbel gradually prepare the child and introduce him to an interesting world. The most interesting is the use of the latest information technologies, platforms, sites for the development of the child along with these gifts. Computer programs and sites created by the author will come to the rescue here. Ready-made online resources of other scientists and teachers. As a result of the research, the author determined the effectiveness of integrated teaching of children by the method of F. Fröbel in the environment of information technologies and computer programs, proving the effectiveness of integrated learning with updated modern methods.

Keywords: information digitaltechnologies, computer programs, improvement of methodology, Fröbel's "gift".

Introduction

The pandemic has served to develop and improve distance education, electronic presentation of educationalmaterials on various subjects, covered all stages of continuing education, starting with kindergartens, schools and universities. The creators of platforms and electronic resources always face a problem with a bunch of questions: how to teach and what to teach in certain areas of continuing education, so that in the future a person can continue such training throughout To create digital platforms, it is necessary to study international experience and existing methods that will be able to prepare a child in the future, starting from the younger preschool age, with the formation of his concepts about the environment, in interaction with living and non-living nature, created computer programs, digital platforms, as well as with skills , skills and knowledge to prepare for school. At school, it is necessary to develop the acquired knowledge and skills, and then it is necessary to promote it at the university. For this preparation and for the creation of educational programs, it was necessary to study all stages of continuing education, to identify special aspects, as well as the creation of educational programs and special standards of education. Let's start with preschool education, which goes far into the depths since the creation of kindergartens.

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We know that in the 40sFredirik Fröbel's idea of creating kindergartens in Germany would have been very popular, officially he created a kindergarten in 1839 . Before him, there were various boarding houses for children, but they only began to study in the kindergartens of Fredirik Fröbel. His method "believed" that children should not be punished, you need to be soft with them, in this his opinion and the authorities did not coincide, for this his kindergartens were closed, some then functioned secretly. Xit would be noted that the ideas and methods of Fredirik Fröbel have not lost their meaning even now. As a teacher who teaches computer science at the university, I involuntarily encounter students, who study at the Faculty of Mathematics, but do not know mathematics well, and I think that this is not their fault, and the whole fault is that they were not directed in childhood to the correct teaching methodology, maybe they did not attend kindergarten at all, there were also flaws in the school and gaps in the continuity of their learning and assimilation of the material. We have found that only continuous STEAM [22, p.5-6], [22, c.7], [22, c.8], [22, c.9], [22, c.10], [22, c.11], [22, c.12], [22, c.13], [22, c.14], [22, c.15], [22, c.5-20], education based on additional education will be able to remove flawsand discrete aspects in education [cmotrite:22].

Risunnock #1-1. STEAM training or integratedbut learning, what are its constituents? from www. google. com

To the question of how to fix these flaws, the answer is unequivocal, you need to retrain, retrain, you need to go to additional courses, attend circles. So that in the future there are no flaws, gaps and misunderstandings in the knowledge of students, it is necessary in the present to teach children continuously and prepare from a young age throughout their lives so that they become good specialists. It is necessary to educate children from early childhood in one direction or another, which will be formed in a child from childhood to adolescence. And he will be able to choose his direction for the future profession. We note that there is a huge differencebetween a childwho has visited pre-school educational institutions and those who have not attended preschool educational institutions, because communication and games in a group in the environment activates the childas a person. But if you teach them according to a special technique in the form of games, gradually prepare him for exposure to the outside world, using special exercises and "gifts" of F. Fröbel [1], [4],[5],[7],[8],[9], [22] in integration with the latest information technologies, sites, platforms for children, with created computer programs that develop the memory and logical thinking of children, teaching children the alphabet of three languages, etc., I would like to note that many parents who have not yet formed the native language of their child give them to learning in another language, probably, At the beginning, the child must learn the alphabet of his native language, learn to write, learn numbers, letters, learn how to make syllables, and then it will be possible to teach him the alphabet of other languages, including a foreign language.

It is at this point that the use of computer programs is inherent, which will teach children the necessary knowledge by games. The child will playfully, will gain knowledge, prepare for school, for interaction with the environment. Early learning should be done with parents. They can engage with children in existing learning platforms, in sites for children based on materials for early learning of the child.

Methods and methodology

In our studies, we reviewed and selected the necessary material for training. We were interested in online resources, platforms for teaching children, computer programs, various environments for child development. We used methods of selection, analysis and synthesis of materials, computer development and

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online resources, sites, platforms, learning environments on the computer, computer programs for the development of logical thinking of children, for the spatial representation of figures, etc. In our work, we based on the methods of analysis and synthesis, selection, comparison, relied on the methods and methodology of previously known methods and on the methodology of exercises and "gifts" of F. Fröbel. Methods of mathematical statistics chi-squared are used. On the basis of which the control and experimental groups were selected,a pedagogical experiment was conducted in one group, the children were engaged in the traditional methodology according to the "Initial Step" program, and in the other we tried to teach children in the direction of integrated teaching materials for children with the aim of gradual development of the child for children 4-5 years old, using and developing the program for preschool children "Initial Step". For children of an earlier age from 2 to 2 to 3 years at home, from 3 years to 4 years in children's educational institutions in order to develop the child and determine the truth of the hypothesis put forward by us, that teaching children according to the program "Initial Step", using the method of F. Fröbel, in the environment of information technology: sites, platforms, online resources, computer programs created by us will greatly increase the level of development of the child, will help the assimilation of knowledge. At earlier stages of development, itwill help the intellectual development of the child in acquaintance with the real world, accelerate its impact, perception, representation, its impact with the environment and the surrounding world.

Детей постарше возрасте необходимо обучать , используя картинки, карточками, работая с ними непрерывно в усвоении ими знаний по названию например фруктов, овощей, букв, цифр [смотрите:3], [3, с.8],[3, с.9],[3, с.10],[3,с.11],[3,с.12],[3,с.13],[3, с.14],[3, с.14],[3, с. 8-14],[13, с. 8],[13, с. 9],[13, с.10],[13, с.11],[13, с.12],[13, с.13],[13, с.14],[13, с.15],[13],[смотрите:13],[13, с.8-14].

Outcomes

The truth of the hypothesis that in this aspect the use of digital information technologies and computer programs will increase the level of development of the child and favor his assimilation of materials is proved by the results, as well as the results obtained by processing the results by the method of mathematical statistics [2]. The results obtained [3] data to determine the level of assimilation of materials based on individual and group surveys was grouped into tables. The data of the table are processed by the method of mathematical statistics chi-squared [2].

The level of knowledge of children in teaching children according to the traditionalmethod according to the program "Ilk kadam" - "Initial step".

Table 1

Group	Number of children with **DOE**	**Level of mastery of knowledge on the integration of several subjects**		
		Low	**Average**	**High**
Экспери-ментальная	**100**	**56**	**24**	**20**
Control	**100**	**52**	**25**	**23**

Let's look at the following diagram, which clearly shows the dependence of children's knowledge on the criteria in the samples of control and experimental groups.

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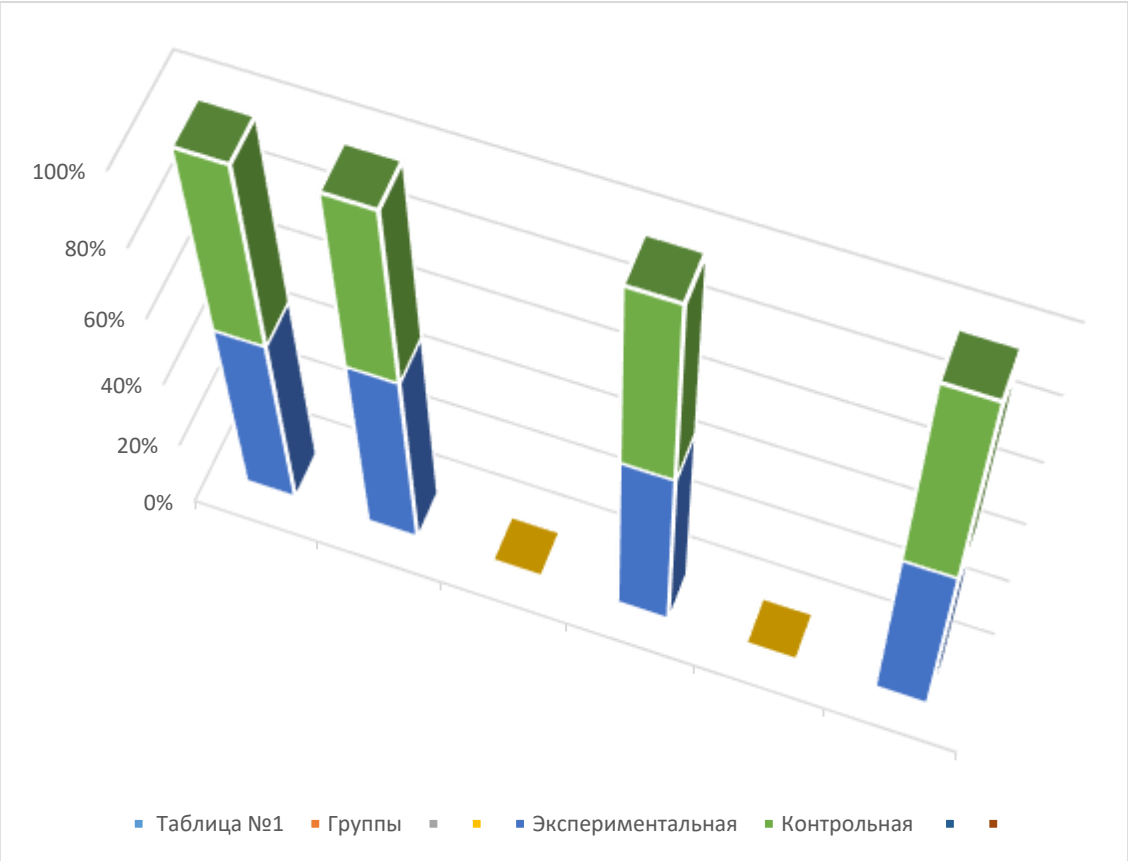

Chart 1. Table No. 1 obtained in the pedagogical experiment.

Calculations are performed according to the following formula:

$T_{куз} = 1/n1^{*} n2^{*} \sum_{i=1}^{C} \frac{(n_1{}^{*}Q_2 i\ n_2{}^{*}Q_1)^2}{Q_1 i + Q_2 i} = 0{,}5$, where Tnab is the observable value, the result of which is checked against the result on the table. And if Tnab. more than Tkr.—Tcr.—Tcric, found in the table, then the hypothesis put forward by us above turns out to be reliable and the method we have conducted will really give the highest results [2].

(Table 2).

Table 2

Group	Number of pupils with **pre-school education**	**The level of knowledge of children using STEAM training with the development of components and using information technologies and computer programs**		
		Low	Average	High
Experiment-tal	**100**	**12**	**30**	**58**
Control	**100**	**38**	**24**	**38**

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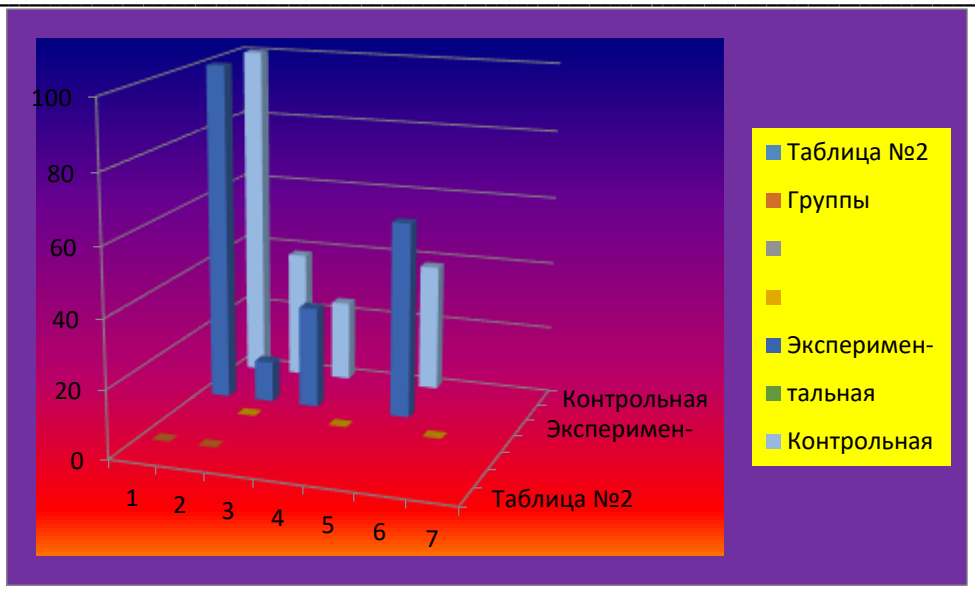

Table No. 2 obtained in the pedagogical experiment.

The following diagram clearly shows a higher level/
Уровень усвоения знаний дошкольников с применением STEAM обучения и информационных технологий и сози ◆анных нами компьютерных программ усвоения п ри применении предложенной методики обучения [10, с.29],[смотрите :10],[12, с.12], [12, с.14], [12, с.15], [12, с.16], [12, с.17], [12, с.18], [12, с.19], [12, с.20-22], [13, с.7], [13, с.8], [13, с.9], [13, с.10], [13, с.11], [13, с. 12-15], [13], [28, с. 7], [28, с.8], [28, с.9], [28, с.10], [28,с.11],[28,с.12],[28],[28,с.13-14],[смотрите: 14], [14, с. 58], [14, с.59], [14, с.60], [14, с.61], [14, с.62-70], [14 , с .71-73], [14, с.75-77], [14, с.78-80], [14, с.81-87], [14],[22],[смотрите:22,с. 12-15] , [смотрите: 15], [15], [15, с. 102], [15, с.103], [15, с.104], [15, с.105], [15, с.106], [15, с.107],[15], [смотрите:16, с.196], [16, с.197], [16,с.198], [смотрите: 17, с.17],[18, с. 20], [смотрите: 18, с.21], [18, с.22], [18, с.23], [18, с.24], [18, с.25], [смотрите: 19], [19, с. 440], [19, с.441], [19, с.443], [смотрите: 20, с. 17], [20, с.19], [20, с.20], [20, с.21], [20, с.22], [20, с.23], [смотрите:20], [20, с.24], [20, с.25], [смотрите:20, с.26], [20, с.27], [20, с.28], [20, с.29], [20, с.30], [20, с.31], [20, с.32], [смотрите: 20, с.33], [20, с.34], [20, с.35], [20, с.36], [20, с.37], [20, с38], [21, URL: *https://hemis. Namdu. uz/static/uploads/21*.],[21], [смотрите: 21, с.3-50],[22, с.5], [22, с.6], [22. с.7-8], [22,с. 9], [22, с.10], [22, с.11], [22,с.12], [22, с.13], [22, с.14-16], [22, с.17-20] . По новизне исследований нами написанқ статьи и книги по этой тематике: [смотрите:23], [23], [23, с. 3-10], [23, с.11-18], [23, с.19-25], [смотрите: 23, URL: http://library.ziyonet.uz/uz/book/121624; URL: http://e-library.namdu.uz/Namangan%20Davlat%20Universiteti%20professor%20va%20o'qituvchilarining%20adabiyotlari/либраря-3/Scratch%20mini%20o'yin%20Г.Юнусова.pdf], [смотрите:23], [смотритеб URL: http://e-library.namdu.uz/Namangan%20Davlat%20Universiteti%20professor%20va%20o'qituvchilarining%20adabiyotlari/либраря-3/Scratch%20mini%20o'yin% 20Г.Юнусова.pdf], [23, 3-10], [23, с11-15], [23, с.16-20], [23, с.21-25], [23, с.26], [23], [23, URL: http://library. ziyonet. uz/uz/book/121624], [23,с.27-28], [23, с.29-35], [23,с.36-55], [23], [23, с. 56-60], [23, с.61-71], [смотрите:24, с.117], [24, с.118], [24], [24, с.119], [24б с.120], [24,с.121], [смотрите: 24, с. 122], [24, с.123], [24, с.124], [24], [24,с.125], [24, с.126], [24, с.127], [24, с.129], [24, с.130], [смотрите: 24, с.131], [24], [25], [смотрите: 25, с.444], [25],[25, с.445-447], [25], [25, с.446], [25, с .447], [25, с.448], [26, URL: http://library.ziyonet.uz/static/lib/reader-pdf/web/viewer.html?file=http://library.ziyonet.uz/uploads/books/7007/61cd931452510.pdf], [смотрите: 26, URL: http://library. ziyonet. uz/static/lib/reader-pdf/web/viewer. html? file=http://library. ziyonet. uz/uploads/books/7007/61cd931452510. pdf], [26, URL: http://library. ziyonet. uz/static/lib/reader-pdf/web/viewer. html? file=http://library. ziyonet. uz/uploads/books/7007/61cd931452510. pdf], [26], [26, с. 5-10], [26,с.11-18], [26], [26, с.55-79], [26,с.80-100], [26, с.101-121], [26, с.122-128], [26, с.129-135], [26,с.136-142], [26, с.143-200], [26, с.201-316], [26б с.1-316], [смотрите:27, URL: http://library. ziyonet. uz/static/lib/reader-pdf/web/viewer. html? file=http://library. ziyonet.

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uz/uploads/books/7007/61cd925a481a3. pdf], [смотрите: 27], [27, с. 5-20], [27, с. 5-10], [27,с.11-18], [27], [27, с.55-79], [27 ,с.80-100], [27, с.101-121], [27, с.122-128], [27, с.129-135], [27,с.136-142], [27, с.143-200], [2 7, с.201-316], [27, с.1-316], [28], [27, URL: http://library. ziyonet. uz/static/lib/reader-pdf/web/viewer. html? file=http://library. ziyonet. uz/uploads/books/7007/61cd931452510. pdf], [28, с. 8], [28, с.9], [28, с.10], [28, с.10-11], [28, с.11], [28, с.12], [28, с.13], [28, с.13-14], [28, с.14], [28, с. 7-14], [28], [смотрите: 28], [28], [28, с.7-15].

Obtained from Table No. 2. Diagram 2.

According to this table and the diagrams, you can establish an increase in the assimilation of knowledge, which proves the effectiveness of the application of our methodology. And the truth of our hypothesis of the effectiveness of the results of integrated learning in the information technology environment and the computer programs created by us.

According to the table from the source, we will compare with the value of the first method [1] α $\mathbf{T_{observed}<T_{critical}, T_{nab}.=0.5, Tkr.=5.991. 5.991>0.5.}$ In the method conducted by the second method $T_{observed}$ = 18.3, it can be seen that this value is greater than the critical one by about 3 timesa. From these conclusions, it can be concluded that when strengthening materials, for the organization of training and assimilation of materials by children in the environment of informationtechnologies and computer programs, and the result of mastering the material became much higher, and the activity of children was also high. We conducted an experiment and used the method of statistical processing of data according to the Chi-squared criterion, according to the Pearson method. In this way, we conducted an experiment, teaching pupils of children's educational institutions No. 5, No. 20 and obtained similar results, experimenting with children aged 2-3 years, from 3 to 4 years, 5-6 years and preschoolers aged 6-7 years, which proved the reliability of our hypothesis of strengthening the teaching of integrated education, which will lead us to the ultimate goal of improving the efficiency of knowledge acquisition in the integration of subjects and even more efficient assimilation of materials using information technology and computer programs. We obtained good results of assimilation of the material by children, and we noticed their certain activity in the knowledge of the unidentified [2]. The data we obtained, shown in Table 1, prove the truth of our hypothesis that the use of integrated education, according to the qualitatively developed methodology of F. Fröbel, his exercises, six types of his gifts and computer programs to these gifts, the use of information technologies, special sites, platforms for the development of teaching methods [3, с.8], [3, с.8], [3, с.8] , [3, с.8] , [3, с.8] , [3, с.8] , [3, с.9] , [3, с.10] ,[13,с.11],[13,с.12],[13,с.12],[13,с .13],[13, с.8-14],[13, p.8-14],[see:13],[see:13], [13], together with the programs we have created to focus, develop memory, logical thinking, learn the alphabets of three languages, as well as the direction of activity in the direction of the comprehensive development of the child's personality gives an effective result in preparing the personality for the next stage of continuous learning [3], [13].

Literature review

We looked at a number of educational children's educational platforms, such as iQsha. ru, rodnaya-tropinka.ru , nsportal. ru, solnstesvet. ru [1,3,8-12], we analyzed the existing literature and sites, materials with links on the Internet under the heading "Gifts of Fröbel" [1],[3],[8],[9],[10],[11], [12], viewed the materials of Wikipedia, looked at the works written by F. Fröbel himself, and that he left as a valuable legacy, studied his methods of teaching and educating children in preschool institutions, his careful attitude to the personality of the child, his attitude to the "flower" [1],[3], [8],[9],[10],[11],[12]. We analyzed the method of F. Fröbel, studied all his methods, gifts to children, for teaching and educating a full-fledged future student. Further, we based on the methodology put forwardby the author of the article G.N. Yunusova [1 3], relying on the e-learning of F. Fröbel's methodology with the help of created programs for teaching in preschool institutions, as well as a number of programs for teaching the alphabet of three languages, as well as programs for identifying the knowledge and inventive abilities of children. The works of K.A. Khusanov [16], [17], [18], tors G.N. Yunusova, R.Kakhkharov and others [19], their idea of using [16, с.196] , [16, с.197], [16, с.198],

[1] Grabar M.I-., Krasnyanskaya K.A., Application of mathematical statistics in pedagogical research., M., Pedagogy., 1977 г., -p. 135.

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[16, c.196-198], [17,],[17, p. 17],[17] were taken as a basis. c.19],[17, p.20],[17],[18,p..20],[18,p.21],[18,p.21],[18,p.21],[18, p.]22,[18,p.22],[18,p.23],[18,p.24],[18,p.25], "learning platform" in teaching children [3], [12], [13], used educational platform in e-learning, [see:16], [16], [17], [18] , as well as the idea of integrated learning" [17, p.24-25], which we reformed into the idea of STEM education [22, p.5], [22, p.6], [22, p. 7], [22, c.8], [22, c.9], [22, c.10], [22, c.11], [22,c.12],[22,c.13],[22,c.14],[22,c.15],[22,c.16],[22,c.17],[22,c .18],[22,c.19],[22,c.20]. In some periods of life, the child is faced with important aspects of determining his future, in kindergarten, he must prepare for school, learn the letters, in schoolshe must study subjects andchoose a profession, in a university he must determine whether he will continue to study or will work in his specialty. The useof various computer programs helps to identify certain features of the use of software tools in training [see:3],[3],[cmotrite:12],[12], help the organization of computer groups and individual methods of teaching subjects [11,p.89],[11,p.90],[11],[11,p.91],[11,p.82],[11,p.88-92],[see:11], the use of educational platforms is described in articles [12]. For the education of a harmonious personality, both group and individual training is necessary, from an early age the teacher must know his own characteristics of the capabilitiesof each student, must work onhis development [12], [15], 18, p.20-25], [19], [20, p.17-38], [24]. A number of works on the method of F. Fröbel were trilled, based on his advanced technique[1], [4], [5], [6], [7]. Pedagogical experiments were carried out according to the methodology of mathematical statistics [2]. computer group and individual training [11], [11, p.88-92] is revealed in independent learning in platforms [12], [20, c.17-38], [24], [27], [28, c.8], [28,c.9], [28, c.10], [28, c.11-12], [28, c.13], [28, c.14], [28, c. 8-14], [28, c.8-14]. Training in programming and robotics should start from childhood and continue throughout a person's life, and this can be done in the areasof non-primary education [12], [14], [see: 14], it is necessary to develop STEAM education [22], smoothtransition from Scratch to STEAM [see: 21, URL:*: https://hemis. namdu. uz/static/uploads/21],* [21, p. 1-20],[cmotrite:21, p.22-25],[21, p.26-28], [21, p.29], [21,p.30-33], [21, p.35-40], [21,p.41], [21, p.43], [21, p.44-48], [21, p.50-52], [cmotrite: 21],[see: 22, p.1-20],[23, p.10-20],[25,c.5-15],[22, c.30-40], [22, p.45-55],[22, c . 56-60],[22, c.60-70],[22, c.71-75],[22, c.76-80],[22, c.81-85],[22, c. 86-90],[22, c.91-100],[22, c. 101],[22, c.102-110],[22, c.11-115],[22],[22, c.116],[22, c. 118-120],[23],[23,s, 1-30], [23,p.31-41], [23], [23,s,42-52], [23,p,42-52], [23,p,43], [23,p,44], [23,p,45],[23,s,46], [23,s,47],[23,s,48], [23,s,49], [23,s,50], [23,s,51],[see: 23,p.52], [23,p.53], [23, p.54], [23, p.23, p.55], [23, p.56], [23, p.57], [23, p.58-60], [23, p.62-65], [23, p.66-77], [23,p.1-77],[25, p. 121],[cmotrite: 25, p.122], [25],[25, p.444],[25],[25, p. 445],[25, p.446], [25,p.447],[25,p.448],[25,p.449],[25,p.450],[25],[see: 25], [22, p.5],[22b p.6],[22, p.7][,[22, p.8],[22, p.9],[22, p.10-15],[22b p.16-20],[23, p.30-35],[25, p.10-23] teaching integrated training of children in platforms [15], development of integrated learning in platforms [12], [15], [16], [17], 18],19], [20, c.17-38]. The use of common platforms helps to increase not only the mobility and interactive skills of students, but also increases the level of their assimilation of materials in subjects, including mathematics and computer science [21],[see:21], [21],[see:21,URL:*: https:// hemis. namdu. uz/static/uploads/21*.],[21, p.1-30],[21, p.31-41],[21, c.42-52],[21,c.53-63],[21,p.64-65],[see: 21,p. 66-100],[see:23],[23, c. URL: http://e-library.namdu.uz/Namdu%20professor%20o'qituvchilar%202/либраря-%202/Scratch%20mini%20o'yin%20Г.Юнусова.pdf],[23,],[23],[23, URL: http://e-library. namdu. uz/Namdu%20professor%20o'qituvchilar%202/либраря-%202/Scratch%20mini%20o'yin%20Г.Юнусова. pdf], [23, c. 1-30, URL: http://e-library. namdu. uz/Namdu%20professor%20o'qituvchilar%202/либраря-%202/Scratch%20mini%20o'yin%20Г.Юнусова. pdf], [23, c. 31-41],[23, c.42-52],[23,c.53-63], [23, c. 64],[23, c.65],[23? c.66],[23, c.67],[23,c.68],[23, 69],[23,c.70.],[[23, c. 70],[23,c.71],[23,c.72],[23,c.73],[23,c.74],[23,c.75],
[23,c.76],[23, c.77], [24,c.117],[24, c.119], [24], [24,c.1 19],[24,c. 120],[24,c. 120],[24],[24,c. 121],[24,c. 122],[24,c.123],[24, c. 124],[24,c.125]. Мы написали статьи в области создания и применения платформ , а так же по новизне наших исследований [12], [13], [14], [22]. Написали книги в области Информационных технологий, т.к. и это является одним из важнейших аспектов в облас ти применения информационных технологий в образовании со всеми его новыми компьютерными программами [10, с.с.�ьютерными программами [10, с.с.�ьютерными программами [10, с.с.�ьютерными программами [10, с.с.�ьютерными программами [10, с.с.�ьютерными программами [10, с.с.�ьютерными программами [10, с..�ьютерными программами [10, с..�ьютерными программа� 29],[10],[смотрите:10], [10, с.28-30], [10, с.29], [10], [12, с.1 2-14], [1 0 ,

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c.29], [10],[12,c.12], [12,c.13], [12,c.14], [12,c.15],[12,c.16], [12,c.17], [12,c.18], [12,c.19], [12,c.20], [12,c.21], [12,c.22], [14, c.58-87], [14], [смотрите: 14, c.60-80], [21, URL:],[22],[23],[24],[25],[26],[27, c. 3-30], [2 6, URL: http://library. Ziyonet. UZ/UZ/BOOK/121626].,[2 6], [смотрите:2 6], [2 6, c.3-10], [2 6, c.3-10], [2 6, c.3-10], [2 6, c.3-10], 2 6, c .3-10], [2 6, c.3-10],[2 6, c.3-10], [2 6, c.3-10], [2 6, c.3-10], [2 6, c.3-10][, [2 6, c.3-10], [2 6],[27, URL:ttp://library.ziyonet.uz/uz/book/121625],[28, c.5-20],[2 7, c.25-35], [смотрите: 2 7, URL: URL:ttp://library.ziyonet.uz/uz/book/121625:],[2 7 , c.3-25], [2 7,c.26-34], [2 7,c.35], [2 7,c.36-40], [2 7,c.41-51], [2 7,c.52], [2 7,c.53-63], [2 7, c 1-316.], [27, c. 316] .

Discussion

The early development ofchildren is very relevant today and many kindergartens open groups for very young children. Modern parents and educators have access to a huge number of methods of education.

Photo by Fredrik Fröbel from Wikipedia.

In the new material, we will talk about the system of F. Fröbel and his "gifts". *The birth of the kindergarten dates back to 1837. It was then that Friedrich Fröbel called the institution for babies he formed in the city of Bad Blankenburg in Germany (more precisely, "Kindergarten") "kindergarten". The history of the name is not limited to one version. The most common opinion is that the teacher considered children "God's plants" in need of caring care. Hence the "kindergarten", that is, the plant garden. Another assumption transfers the birth of a kindergarten in the 40s. XIX century: The German pedagogue then allegedly opened the "first childcare facility" in the former hotel "At the Palace Garden" in Zorbih. Residents of the town, bringing children here, exclaimed: "We are going to the garden." Finally, it is known that his kindergarten was a garden by design, with trees and flower beds. It is noteworthy that Fröbel also called educators "gardeners".*

The merit of Friedrich Fröbel was not only the opening of a kindergarten, but also the creation of a methodology for preschool education (although the famous educator did not release the methodology as a manual during his lifetime, limiting himself to several works). It is based on a strong foundation - boundless love for children. Let us outline the main aspects of the methodology of Friedrich Fröbel - an outstanding German teacher and theorist of preschool education. He is the founder of the first kindergartens, the task of which, unlike orphanages, was to educate and educate children. The main purpose of Fröbel's kindergartens was to promote the development of the child's natural abilities. In his opinion, children grow like flowers (hence the term "kindergarten") and the task of educators is to take care of them and contribute to their fullest disclosure.

The main aspects of fröbel's methodology are:

Game

Training is built on a system of games with concrete didactic materials, the so-called "gifts of Froebel". These are objects that differ in color, shape, size and method of action with them: knitted balls of all colors, cubes and cylinders, balls of different colors and sizes, sticks for laying out, paper strips for weaving and appliqués, colored multi-colored woolen threads for lacing, etc. Creative, mobile, creative, fantasy, imitative, etc. - any freu games Bel considered the indestructible basis of children's education and singled out the basis of his own methodology. He was convinced that "children's play is a mirror of life and a free manifestation of the inner world." However, the teacher urged adults to direct the game in the right direction, as if managing the will of the child, but not to insist on anything (by the way, many teachers consider this fact a very negative feature of Fröbel's methodology).

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Speech development

Fröbel proposed to form speech with the help of the development of fine motor skills, as he was convinced that a child who performs a lot of exercises with small objects will begin to speak much earlier than other children. Working with paper, sticks, paints, sculpting, "gluing", sawing were integral activities in Fröbel's kindergarten. Also during the game, children had to talk and speak. The topic of the conversation was prepared in advance. Fröbel was convinced that the development of fine motor skills: working with paper, sticks, paints, plasticine has a positive effect on speech. During creative activities, children talk and discuss what is happening. The connection with the word makes the child's actions and sensory experiences meaningful and conscious.

Surrounded by love

Friedrich Fröbel was a humanist and denied any manifestation of cruelty to children. This aspect was contrary to the opinion of the clergy, and later the opinion of the authorities about working with children: they believed that the basis of education should be discipline, memorized catechism, "knitted stockings" and harsh punishment for any violation. Now it seems incredible, but it is because of this disagreement between a good teacher and strict dignitaries from 1851 to 1860 kindergartens were banned and continued to exist only in secret.

Collective education

Friedricht considered the spirit of collectivismto Fröbel to be the basis of humanity. Therefore, he advocated the mandatory presence of the child among other children, that is, in kindergarten. The teacher wrote about this: "Children must be actively involved in collective activities, develop their bodies, exercise the external manifestations of feelings, acquaint them with people and nature; in games, fun and innocent fun to prepare for school, helping to develop like plants in a garden." However, he urged not to forget about the individuality of each baby. That is why in the garden there were both large flower beds, where children cared for the flowers of groupsof ami, and single pots with a plant, assigned to one baby.

Froebel's "Gifts"

The first "gift"

is textile balls on a string of all colors of the rainbow and white. The ball is held by the string and show the child different kinds of movements with it: right-left, up-down, in a circle, oscillating movements. Games with the ball teach the child to distinguish colors and navigate in space.

Figure 1. The first gift of F. Fröbel.

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The second "gift"

Is a ball, a cube, and a cylinder of the same size. This gift introduces geometric bodies and the differences between them. The ball rolls, and the cube is stationary, it has ribs.

Figure 2. The use of the Second Gift of F. Fröbel in kindergarten classes.

Figure 3. The third gift of F. Fröbel.

Other "gifts"

The third, fourth, fifth, and sixth giftof Fröhbel is a cube divided into small parts (small cubes and prisms). These shapes were used as a construction set. So preschoolers got acquainted with geometric shapes, got an idea of the whole and its parts.

Figure #4. 1,2,3,4 Gifts of F. Froebel. www. google. ru.

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On the basis of the works of FriedrichFröhl, educational kits have been developed that meet the requirements of the Federal State Educational Standards of Preschool Education. The kits correspond to all educational programs implemented in preschool organizations, are harmoniously included in the Montessori methodology - the environment and are an integral part of the STEM education program.

Figure No5, No6, No7. The fourth, fifth and sixth gifts of F. Fröbel. The use of this technique in kindergarten by children. www. google. ru.

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Educational tasks that are solved with the help of these sets: Experimentation with objects of the surrounding world;

- Mastering mathematical reality by acting with geometric bodies and shapes;
- Mastering spatial relations.
- Construction in various angles and projections.

Gifts of FreuxBel

Speaking of Friedrich Fröbel, it is impossible not to mention his "gifts". "Fröbel's Gifts" is a didactic material developed by the teacher, a toy system that trains various skills and abilities of the baby. Each toy implies certain rules of use and contributes to the development of the child. Their description deserves a separate material, so we will limit ourselves to listing the "gifts", of which there are 6.

- Dar 1 is a ball. This is the first toy, since the ball has no corners and is convenient for the baby. Wool was most often used as a material.
- "Dar 2" - wooden cube, ball and cylinder.
- "Dar 3" is a cube cut into 8 cubes.
- "Dar 4" is a cube divided into 8 tiles.
- "Dar 5" - a cube cut diagonally in half into cubes.
- "Dar 6" is a cube divided into 27 "bricks", some of which are respectively divided lengthwise, and part - across.

Thus, the goals and principles of the kindergarten according to Fröbel were:

- focus on 3 types of activities - play, study, work;
- development of the child's feelings;
- strengthening the body and spirit of the baby;
- acquaintance with nature and knowledge of the world using a visual method;
- communication with people;
- development of the natural qualities of the child;
- manifestation of boundless love for children.

Now the theses may seem rather primitive, but let's not forget that we are talking about the beginning and middle of the XIX century, when slavery and serfdom were still oppressed by people. We created computer programs for fröbel's gifts, with the help of which the child could visually get acquainted with objects, geometric spatial figures, and most importantly, would be able, using cubes, parallelepipeds, to independently "build" the figurative structures that the program recommends to him.

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Figure 8. A complete modern set for child development according to F. Fröbel. Picture from www. google. com

Using colored sticks, rings and half-rings, you can get various patterns on the computer, get an image of snowflakes, patterns.

Figure No. 8, No. 9, No. 10, No. 11. Multicolored rings, figures, semicircles, triangles, squares and quadrangles, making patterns and drawings using them. Drawings from www. google. ru.

Also, the traditional use of multi-colored figures and obtaining various patterns and drawings from them, also improves the representation, imagination of the child, forms his perception and acceptance of information, gives him concepts about figures, objects.

Рисунок №11,№12. www. google. ru.

Figures **No. 12, No. 13** show the use of mosaic and lacing methods, the tasks of which children perform with pleasure.

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Рисунки №13, Рис №14, №15., №16,№17, №18. www. google. ru.

Drawings No. 13, Fig No. 14, No. 15, No. 16, No. 17, No. 18 , show work with mosaics, with colored rings, with lacing, performing tasks, children get pleasure both when working and after receiving the results.




Рисунки из www. google. ru.

The idea of using platforms for children, sites, as well as various applications was put forward by many scientists, in their works this idea is substantiated within the framework of their scientific projects, works and scientific articles written by them, the idea of "applying integrated learning electronically, using an educational platform" [4, p.102], as well as, for example, "the useof innovative information technologies in Uzbekistan", is developing. [5, p. 196]. In this aspect, it is possible to distinguish works that distinguish the method of "usingan integrated learningplatform, e-learning" [4, p.102-103], "Web-applications with educational

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materials" [6, c .16-17], where great attention is also paid to the "development of an educational platform for children's education", [7, p. 24] as if to prove our idea that children need to be prepared from an early age, using various educational platforms, sites, Web applications for teaching children. During e-learning, we revealed such an interesting fact, children "who in a preschool institution were considered weak in the knowledge of knowledge, actively poured into e-learning, andscored high results", [9, pp.13-14], the question of "preparing the future generation with the latest technologies, with the help of computer programs, computer tools, its additional channels, to bring to the perception of the child the needed to individual skills and knowledge", [14, pp.58-65]. "At the current stage of education, when every three years school students participate in knowledge assessment programs", through testing, it is necessary to prepare children from an early age in the field of STEAM education, in order to get good results in this testing. In these areas, you need to prepare children, and their abilities in sciences, engineering and technology, in mathematics and art, you need to start with training in preschool institutions. I'm at home with my parents." [14 , p.58-87].


Figure No. 19 a, No. 19 b, No. 19 in from https://www.google.com/

Based on the results of the experiment, we found that the data of the experimental group were much higher, which proved our hypothesis that the use of information technologies and programs will greatly increase the effectiveness of learning, and the use ofFröbel's gifts and electronic application and training in this technique through computer programs will greatly increase the effectiveness of preparing children for school, for life, and for co-operation. with living and inanimate objects of the world.

Findings

Aboutthe educational, mathematical, creative tasks that are performed using this technique aimed at working with objects of animate and inanimate nature. This technique involves the development of the following skills of children:

- ❖ Mastering mathematical reality through the work and use of geometric planar and spatial shapes;
- ❖ Development of spatial relations that occur in nature and everyday life;
- ❖ Construction in different directions and projections;

We created an e-learning methodology of F. Fröbel and conducted training seminars on the use of computer programs created by us and thus created an electronic methodology for teaching preschool children using 14 computer programs created by us.

Conclusion

I would like to note that at the heart of Steam training in kindergartens, many take the method of F. Fröbel and his gifts for the initial, use his cubes and cubes, parallelepipeds in teaching addition and subtraction, as well as teaching parts of the object, the concept of division into parts and what the whole consists of.

The method of e-learning increases the assimilation of this material in obtaining high visual results by the children themselves. Created computer programs can be used both in preschool institutions, and at home parents can work with their children.

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Figure No. 19 g of https://www.google.com/

And of course, such children will receive a good education in kindergarten and its gradual development in the field of STEAM education throughout their lives will help them become good specialists in the future. "During the period of study, 14-15 years" [15, p.88], based on our experience and teaching experience, we can note that "based on their mental abilities and interests, young people think about their right to choose a profession. It is at this time that children undergo various psychological and physiological, mental changes and development. During this period, young people have a lot of free time, as they must choose their own path in life," [15, p.88] it is at this time that it is necessary to occupy them with the necessary knowledge that will help them in the future to become good specialists. Everything is interconnected, preschool education, based on skillful and advanced methodology, which prepares smart students for school, and the school in due time should also prepare good small future specialists or promising future students. As you can see, all this requires the development of e-learning and in the next stages of continuing education, "improving and developing e-learning in university faculties" [1 9,p.440], [19,c. 441],[19,c.442],[19,c.443],[19,c.440-443],[c motrite:19.,p.441-442], [20[, [21], [22], [23], [24], [25], [26], [27], [28].

Gratitude

We received certificates of commendation, gratitude from children's preschool institutions No. 5, No. 20 of the city of Namangan and from the department of preschool education of Namangan region. Many of the children we have taught have enrolled in prestigious schools. We are grateful to the administration, leaders, kindergarten teachers, parents of pupils.

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