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**Realizations of didactic principles of communication  
theory and practice IN EDUCATIONAL PROCESS  
SENIOR agricultural education institutions**

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*Rozhlyanuto problem of implementing the principle of didactic communication theory and practice in the educational process of higher agricultural education; disclosed didactic conditions of progress testing lectures on laboratory studies the example disciplines "Agricultural Machinery" and "Navigation and communication".*

***Test and control conditions didactic principle, laboratory classes, academic discipline.***

**Resolutionska problem.** Group of the knowledge society as a qualitatively new socio-economic structure in the XXI century. caused by the special role of knowledge in modern civilization development. Competitive advantages of fewer defined wealth of natural resources or cheap labor and increasingly use of knowledge, which ranks first among the factors of social development, contributing to the complementary goals of sustainable economic growth, improving social welfare, promotion of social cohesion, human development. The knowledge society determines the type of economy in which knowledge plays a crucial role, and their production is a source of

☐ technical

Socioeconomic shiftedion, Chybokand tand  
dynomic

Peretusion occurring in different industries determine the need for modernization of education, including training of future professionals highly

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education, which does not require material expenditures is to provide a systematic connection between theory and practice throughout the learning process.

**Analiz recent research.** It is known theoretical material serves as the basis for the implementation of practical and laboratory works that make clear and convincing those fundamental provisions disclosed in lectures.

This repeatedly emphasized SI Zinoviev, II Kobyllyatskyy and others. In particular SI Zinoviev notes that through laboratory classes students reinforce theoretical stronger

lecture training information, while it turns a lot of details, which the students had not had a clear idea. In turn, there is feedback. Timely lecture mastery learning material is a prerequisite combination of theory and experience in laboratory work

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program material students need to work on laboratory work, already having theoretical knowledge of at least the relevant lectures. Formulating one of the requirements for teaching laboratory classes, Il Kobylyatskyy noted that the need to plan and conduct classes so that they encourage students the opportunity to deepen knowledge

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"improving knowledge" refers to the presence of the students theoretical knowledge acquired by them in lectures and through independent work with literary sources. Well-known educator rightly says that only under these conditions can be carried out effectively improve knowledge on laboratory work. But as shown by observation, often many students come to the laboratory classes, barely having theoretical knowledge even of the lecture material. That is, the teacher in such classes is simply nothing "deepen" the absence of such students theoretical knowledge base that could deepen in laboratory work. These students too superficially understand the purpose and content of educational work in class and, consequently, are not systematic knowledge and only fragments of knowledge, and it is not sustainable. The cause of the abovementioned situations in the classroom is that students are not always a desire to work out lectures on a fresh memory and time to acquire theoretical knowledge that it is advisable to strengthen laboratory work.

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PracticesS in the learning process; reveal the didactic conditions of progress testing lectures on laboratory studies the example disciplines "Agricultural Machinery" and "Navigation and communication".

### Rezultaty dosidzhen. DA to awaken in students

BaJeanne systematically work with theoretical training material techniques should be used to stimulate the system and, therefore, encourage students to independent academic work. This is confirmed by JK Babanskii, noting that the most important condition for successful mastery of knowledge is systematic work on the study material. According to scientists the main reason that prevents students successfully learn, is the lack of systemic work. Check

fromnan only during the session in any case not systematically encourages students ☐7☐

In practice, the training process knowledge often lectures is required only on examination, or at best - intermediate certification. In this situation, formulated by scientists didactic heritage and respect the integrity of the relationship of theory lectures and laboratory work practices can not be used. Not performed several didactic principles of training:

- PrincesMr connection between theory and practice;
- PrincesMr regularity and consistency;
- PrincesMr strength of learning and skills.

In educational practice is generally not covered by the current control of all students. In addition to laboratory work is supervised theoretical training material required for

laboratory work. However, in lectures and served other essential educational information is available on the laboratory work. Thus, a substantial part necessary for future professional theoretical knowledge, which are not directly related to laboratory work are out of control.

According pedagogical terminology such knowledge can be described as "knowledge-memories". That is knowledge that students can not use in training and practice. Without practical consolidation, they quickly disappear from memory. As a result, the system violated the fundamental laws of the learning process and as a result, significantly fromnyzhuyetsya its effectiveness. One of the effective ways to ensure the integrity of the connection between theory and practice and compliance with other principles of teaching is the introduction to laboratory studies of current control all basic knowledge lectures. Under this condition it acts as a feedback. MO Danilov considers that student achievement, test and evaluation of their knowledge and identify the level of mental development is essentially a process

fromGate connection

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constant detection efficiency operation

training system, optimal operation is confirmed,

mainly, the impact of students

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information on the level of learning for each student in the learning process. If you find, the results of this monitoring inefficiency of the process, make the necessary adjustments in the course of learning of students and as a result make learning and especially learning quite manageable. Current

control notes MI Kuvshinov helps determine how fast the students learned knowledge and skills on certain sections of the course. Control allows you to detect difficulties prevent lag, take the necessary measures to prevent similar incidents in the future. Current control helps students organize their cognitive activity, in particular it effectively promotes skills of independent work. Systematic training work as a result of the success of this impact, helps consolidate and improve knowledge, including helping the scattered elements of the training material as a whole, to bring them to the system

regard, it should be noted that the current control knowledge lectures on laboratory work performs the following tasks:

- allows you to quickly and effectively detect the level of learning lectures and readiness of students to tasks labs lecture on the topic;
- based on the results of this monitoring to identify weaknesses in the learning of students and outline ways to address them;
- as a result of progress testing, to form students conviction of the need to systematically perform educational responsibilities.

Mand conducted a study of the effectiveness of progress testing the quality of lecture material forming the system of knowledge of the subject "Farm Machines". Our research was conducted in the second year (four groups), one of the faculties of Agronomy profile and in the third year of engineering and technical training. Two groups (with the best success rate in the first year) we were taken as controls. The other two (with worse indicators of success for the first year) - as experimental. In the study subjects "Farm equipment" and "Navigation and communication" in the experimental groups we entered the current test control in each laboratory session. In the control group it was not performed.

Based on the analysis of the study and the specific study subjects, we have found the necessary conditions of efficient current control:

1. ThatJV task to control should be developed in such a way that students have learned and understood the training not only the information needed for the current laboratory work, but also all the basic stuff previous lecture.

2. Tosaturated frombridge the workingth  
aboutprograms, pipelinednist  
youdoctrine

about Structures in agricultural machinery and navigation systems and the lack of teaching time allocated stipulate possible, minimize the time for the current control. However, it should be time to monitor each student's knowledge. We developed tests containing five or more questions covering basic theoretical information from lectures. Students have time to answer the test task for five minutes. For example, tests (on mono selectivity) with the subject "Farm Machines" to lecture on "machines for basic tillage" include questions and answers to them:

And. What does "bezpolytsevy tillage":

1. Milke loosening narrow strips of field surface. 2. Rotate and loosening soil layer thickness of 18-35 cm. 3. Deep loosening without rotation of the soil layer. 4. All of the above answers.

II. Determine which machines are used for rotary tillage:

1. Policemo plows. 2. Mills. 3. Row flat. 4. Flat-subsoil.

III. What is the function of peredpluzhnyk:

1. Cut right side dirt chunks. 2. cut the upper part of the soil matted chunks 1/3 depth course the main body. 3. cut the bottom of the soil thickness 5-6sm chunks.

4. In theB these functions.

IV. Which of these job cuts plow the soil in the vertical plane to a depth of 15cm.

1. The body. 2. Peredpluzhnyk. 3. Knife. 4. Hruntopohlyblyuvach.

V. What makes smooth plow tillage (no booster furrows and ridges zvalnyh):

1. PLN-5-35. 2. PNO-3-35. 3. PL-5-40. 4. PTC-9-35. 5. All refew plows.

We have also developed tests of discipline "Navigation and communication" containing tests both closed and open type: bahatovybirkovi for compliance, the consistency in the definition of the amendment. For example, tests for the lecture "Global system of differential corrections" include questions and answers to them:

And. WAAS system is designed to ..... positioning navigation system GPS. (Write the missing words, if needed).

II. How is functional supplement satellite system GPS, which is the reach of North America? .....

III. The signal from the satellite group which best meets its

Funktsiyi in Ukraine?

1. SBAS. 2. EGNOS. 3. WAAS. 4. MSAS.

IV. PEid angle receives signals from satellites EGNOS?

1. In blunt. 2. During acute (300). 3. In sharp enough (300). 4. When deployed. 5. Direct.

V. Zo meaning of SBAS?

1. Geostationary satellite navigation system Scandinavian countries. 2. Common name combining functional additions WAAS, EGNOS and MSAS. 3. Synonym WADGPS - global differential GPS.

3. In themotivation training activities. In order to test control was really effective, we need an effective motive that would ensure a thorough preparation of students for answers to tests.

It should be noted that the motives of learning, as we know, belongs to a wide range of cognitive and social motives, which in its there isunity and cooperation form the intrinsic motivation of students learning. Level of development of cognitive and social learning motivation among students is essential to the success of training activities. However, it always provides intrinsic motivation actsint cognitive activity of students. This is because, firstly, given the different level of development of students as cognitive and social reasons, internal reasons require feed, or they fade. Second, in some cases, internal motivation can be negative, resulting in student learning can not take place at all. In the froma bunch of these, in order to involve all students in active, conscious cognitive activity, we used the tools of foreign influence, stimulating learning activities, although not part of the internal motivation of learning. Means external stimulation is often called external motivation. The main reason for the use of external motivation learning is frivolous attitude of students to fulfill their educational responsibilities. MI Alekseev proposes to use to stimulate motives related to students living close to the circumstances. Among them are scientists call motives related to dignity or pride and ambition, with established habit of regular classes, the desire for self and motives are determined by the authority of teachers and parents, the desire to earn the approval of others. This type of motivation scientists say that fear of unsatisfactory evaluations as those that strike ambitions or to cause trouble. Considering the origin and development of this type of motivation, MI Alekseev correctly

ZAZNacha that some motives to the fore not "internal motivations" and external stimulation - situational enforcement training duties. Stone E. confirms that the term "external motivation" refers reinforcement tools that come from outside the individual. □10□

It should be noted that external studying incentives designed to attract students to work together with the teacher directed mental activity to a result that is not directly linked to the knowledge of the object. External motivation necessary stepping causing activity of the individual, which currently is not involved in the conscious action on the acquisition of knowledge. These needs such as image, prestige, dignity, recognition experienced person as particularly important, necessary and urgent for her, and although they are not directly related to cognitive activity as a result of personality to encourage educational activities. In other words, external motivation as a result of constant exposure, initiates a gradual formation of students' cognitive needs. This process can be regarded as a phenomenon of transition external motives (incentives) in the inside. In our current research knowledge test control acts as an external motive learning.

For an efficient mastery of basic knowledge lecture educational information used our method improved test control. In addition to the tests we have introduced the following techniques to stimulate theoretical training of students.

1. Encouraging progress. For this evaluation test items from diysnyuvalas the following indicators:

- answers to all five questions correctly - five points;
- correct answers to four questions - four points;

2. Promote additional workload. Students who gave incorrect answers more than one question thatstu, elaborate theoretical material again and report ABSTRACTm on the lecture.

Studies have shown that after the second test control students began much conscientious attitude to the mastery of knowledge of the basic material of the lecture. The classes began to emerge informative lecture discussions on issues of educational information. There was the presence of more thorough understanding of the theoretical knowledge of students and associate them with laboratory work. Lectures increased focus students began to have questions on the content of educational material. Basic information lecture was thoroughly displayed in the students' notes. Increased efficiency

laboratory work.

## Conclusions

In the consequence of the introduction of the learning process experimental groups improved our current control, the results of students learning these groups significantly increased, as clearly evidenced by the results of examinations (Table. 1, Tab. 2).

As the table shows, the average mark of success in the experimental group was respectively 4.0 and 4.1 and the students of control group - 3.3 and 3.7. It can be concluded that introduced us test current control significantly affects the quality improvement mastery of knowledge, the formation of students provides an integrated system of knowledge and this knowledge provides effective properties needed for future careers.

### 1. *Natassess students before an examination of the subject "Farm Machines".*

Groups	Number of students who received "5"	Number of students who received "4"	Number of students who received "3"	The number of students who received "unsatisfactory"	Total number of students	Among - It score
Experimental	16	14	11	1	42	4.0
Control	10	12	14	6	42	3.3

### 2. *Natbefore an examination theseNKI students from discipline "Navigation and communication".*

Groups	Number of students of which were obtained	Number of students of which were obtained	Number of students of which were obtained	The number of students who received "unsatisfactory"	The general the number of students	Among - It score
Experimental	10	14	3	2	29	4.1
Control	7	12	7	5	31	3.7

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*Rassmotrena problem Implementation dydaktycheskoho principle of communication theory with praktykoy in Uchebn protsesse vyssheho agricultural Uchebn zavedenyya; raskryty terms dydaktycheskiye carry out routine control of knowledge on the material lektsyonnoho laboratornykh Classes in Example disciplines "Selskohozyaystvennyye mashyny" and "Navigating Systems and Communications."*

***Doughnyy control dydaktycheskiye terms, the principle Laboratornoe Lesson, uchebnaya discipline.***

*The problem of implementation of didactic principle of connection between theory and practice in educational process of higher agricultural education institution; disclosed didactic conditions of current control knowledge of lecture material for laboratory studies on example discipline "Agricultural machinery" and "Communication and navigation systems".*

***Test control, didactic terms, principle, lab course, academic subject.***

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## **METODYKA DEFINITION QUALITY mechanized manufacturing operations**

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