# FORMATION OF STUDENT KNOWLEDGE IN TEACHING THE SCIENCE OF METAL CUTTING MACHINES

# Yangiboeva Kunduzkhon

**TerDUPI** Masters

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**Abstract.** This article discusses the conditions under which young students form and develop their knowledge, skills and abilities in the teaching of engineering and technical sciences.

*Keywords: perfect man, spiritually rich, experts, structure, potential, exhibition, animations, electronic versions, didactic, principles, professional center.* 

# ФОРМИРОВАНИЕ ЗНАНИЙ УЧАЩИХСЯ ПРИ ОБУЧЕНИИ НАУКЕ О МЕТАЛЛОРЕЖУЩИХ СТАНКАХ

Аннотация. В данной статье рассматриваются условия, в которых у учащейся молодежи формируются и развиваются знания, умения и навыки при обучении инженерно-техническим наукам.

**Ключевые слова:** совершенный человек, духовно богатый, специалисты, структура, потенциал, выставка, анимация, электронные версии, дидактика, принципы, профессиональный центр.

# INTRODUCTION

In the 21st century, when the pace of development is extremely fast, the minds of young people are occupied with information and information technology, and today it is an urgent problem to bring them up as spiritually rich, perfect people.

### MATERIALS AND METHODS

The training of specialists to manage management systems is becoming an urgent task.

In order to successfully perform the tasks assigned to them, future professionals need to know and master the structure of the system, its processes, information and management channels, how the system behaves in different conditions, in addition to high practical capacity. The high level of learning objectives, the complexity of the content, its clarity and low visibility require special teaching aids (ATVs) in this case, and at this stage a variety of electronic textbooks, in particular electronic versions of videos and electronic animations can be used as such tools.

The increase in the use of information technology in the education system, unfortunately, does not always lead to positive results, in our opinion, one of the reasons is that their pedagogical framework is not sufficiently developed.

Therefore, it is important to develop the theoretical basis for the use of electronic versions, the pedagogical basis for their design, and on this basis to improve (improve) the didactic characteristics and capabilities of electronic versions in education.

In recent years, significant changes have taken place in the provision of educational institutions with information technology. These are reflected in the enrichment of the content of the education system, in improving its quality and in the organization of various effective forms of education.

Some positive work has been done on the introduction of information technology in the process of training future teachers of vocational education.

N. A. Muslimov's work cites research on the system of distance education and the use of electronic textbooks as factors that provide a positive solution to the problem of professional formation of future teachers of vocational education.

K.T. Olimov's works contain the principles and technologies of creating electronic textbooks on special subjects taught in the system of secondary special and vocational centers, as well as the methodological basis for assessing their quality.

In the works of HF Rashidov the methodological bases of informatization of the process of secondary special and vocational education in the Republic are studied as a problem.

# RESULTS

The results of the analysis classified the components of knowledge and skills in the field of metal-cutting machines, which should be formed in future professionals, as follows, and identified the need for students to develop the following knowledge and skills in the learning process:

1. Knowledge and skills on job description. These include: calculation; measurement; design and graphics; machinery, tools and equipment management; working directly with labor objects, etc. are included.

2. Knowledge and skills on the scientific principles underlying the activity. To: mechanical; electrician; biotechnology; chemical and technical; sigaotechnical (working with a known system) and others.

3. Knowledge and skills on functional sign. Work planning, and organization; development (blank shape, change in size and properties); assembly and installation; control research (diagnostic); service and collection; technical improvement; economic improvement: consists of sanitary and hygienic knowledge and skills.

4. Knowledge and skills in the field of application. These are: general production; general technical: general professional, etc.

5. Knowledge and skills in relation to physical and intellectual labor. These include: the ability to make physical cocktails; ability to work intellectually; show personal ability, etc.

### DISCUSSION

The development of science and technology today requires a radical reform of the system of continuing education, including its principles, content, forms and methods of the educational process. One such problem is the computerization of education.

The use of computer technology, in particular, electronic versions created using its capabilities in the educational process, has been studied not only in pedagogy, but also in numerous scientific studies in psychology. The generality, the specificity of the presentation of the instructional material, the ability of the learner to participate directly in the process, the increase in the desire to read due to their natural interest in computer technology features such as shi, control and automation of assessment are undoubtedly advantages of using computer technology in the learning process.

The rapidly evolving process of informatization of society today requires that professionals trained in vocational centers have sufficient knowledge in the field of computer technology and the use of Internet services. They should be able to solve practical problems related to their specialties from the types of information and e-learning manuals and obtain information of interest to them, have developed the skills to store and transmit them.

#### CONCLUSIONS

In short, in a real learning environment, students are able to remember some of the learning information, to solve problems by themselves. in the course of laboratory, practical and other training sessions. Because involuntary memorization is the result of the student's active, specially organized conscious activity, it is necessary to create activating learning situations (conditions, situations) for the functioning of the thinking mechanism.

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