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MATHEMATICAL ANALYSIS OF THE INCREASED DEVELOPMENT OF STUDENTS IN HIGHER EDUCATION USING THE INNOVATION CLUSTER OF PEDAGOGICAL EDUCATION

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ABSTRACT

In this article, based on the principle of "Innovative cluster of pedagogical education" and "Study of the economic importance of co-cultivation of soybeans and corn (heard, seen, done)" There is information on raising the level of integration, increasing practical knowledge, the organization of cooperation with higher education and research institutions.

Keywords: innovation, cluster, soybeans, corn, method, education.

OLIY TA'LIMDA "PEDAGOGIK TA'LIM INNOVATSION KLASTERI" DAN FOYDALANIB TALABALARNI O'ZLASHTIRISH DARAJASINI ORTGANLIGINI MATEMATIK TAHLILI

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ANNOTATIYA

Ushbu maqolada, Tabiiy fanlarni o'qitishda "Pedagogik ta'lim innovatsion klasteri" va "Eshitdim, ko'rdim, bajardim "tamoyilini oliy ta'limda qo'llash orqali talabalar bilim saviyasini va o'zlashtirish darajasini yuqoriga ko'tarish , amalyotdagi bilimlarini oshirish , oliy talim va ilmiy tekshirish muassasalari bilan hamkorlikni tashkil etish haqida ma'lumotlar keltirilgan.

Kalit so'zlar : innovatsion, klaster, soya, makkajo'xori, metod, ta'lim.

INTRODUCTION

Today, there is a special emphasis on the development of agro-technologies for the creation, testing and adaptation of new varieties of nutritious crops, including soybeans, the production, storage, and soil productivity of fertile, quality, ecologically clean grain products. Legumes increase soil fertility and are suitable as past crops for many crops in the replacement planting system.

In addition, in leguminous grain crops, the amount of protein grown relative to the unit of the field is higher in quality and easier to absorb. In the years that followed, the acceleration of the production of feed for food and livestock prohibits an increase in soybean grain production. Additionally, organize joint plantings for the purpose of unimli use of the land.

At the same time, various decrees have been approved to integrate this into the development of students' academic achievements by using innovative methods of higher education to bring this

knowledge to a young age For more information, please contact the Treasurer's Office by writing to the address noted above or by telephoning (718) 560 - 7500.

METODOLOGY

The problem of innovative classrooms of pedagogical education in our country is being studied as a separate research object. The author of this idea, G. Research by I. Muhamedov and U.N.Khodjamkulov, Sh.Q.Mardonov provides information on the systematic work being done in the innovative classroom of pedagogical education. [2] Scientists from the CIS countries T.Bayborodova, S.Beketova, N.Galiyeva, L.Grigoryeva, Researched by Y.Demyankov, M.Joorayev, O.Naumova, I.Ponomareva, N.Postnova, Y.Chaykovsky, and others on the theoretical basis and pedagogical and psychological aspects of the development of the natural and scientific world of students and students in the teaching of natural sciences, including biology, L.L.Naumova, based on the divine concentration of the classroom and into the technological chain suppliers of linked goods and raw materials, combining the main manufacturers[3]. K.A. Timiryazev writes: "Agriculture is a science of the best ways to hunt down sunlight, and agronomy is the best way to catch heat, which is a source of life."[4]. One such method is the addition of various crops. The intermolecular force from all these filaments is enough to support more than the geccow's body weight—when it is skitting upside down ahead. In soy roots, tuganaks are formed by bacteria Rizobium japonicum. The amount of tuganas varies in crops and depends on the conditions of cultivation. In the conditions of ryazan, the amount of endowments ranges from 1 to 20 in the pea, from 14 to 41 in beans, and from 6 to 76 in the shade [5]. In the first year of life, the grass added in the grass mixture forms less endlessly than when planted in pure form, and in the second year it is equal [6].

RESULTS

I heard the experimental testing work, I saw I did it through the presentation to the experimental group on the heads. Students have repeatedly reproduced and implemented knowledge and have been investigated by statistical methods for further strengthening, differences in the learning performance of experimental and control groups, i.e. the difference in the idea put forward in the study by their results in experimental groups. Therefore, we advance the following hypothesis.

Basic hypothesis: H_0: the level of learning in the experimental group and control group (based on the idea put forward in the study) is the same;

Contradictory (alternative) hypothesis: H_1: The level of learning in the experimental group and control group varies.

Value definition formulas.

Mezonlar	**First selection (experimental group)**	**Second selection (control group)**
Average value of the absorption price	$\overline{X} = \frac{1}{n}\sum_{i=1}^{3} n_i x_i$	$\overline{Y} = \frac{1}{m}\sum_{i=1}^{3} m_i y_i$
Tanlanma dispersiya	$S_T = \frac{1}{n}\sum_{i=1}^{3} x_i^2 n_i - \bar{x}^2$	$S_H = \frac{1}{m}\sum_{i=1}^{3} y_i^2 m_i - \bar{y}^2$
O'rtacha kvadratik chetlanish	$\sigma_T = \sqrt{S_T}$	$\sigma_N = \sqrt{S_H}$
Variatsiya koeffitsientlari	$V_T = \frac{\sigma_T}{\overline{X}} \cdot 100\%$	$V_H = \frac{\sigma_H}{\overline{Y}} \cdot 100\%$
Samaradorlik	$\eta = \frac{\overline{X}}{\overline{Y}}$	
Ishonch oraliqlari:	$\overline{X} - t_\gamma \cdot \frac{\sigma_T}{\sqrt{n}} \le a_x \le \overline{X} + t_\gamma \cdot \frac{\sigma_T}{\sqrt{n}}$	$\overline{Y} - t_\gamma \cdot \frac{\sigma_H}{\sqrt{m}} \le a_y \le \overline{Y} + t_\gamma \cdot \frac{\sigma_H}{\sqrt{m}}$
χ^2 (xi square) Statistikasi	$\chi^2_{эмп} = \frac{1}{mn}\sum_{i=1}^{3} \frac{(n_i m - m_i n)^2}{m_i + n_i}$	
Pedagogy gipoteza	If so, it will be accepted, otherwise it will be accepted $\chi_{Эмп} > \chi_{кр}$ H_1 H_0	

Results of an initial practical indicator of student learning activities(entrance test).

Preliminary practical indicator of student learning activitieskintestinal (entrance test) results

	1st-grade students of the Chirchik State Pedagogical Initiative (62 Navarrese)		**2nd grade students of the Chirchik State Pedagogical Initiative (52)**		**3rd grade of the Chirchik State Pedagogical Initiative (41Navarrese)**	
	Tin the surprise group (32 Navarrese)	Control in the group (30 Navarrese)	Tin the surprise group (27 Navarrese)	Control in the group (25 Navarrese)	Tin the surprise group (22 Navarrese)	Control in the group (19 Navarrese)
Yit's snowy	2	1	1	1	2	2
Medium	7	4	6	3	5	1
Past	20	20	18	15	14	13
Qoniqarsiz	3	5	2	7	1	3

Theresults obtained at the beginning of the T ajriba test were statistical. Initially, the Chirchik State Pedagogical Initiative examined the average level and effectiveness of the results obtained from monitoring groups and experimental group students in the field of biology.

$\bar{X} = \frac{1}{n}\sum_{i=1}^{3} n_i x_i \approx 3{,}54$, $\bar{Y} = \frac{1}{m}\sum_{i=1}^{3} m_i u_i \approx 3{,}58$. $\eta = \frac{\bar{x}}{\bar{y}} \approx 1$

Therefore, at the beginning of the experimental work, the levelof knowledge of the students is almost equal. Now, in the third final phase of the experimental work, a mathematical and statistical analysis of pedagogical research has been carried out, and the results have been combined.

The study of the control test in the experimental and control groups isk. (I heard and after the maruza stage)

	1st class of the State Pedagogical Initiative (62 Navarrese)		1st class of the State Pedagogical Initiative (52Navarrese)		3rd grade students of the Chirchik State Pedagogical Initiative (41 Navarrese)	
	Tin the surprise group (32 Navarrese)	Control in the group (30 Navarrese)	Tin the surprise group (27 Navarrese)	Control in the group (25 Navarrese)	Tin the surprise group (22Navarrese)	Control in the group (19 Navarrese)
Yit's snowy	1	0	0	0	2	1
Medium	1	2	1	1	2	1
Past	18	17	16	13	12	10
Qoniqarsiz	12	9	10	11	6	7

The study of the control test in the **experimental** and control groups is **k.** (See and after the practical stage)

	1st grade of the Chirchik State Pedagogical Initiative (62)		1st grade of the Chirchik State Pedagogical Initiative (52)		3rd grade students of the Chirchik State Pedagogical Initiative (Navarre)	
	Tin the surprise group (32 Navarrese)	Control in the group (30 Navarrese)	Tin the surprise group (27 Navarrese)	Control in the group (25 Navarrese)	Tin the surprise group (22 Navarrese)	Control in the group (19 Navarrese)
Yit's snowy	7	6	4	6	8	7
Medium	9	11	10	10	4	6
Past	16	13	13	9	10	6
Qoniqarsiz	0	0	0	0	0	0

The control test in experimental and control groups **is integratedh indicatork.** (After the success phase)

	1st class of the State Pedagogical Initiative (62Navarrese)		1st class of the State Pedagogical Initiative (52Navarrese)		3rd grade students of the Chirchik State Pedagogical Initiative (41 Navarrese)	
	Tin the surprise group (32 Navarrese)	Control in the group (30 Navarrese)	Tin the surprise group (27 Navarrese)	Control in the group (25 Navarrese)	Tin the surprise group (22 Navarrese)	Control in the group (19 Navarrese)
Yit's snowy	13		10		14	
Medium	10		11		4	
Past	9		6		4	
Qoniqarsiz	0		0		0	

As shown in the table above, the results of the student's Bajardim-level test show that the level of learning in the experimental group was higher than that of the control groups, while the experimental groups conducted classes in two stages were taught in three phases.

Tajriba sons ishlarining statistics tahlili

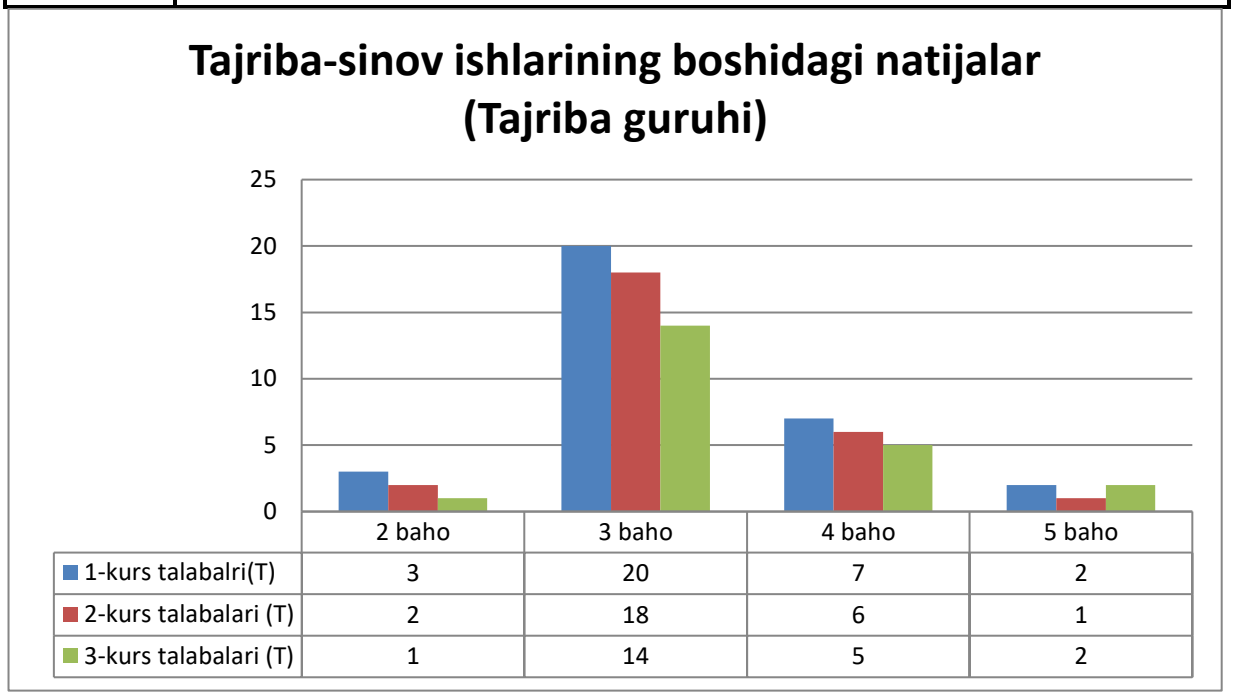
1st-grade students of the Chirchik State Pedogagika Initiative (62)					2nd grade students of the Chirchik State Pedagogical Initiative (52)					3rd-grade students at the State Institute of Pedogics (41afar)				
	Tajriba guruhi					Tajriba guruhi					Tajriba guruhi			
x_i	2	3	4	5	x_i	2	3	4	5	x_i	2	3	4	5
n_i	3	20	7	2	n_i	2	18	6	1	n_i	1	14	5	2
	Nazorat guruhi					Nazorat guruhi					Nazorat guruhi			
y_i	2	3	4	5	y_i	2	3	4	5	y_i	2	3	4	5
m_i	5	20	4	1	m_i	7	15	3	1	m_i	2	13	1	2

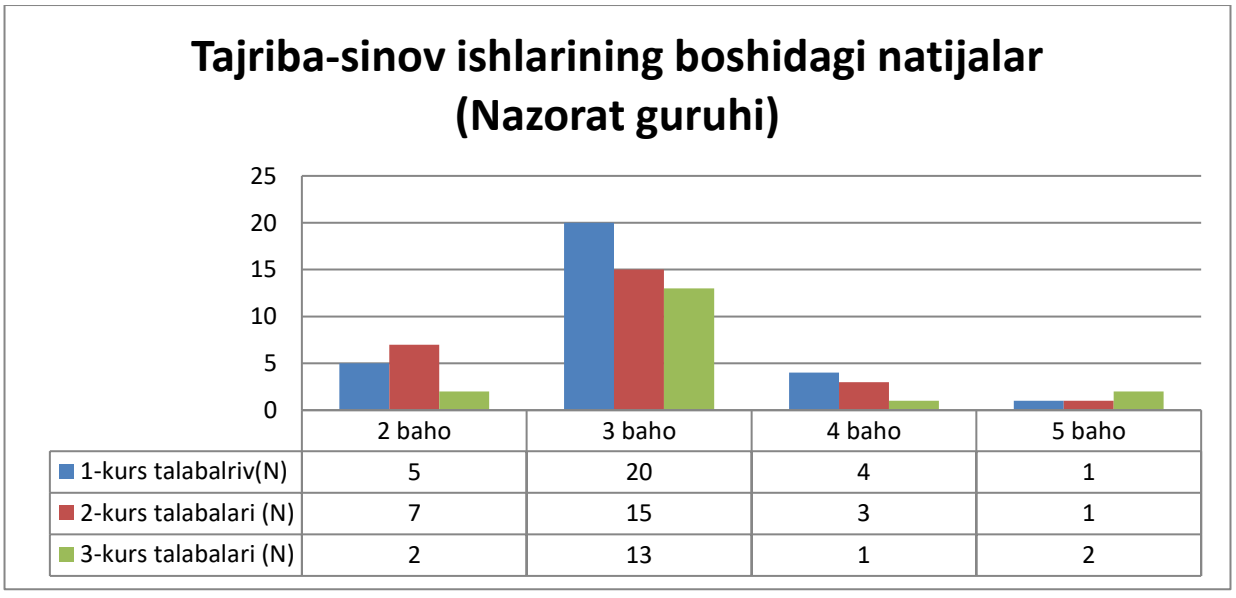
The table provides statistical analysis of entrance tests in the study. At the same time, the knowledge indicators of experimental and control groups are close to one another.

Tajriba-sinov yakunidagi natijalar satistik analizi

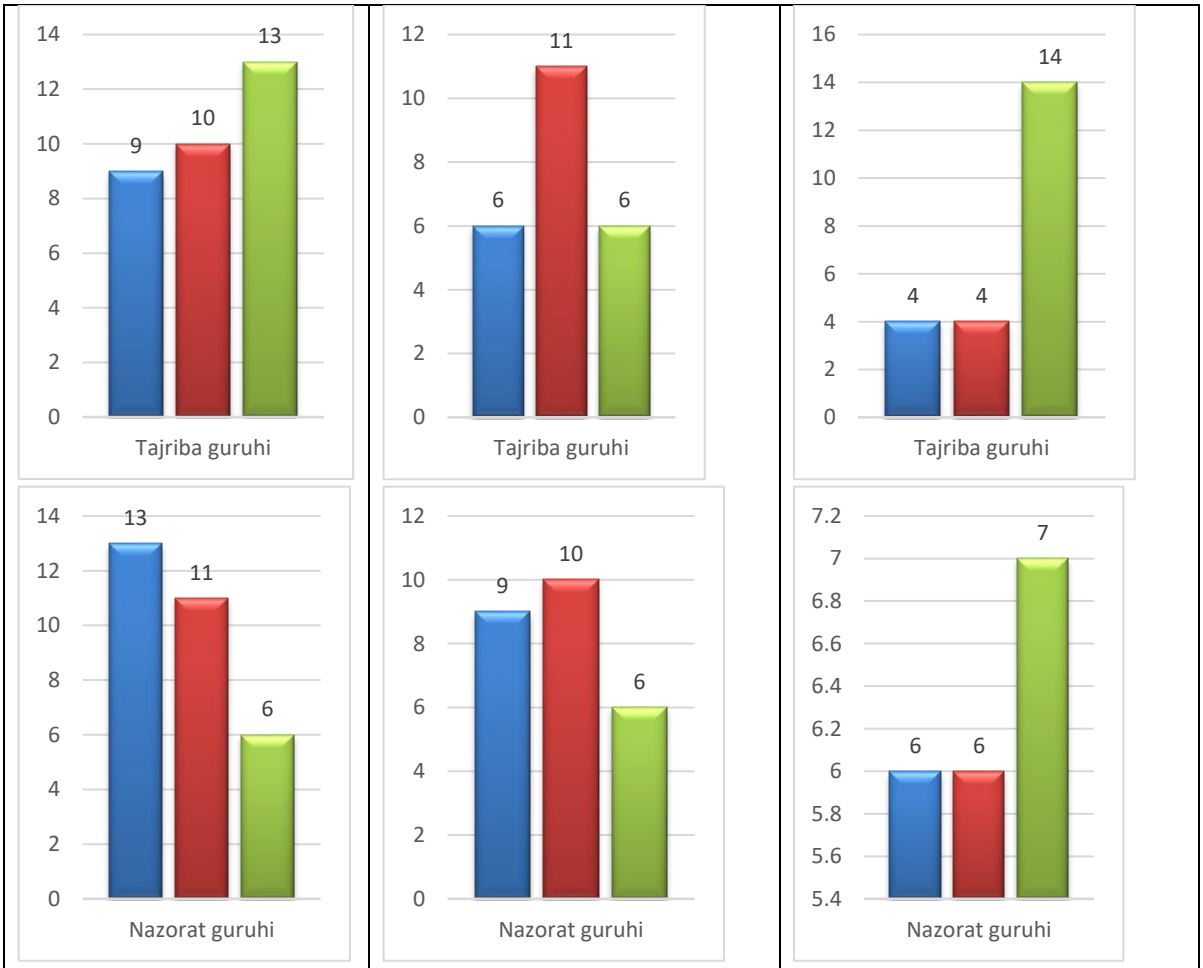
1st grade of the Chirchik State Pedagogical Initiative (62)									
	2	3	4	5	Jami	o'rtacha	Disperhim	Variatsiya koeffs.	Samaradorlik
Experience Group	0	9	10	13	32	4,12	0,7	0,83	1,09
Control Group	0	13	11	6	30	3,76	0,62	0,78	
Summary	H_1 hypothesis accepted								
2nd grade of the Chirchik State Pedagogical Initiative (52)									
	2	3	4	5	Jami	o'rtacha	Disperhim	Variatsiya koeffs.	Samaradorlik
Experience Group	0	6	11	10	27	4,14	0.63	0,79	1,08
Control Group	0	9	10	6	25	3,80	0,59	0,78	
Summary	H_1 hypothesis accepted								

3rd grade of the Chirchik State Pedagogical Initiative (41)									
	2	3	4	5	Jami	o'rtacha	Disperhim	Variatsiya koeffs.	Samaradorlik
Experience Group	0	4	4	14	22	4,45	0,64	0,8	1,10
Control Group	0	6	6	7	19	4,04	0,77	0,87	
Summary	H_1 hypothesis accepted								





A chart of student efficiency in experimental work,
In %



Chirchik State Pedagogical Initiative 1-Course Talabalari (62 Navarrese)	Chirchik State Pedagogical Initiative 2-Course Talabalari (52 Navarrese)	Chirchik State Pedagogical Initiative 3-Course Talabalari (41 Navarrese)

The results show that I heard, saw, implemented in first-course students in the field of biology at the State Peda Gogika Initiative in Chirchik, and found that the effectiveness of my performance (knowledge, skills, skills, manyetenations) increased by 9% in second-grade students by 8% to 10% in third-grade students.

CONCLUSION

At the Bajardim stage of "I ate, saw, and implemented", students planted soybeans and corn together in the form of independent education, based on the knowledge they had heard, seen in Phases I and II, and did the work carried out in a laboratory environment independently. Even after this phase, the control test was taken in a enriched form, or 20, with a 19% increase in absorption and an increase of up to 89%.

Experimental groups.	Kirish test (10 he)	Eshitdim bosqichi nazorat test (10 ta)	Viewed step Nazorat test (15 ta)	Bajardi bosqichi Nazorat test (20 he)
1 course 21/1	65 %	52 %	74 %	82 %
2-Course 20/3	64 %	50 %	73 %	82%
3-Course 19/3	66 %	60 %	78 %	89%
O'rtacha qimati.	65 %	54 %	75 %	84 %

At each stage, students were tested based on the knowledge gained, and students were monitored for their knowledge indicators and skills.

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