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IMPROVING THE INTEGRATION OF THE TECHNICAL DEPARTMENT AND MANUFACTURING ENTERPRISES EFFICIENCY

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ABSTRACT

The article presents statements on the results of experimental work and the conclusions of studies on improving the effectiveness of education by improving the integration of technical departments of higher educational institutions and industrial enterprises.

KEYWORDS: *Technical Department, Integration Cooperation, Research, Innovation, Integration.*

INTRODUCTION

To fully solve the problem of integration in education, it is important not only to pay attention to the consistency and continuity of interdisciplinary, related educational stages and courses, to establish the integration of science and production, but also to ensure the consistency of forms and teaching methods [1-10].

Therefore, ensuring integrative cooperation in education acts as a socio-pedagogical problem, and its systematic and effective solution is one of the important scientific and practical tasks facing our scientists.

Before conducting research to ensure the integration interaction of the technical department and manufacturing enterprises in an innovative educational environment, a survey was conducted of 53 professors and teachers of general professional and special sciences working in light industry and technical universities of the Republic of Uzbekistan. The experimental and control groups included 546 students [11-22].

We have carried out pilot studies on the integration of the technical department and manufacturing enterprises and have achieved the following results. According to the results of the research, the results of students' knowledge and skills during qualifying practices were determined on the basis of their positive solutions to tests, answers to questions and tasks. We are seeing an increase in the effectiveness of training in training based on our proposed improved Charter and practice program. To this end, for 3 years we have been conducting research work in control and experimental groups at the Jizzakh Polytechnic Institute, the Karshi Engineering and Economics Institute and the Bukhara Engineering and Technology Institute.

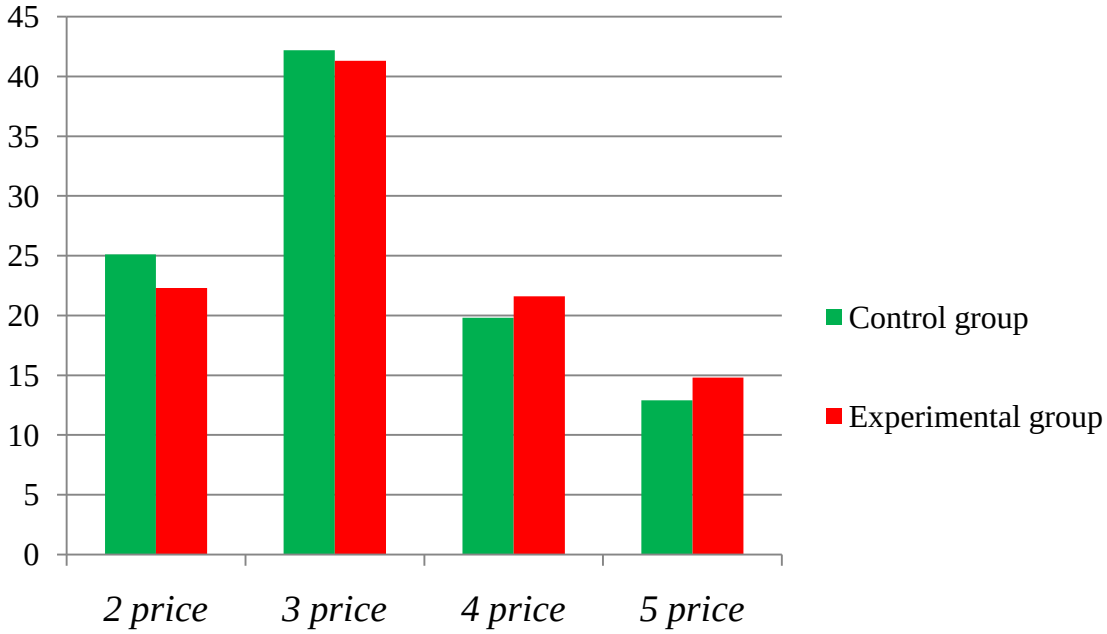
Pedagogical experimental work has been carried out on the basis of the integration of technical departments and manufacturing enterprises into an innovative educational environment, and 12% efficiency has been achieved. During the pedagogical experiment, the mechanisms for determining the level of students' preparation for professional activities were optimized in terms of quantitative and qualitative indicators using benchmarks.

We used Student statistics to obtain the results of research work and obtained the following results (Table 1, Fig. 1, 2).

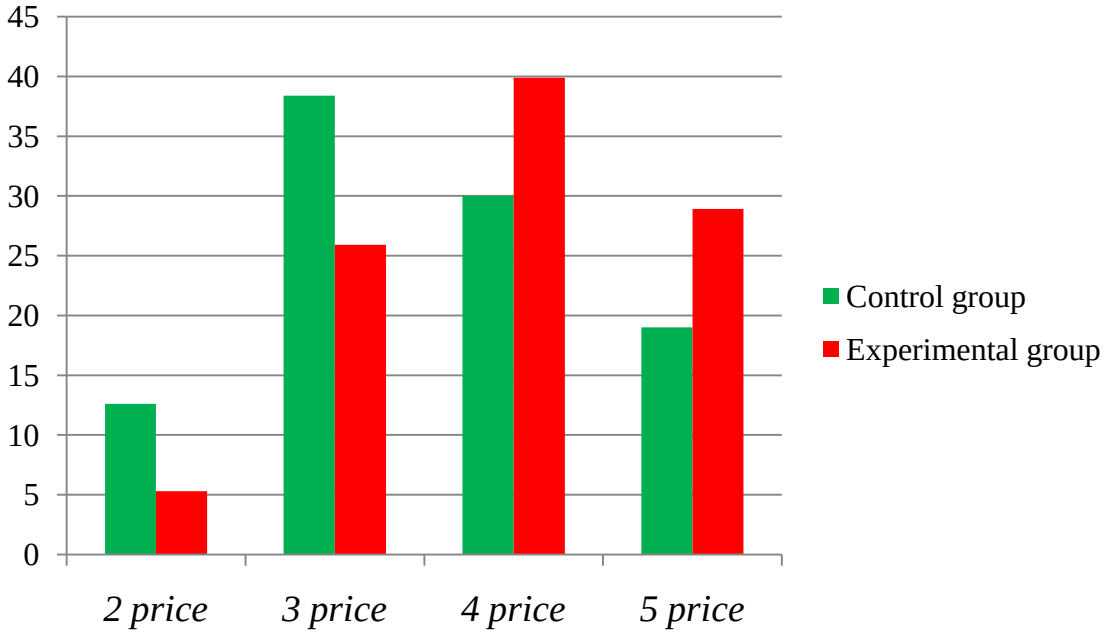
Table 1

The results of the experiment on the methodology for organizing qualification practices for students in the studied universities

Levels	Experimental group (t=283 students)				Control group (n=263 students)			
	At the beginning of the experiment		At the end of the experiment		At the beginning of the experiment		At the end of the experiment	
	Number of students	%	Number of students	%	Number of students	%	Number of students	%
"Excellent" (Professional)	42	14,8	82	28,9	34	12,9	50	19,0
"good" (Intellectual)	61	21,6	113	39,9	52	19,8	79	30,0
"satisfactorily" (communicative)	117	41,3	73	25,9	111	42,2	101	38,4
"unsatisfied" (reproductive)	63	22,3	15	5,3	66	25,1	33	12,6



Rice. 1. Diagram of test results of a methodology created on the basis of integrative cooperation between technical departments and manufacturing enterprises (at the beginning of the experiment)



Rice. 2. Diagram of test results of a methodology created on the basis of integrative cooperation between technical departments and manufacturing enterprises (at the end of the experiment)

Methodological manuals for organizing practices and recommendations for practice leaders for conducting practical classes on integrated practice programs based on the interactive methods of "Case Study", "Briefing", "Boomerang" and "Deming Cycle" have been developed.[23-26]

The results of experimental tests showed that when studying in integrative practice programs, the number of students who received "excellent" grades in the experimental groups increased by 12% compared to the control group, "good" increased by 9%, students also decreased "satisfactory" grades by 15%, and "unsatisfied" by 6%.

Thus, in the experimental groups, the number of students who received "excellent" and "good" grades increased, and the number of students who received "satisfactory" and "unsatisfied" grades decreased compared to the control groups.

Our preliminary studies have shown that conducting professional practices based on integrated practice programs has a positive effect on the development of a student's professional and practical skills.

It can be concluded that in improving the integrative interaction between science, education and industrial enterprises, high efficiency can be achieved through the methodology recommended by us.

REFERENCES

1. To'xtayeva Z.Sh. "Oliy ta'limda fanlar integratsiyasini ta'minlashning o'quv-metodik va didaktik vositalari" , Pedagogik mahorat. Ilmiy-nazariy, metodik jurnal. – № 5. Buxoro, 2019. – 66-72 b.

2. Туракулова, Б. Б. (2022). Повышение квалификации персонала на основе интеграции технических подразделений и производственных предприятий. Universum: психология и образование, (10 (100)), 8-11.

3. Sharifovna, T. Z., & Bakhriniso, T. MODERNIZATION OF HIGHER EDUCATION BY SOLVING INTEGRATION PROBLEMS.

4. To'raqulova B.B. "Technical innovative-educational environment contents of integration cooperation between management and production enterprises" International journal of innovations in engineering research and technology [IJIERT] . volume 7, issue 4, apr.-2020, 246-249.

5. K.S.Rakhmonov. Influence of leavens of spontaneous fermentation and phytoadditives on the provision of microbiological safety of bread // T. I. Atamuratova, N. R. Djuraeva, I. B. Isabaev, L. N. Haydar-Zade//Journal of Critical Reviews //2020, Vol.7, Issue 5, pp. 850-860.

6. S.K. Jabborova.Application of products of processing mulberries and roots of sugar beet in the production of cupcakes // I.B.Isabaev., N.R. Djuraeva., M.T. Kurbanov.,l.N. Khaydar-Zade., K.S. Rakhmonov //Journal of Critical Reviews //2020, Vol.5, Issue 5, pp. 277-286.

7. K.S.Rakhmonov. Application of phito supplements from medicinal vegetable raw materials in the production of drugs // T. I. Atamuratova., M.E. Mukhamedova., N.K.Madjidova., I.Sh. Sadikov //Journal of Critical Reviews //2020, Vol.7, Issue 12, pp. 934-941.

8. Djurayeva N, Mixtures of Vegetable Fat as a Potential Raw Material for Bakery// Barakayev N, Rakhmonov K,Atamuratova T, Mukhamedova M, Muzaffarova Kh. // International Journal of Current Research and Review// october 2020, Vol.12, Issue 19, pp. 140-148. DOI: http://dx.doi.org/10.31782/IJCRR.2020.12192

9. Djurayeva N, Plant-fat mixtures as a potential raw material for bakery production// Rakhmonov K, Barakayev N, Atamuratova T, Mukhamedova M, Muzaffarova Kh. // Plant Cell Biotechnology and Molecular Biology 2020 21(45-46), pp. 29-42

10. Ravshanov S.S, The impact of ultrasonic activated water on hydrothermal processing of wheat grains grown in dry climate conditions // Rakhmonov K.S., Amanov B.N. // Plant Cell Biotechnology and Molecular Biology 2020 21(45-46), pp. 29-42

11. Kuliev N.SH, Udk 664.8 baking properties and quality expertise wheat flour// Rakhmonov K.S. // European Journal of Molecular & Clinical Medicine, 2020, Volume 7, Issue 2, Pages 6333-6340

12. Ravshanov S.S, The Effect Of Drinking And Activated Water On Field Scales Of Wheat Grains Grown In Arid Climatic Conditions// Rakhmonov K.S. Ergasheva H.B., Yuldasheva Sh. J.// European Journal of Molecular & Clinical Medicine, 2020, Volume 7, Issue 3, Pages 3065-3070.

13. Rakhmonov K.S., Confectionery Products for Therapeutic and Preventive Purpose with Medicinal Herbs Uzbekistan// L.N. Khaydar-Zade., N.SH. Kuliev, G.H.Sulaymonova // Annals of the Romanian Society for Cell Biology, Vol. 25, Issue 2, 2021, Pages. 4126 – 4140.

14. Ravshanov S.S., Influence of the Use of Activated Water during Hydrothermal Treatment on the Quality of Bread// Rakhmonov K.S., Radjabova V.E., Pardayev Z.T. // Annals of the Romanian Society for Cell Biology, Vol. 25, Issue 2, 2021, Pages. 4091 – 4102

15. Azim Oltiev., The role of catalysts in fat transesterification technology// Matluba Kamalova., Kakhramon Rakhmonov., Orifjon Mamatqulov// IOP Conf. Series: Earth and Environmental Science 848(2021) 012220

16. Rakhmonov KS, Spontaneous fermentation starter cultures - an effective means of preventing the potato disease of bread // Isabaev IB. // Journal "Storage and processing of agricultural raw materials" .- M., 2011.- No. 12.- P.23-25.

17. Rakhmonov KS, Influence of the substrate of the nutrient medium on the composition of the populations of microorganisms in the starter cultures of spontaneous fermentation // Isabaev IB, Akhmedova ZR // Journal "Storage and processing of agricultural raw materials". M, 2012 ..- No. 9.- P.40-43

18. Rakhmonov KS, Analysis of typical sources of microbial contamination of bread // Buxoro davlat universiteti ilmiy axboroti. // 2014.- No. 3.- P.37-43.

19. Rakhmonov K.S. Potato Bread Disease and a Method for Its Prevention // T.I. Atamuratova // Russian Bakery Magazine. M, 2014.- No. 5.- P.37-38.

20. Rakhmonov KS, Biotechnological aspects of ensuring the microbiological purity of bread // E. Muratov, T.I. Atamuratova // Kimyo va kimyo texnologiyasi. 2015.- No. 2.- P.64-68.

21. Rakhmonov K.S. Wheaten ferments spontaneous fermentation in biorechnological methods// Isabayev I.B. // Austrian Journal of Technical and Natural Sciences. 2016. - № 7-8. - P. 9-12.

22. Rakhmonov KS, Methods for improving the composition of the nutrient medium of sourdough cultures for bakery products from wheat flour // T.I. Atamuratova. Isabaev I.B. // Bakery of Russia. 2016. –№2. - P.22-24.

23. Rakhmonov KS, Optimization of the recipe composition of wheat breads using spontaneous fermentation starter cultures // Isabaev IB, U.M. Ibragimov, Molchanova E.N. // Bakery of Russia. 2018. –№3. - S. 33-37.

24. I.B. Isabaev, The use of feed flour as a substrate for the nutrient medium of wheat starter cultures in the production of bread // T. I. Atamuratova., Rakhmonov K.S. // Buxoro davlat universiteti ilmiy axboroti.- 2018. No. 2.- P.24-30.

25. Ravshanov S.S, Radjabova V.E, Rakhmonov K.S, Pardayev Z.T. Influence of the Use of Activated Water during Hydrothermal Treatment on the Quality of Bread // Journal Annals of the Romanian Society for Cell Biology - Romania, 2021. Vol. 25, №2 ISSN: 1583-6258, pp. 4091-4102.

26. Ravshanov S.S, Rakhmonov K.S, Ergasheva H.B, Yuldasheva Sh.J. The Effect Of Drinking And Activated Water On Field Scales Of Wheat Grains Grown In Arid Climatic Conditions // European Journal of Molecular & Clinical Medicine. Volume 07. Issue 03. 2020. -pp 3065-3070.