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THE CURRENT STATE OF THE CREDIT MODULE SYSTEM WHEN TEACHING THE DEPARTMENT OF ATOMIC AND NUCLEAR PHYSICS IN PEDAGOGICAL HIGHER EDUCATIONAL INSTITUTIONS

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Annotation
This article presents the results in creating a vertual laboratory, where the orbitals of a hydrogen atom are interpreted based on the Schrödinger equation, allowing to explain quantum parameters.

Keywords: quantum, spectrum, electron, photon, potential, energy, wave, energy, effect, orbit.

Introduction

The current stage of restructuring and radical reforming the system of higher education in our republic imposes qualitatively new requirements for the organization, content and methodology of the educational process in higher educational institutions, its individualization and differentiation. The rapid social changes taking place in society form the need for highly qualified specialists. The study shows that by the beginning of the XXI century, the educational system of students of higher educational institutions in our Republic has passed into the credit-modular form of Education, which requires a new approach to student training. This is especially noticeable in independent professional activity. For this reason, the individual approach of students in learning is very important. Based on the above needs, the education of today's era sets the task of improving the theory and practice of training a specialist who meets modern requirements for the methodology of teaching atomic physics. Atomic physics is objectively the most complex science that requires much more intensive mental work, a high level of generalization and abstract activity. Therefore, the assimilation of atomic physics material equally and at a high level by all students is unattainable. Even focusing on the "average" student in teaching a subject leads to a decrease in academic performance in the group.

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LITERATURE REVIEW

The pedagogical general principles of the use of modeled developments in the process of student training and the individualization of the educational process are reflected in a number of works (A.V. Drummers, B. P. Bespalko, B.S. Gershunsky, E.N. Karotkov, BC Lednev, V.A. Slastenin, E.S. Rabunsky, I.E. Check, I.A. Skopylatov, A.I. Lutovinov and others).

The problem of differential education is one of the traditional problems of secondary educational institutions. Its methodological basis is Yu.K. reflected in his works. Babansky, A.A. Budarnogo, B.P. Yesipova, U. Zubaidova, A.A. Kirsanova, I.Ya. Lerner, E.S. Rabunsky, I.E. Ont, C. Sharipov, N.M. Shakhmaeva and others.

Study of the spiritual and individual abilities of students L.S.reflected in the works of. Vygotsky, I.V. Dobravina, Z.I. Kalmikova, V.A. Krutetskogo A.N. Leantiev, N.A. Menchinsky, N.F. Talyzina, B.M. Teplova et al.

RESEARCH METHODOLOGY AND IMPERIAL ANALYSIS

The results of the educational examination, the individualization of Atomic physical knowledge in the conditions of credit training, often need to be carried out independently under the guidance of teachers and in the independent work of students, which creates a training program for training specialists. Continuing the formative experience we discuss the method of conducting assistance examinations in simulation programs and set the criteria for assessing the effectiveness of the proposed method. While the study, we have been detailed and substantiated in joriy'va next, the software modeling and modeling for higher education at the University and the management of the educational process based on formal technologies, reducing the launch of the human factor in assessing the knowledge of the students, the automatic management process was proposed. Therefore, it provided a positive assessment of students ' performance to the content of the educational material being studied, and training programs for solving practical problems increase motivation for use. on the change of pedagogical experiment, special consultations were held for teachers with whom we work in experimental groups.

Test groups laboratory classes on "atomic physics "were applied to the electronic complex, jobs, models for explaining the structure of matter, virtual work on the topic" the state of electrons in Atomic orbits", work aimed at

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increasing the pedagogical capabilities of reading and the process of reading and teaching.

In order to determine the effectiveness on the path of experimental and test work, Final control tests were carried out in the form of written work. The results of the experiment-test (Table 2 and look at the 3rd intensity)are presented in.

Table 1. Indicators of generalization of students at the end of the experiment-test process

Experiment-time of testing	Groups	Number of students	Index			
			excellent	good	satisfying	unsatisfactory
At the end of the experiment	Test group	85	23	42	17	3
	Control group	85	11	29	31	14

Table 2. Experience-indicators of student assimilation at the end of the test process

OTM name	Groups involved in the experiment	N	excellent	good	satisfying	unsatisfactory	Average value	Efficiency
NamDU	Experience	24	7	13	4	0	4,12	1,16
	Control	24	3	8	8	5	3,53	
FarDU	Experience	21	4	12	4	1	4,06	1,14
	Control	21	1	8	10	2	3,55	
ADU	Experience	20	6	8	5	1	4,1	1,15
	Control	20	3	7	8	2	3,55	
QarDU	Experience	20	6	9	4	1	4	1,159
	Control	20	4	6	5	5	3,45	

CONCLUSION AND DISCUSSION

In higher education, the following conclusions were reached in the process of overflow of experimental and test work on the means of improving practical training on "atomic physics", improving the methodology for preparing requirements for examination, scientific research on the methodology for using virtual developments, teaching the discipline "atomic physics:

1. Laboratory classes on "atomic physics" were launched on the basis of the program and pedagogical technologies, pedagogical experiments and tests were carried out. pedagogical experience-through the processing of test results based on the xi-square method

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Following the virtual developments of solving and laboratory expertise on issues related to" atomic physics", it was proved that after obtaining accurate results, the effectiveness of implementation increases by 15% compared to traditional studies and gives a positive assessment of the scientific opinions of their students.

2. The criteria for clarifying the degree of formality of the scientific worldview on "atomic physics" of personnel trained in the science of physics served to increase the practical and theoretical cost of production. The scientific worldview of students on"atomic physics", the degree of formation of knowledge of quantum mechanics, personality traits were determined on the basis of the criteria for professional training in specialist disciplines.

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