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Methodological Aspects of Forming Integrated Skills in Students During the Teaching of Special Subjects

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Abstract

This article discusses methodological approaches, practical methods and ways to increase their effectiveness in the process of teaching special subjects. Integrated skills are the combined acquisition of theoretical knowledge and practical skills, which are important in preparing competitive specialists in the labor market.

Keywords: Professional education, special subjects, didactic principles of teaching, subject - education, personnel training, youth, teaching methodology of special subjects, tasks of special subjects, transformation, e-learning methodological complex.

Introduction

One of the main goals of the modern education system is to train professionally oriented, practical knowledge and skills, independent thinkers, and initiative-oriented personnel. Special subjects taught in vocational schools and colleges play an especially important role in this regard. By using an integrated approach to teaching special subjects, students can be brought to a level where they can apply theoretical knowledge in practice. Improving the quality of education, linking it to the needs of the market economy, is possible only if the quality of education is improved, ensuring the training of high-quality and competitive personnel. One of the promising directions for the development of vocational education is the implementation of the goals of humanization, continuity, integration, intensification, standardization, and individualization of education.

In connection with the development of production, technology, the emergence of new technologies in science, technology, production and education, integration processes are developing and being implemented. Therefore, the views of scientists from various fields of knowledge (political scientists, sociologists, economists, teachers, psychologists) on the integration of the educational process, as well as the study of the mechanisms of its management and development, are being aimed at development **.**

"Integration is the restoration, completion, unification of any parts into a whole. In the encyclopedic dictionary, integration is understood as:

• the concept of the state of interconnectedness of the separately differentiated parts and functions of the system, in general, of the whole organism, as well as the process that led to this state;

• the process of rapprochement and communication of disciplines that occurs simultaneously with the process of differentiation"

Different disciplines With the development of branches, their differentiation occurred. Along with differentiation, its reverse process - integration - the formation of "combined" disciplines - took place. For example, at the intersection of two disciplines: drawing and geometry, drawing geometry was formed. In this case, objects in a mutual relationship enrich each other. In drawing, modern physics, mathematics, The achievements of electrical engineering, special technologies and other related disciplines are used

In the new conditions of the world economy, science and production are rapidly merging, and at the same time, technology is considered a unifying element in the process of introducing scientific achievements into production.

The processes of integration and differentiation correspond to two directions of human thinking: one on the one hand, to imagine the whole world as a single whole, on the other hand, to understand more clearly the laws and the qualitative characteristics of various structures and systems

These two trends come from each other and complement each other. The development trend of science, technology and production is considered the most important source in the content of vocational education

As for the content of vocational education, general education, vocational and technical The system of knowledge, skills, qualifications, norms and values is understood, their assimilation ensures the development of the mental and physical abilities of students, the preparation of a qualified specialist who is ready to work effectively at a particular professional and interprofessional level, who possesses cultural, humanistic democratic norms and values. The content of education is not only focused on the development of The laws, regulations, and integration processes that occur in editorial work also affect it. As in any other discipline, integration processes occur in editorial work, including professional editorial work, because editorial knowledge itself is integrated within disciplines aimed at approaching technical, economic, psychological, physiological, and social knowledge. will be: theories of education and upbringing, theories and methods of teaching theoretical and applied disciplines will converge. Integration will be implemented in individual blocks, parts of pedagogical knowledge, in systems of organizing education, in its content.

According to ARBELYAEV, "integration as an editorial law and didactic principle is a "systematic feature of general scientific, inter-scientific or intra-scientific relations, the corresponding mechanisms of interdependence, as well as a new form of integrity arising from changes in the elements and functions of the object of study, the interdependence of objects and properties of the newly formed system." "is a product of" [28]

It should be emphasized that the first integration processes were carried out at all levels of its organization - in the content of general and vocational education: selection, development of curricula and textbooks, systematization of the educational material of the lesson, as well as its mastery. In this regard, the trend of the emergence of new integrated academic disciplines is increasing. At the same time, the trends of disciplines and The fragmentation, the proliferation of

innovations, the creation of cycles and sub-cycles in the curriculum do not subside, which leads to an overload of the educational process and students. The only way out of this situation is to integrate scientific disciplines at the level of academic disciplines. Thus, the implementation of the differentiation of general and vocational education leads to the proliferation and development of the integration of its constituent elements. came

When creating the structure of vocational education, the idea of creating blocks of components that express the so-called "integrated" coherent structural structures is taken into account and implemented

Integration is implemented in the system of the most important component and result of vocational education - professional knowledge, skills and qualifications

Knowledge, skills and qualifications are considered the main results for vocational education Skills and The concepts of competence have been interpreted differently by different researchers, and in order to better understand the essence of these concepts, we will present some of their definitions of skills and competence. No matter how clearly these concepts are defined, these concepts require further in-depth study and comprehensive theoretical analysis. It is necessary to correctly understand the meaning of the terms “skill” and “competence” and to understand the sequence of their formation. Vaskakun gave a concise definition of skills and competences: “skill is a component of competence, which ultimately expresses the ability to independently perform the complex parts of movements quickly and purposefully and, in turn, allows students to perform exercises "comes to the surface as a result of repeated repetition; competence is the readiness (ability) of students to consciously and correctly perform a movement (or set of movements) in the labor process, using methods of movement that are appropriate to the goal in certain conditions, and thus achieving positive results in labor."

In the educational and methodological manual developed by O. Musurmanova, A. Abdullaev, M. Ahmedova, one can find the following definition: “skill is the ability to purposefully implement an activity formed by applying a person’s knowledge in practice; competence is the level of skillful performance of an activity, and its individual components are performed in an automated manner. The higher the level of automation, the higher the level of skill.”

The following two definitions are given in the textbook developed by A. Khodjabaev and I. Khusanov:

“Skill is a component of skill, which expresses the ability to independently perform the painful parts of the movement in a clear, fast and purposeful manner, and this is revealed in students as a result of repeated repetition - exercises.

Skill is the result of students' labor The ability (ability) to consciously and correctly perform a process (or set of processes) using methods of action appropriate to the goal in certain conditions and thus achieving positive results in labor.

Skill is the ability of a person (specialist) to perform work qualitatively, in the required volume and at the allocated - specified time in new conditions.

Qualification is "the ability of a student to perform a task in an automatic manner."

In the methodological manual prepared for vocational colleges by O. Khidirov, K. Mirsaidov, R. Choriev, the following definition is given: “skill is a component of work performed consciously, repeatedly repeated in various labor methods, which has become automatic (has become a habit);

qualification is a person's ability to perform certain tasks based on his own knowledge and in accordance with certain requirements. "...in this case, it is the fulfillment of labor obligations."

In her scientific research work, D.M. Fayzullaeva, based on the analysis of definitions given by several researchers, gave the following definitions: "skill is the ability to perform a task with the help of repeated exercises; if it is a qualification, then the ability to perform a task with the acquired experience and skills."

O.K. Tolirov, in his scientific research work, also gave his own summary definitions of skills and competences based on the analysis of the work of several researchers: "Skills are the ability to effectively perform actions; skills are actions performed with a certain level of thought; skills are a method of performing any action in new conditions; skills are complex, systematic mental and practical "is the mastery of actions"; "A skill is a set of actions with a high degree of mastery; skills are a method of action that has been strengthened as a result of training".

R. Ivanov gives a mixed definition of skill and skill: "A skill is a set of mental and physical actions, methods and guidelines that help to achieve a certain goal or to perform a certain activity. are implemented; skills are consolidated and automated ways and methods of some action, and these ways and methods are usually used in the implementation of complex conscious activity".

The textbook "General Psychology", edited by A.V. Retrovsky, provides a comprehensive definition of skills and competence: "skill - "expresses the mastery of a complex system of mental and practical actions necessary for the purposeful management of the subject of activity with the knowledge and skills available to him; Skill is a partial automation of a person's ability to perform and manage his efforts in a goal-oriented manner, and "no skill can be developed without repeated practical efforts."

Based on the above definitions, we have given our own working definition of skills and abilities, and we will adhere to these definitions in the course of our research:

Skill is a person's Competence is the ability to successfully perform labor processes based on one's own knowledge and skills, while meeting certain requirements. Competence is the ability of a person to perform labor processes with high productivity, based on one's own knowledge and skills, and in this case, actions are performed automatically. However, in the field of consciousness, the conditions under which actions take place and their results are determined The goals that are achieved remain and are put first. From this point of view, the execution of actions, in general, becomes more conscious.

Researchers also have different ideas about the types of skills and abilities. As K.K. Rlatonov emphasizes, "depending on the types of actions, there are the following types of skills: visual skills, movement skills, thinking skills, estimation skills, volitional-mental skills, and others. These later take shape and turn into complex skills of this type."

The famous psychologist V.V. Chebysheva divides professional skills into sensory, intellectual and motor skills.

N.I. Makienko distinguishes the following types of skills: mental skills; sensory skills; motor (motor) skills; sensorimotor skills; volitional skills

"Mental skills are the ability to immediately use existing knowledge and experience to perform tasks without thinking, to understand the situation

Sensory skills are the main role here. Sensory skills are formed through experience and practical exercises, through observation.

Movement skills are mainly hands Skills associated with movement, sometimes with hand, eye, and whole body movements. Movement skills are formed mainly as a result of practical exercises. Sensory-motor skills are skills that involve perception and movement. This category includes visual skills that are formed when learning to perform tasks that need to be performed by the car and hand. Sensory-motor The formation of skills is a very complex process, formed in the process of performing exercises with great sensitivity. Volitional - disciplinary skills It is necessary to use various methods of forming will and character in the educational process. These can be explanations and conversations conducted to influence the conscious, goal-oriented pursuit of students. The importance of setting a personal example is also important. "big".

N.D. Levitov divides skills into the following four groups:

1 Visual skills associated with a high level of perception and visual perception

2 Motor skills associated with the development of the body, hands and brain

3 Approximate skills associated with observing and understanding a person in new working conditions

4 Planning and control of work, organization of the workplace skills in manufacturing, machining and parts.

In our opinion, although it is not easy to clearly assign a skill to one of these categories, in each professional activity there are elements of either a sensory nature, or elements of mental activity, or elements of movement associated with muscle strength, i.e. motor movements, regardless of the fact that the blindness of professional skills is a mixed feature. The division of skills into sensory, motor and intellectual skills facilitates the organization of practical training, as it shows the importance of the functioning of the sensory organs, emphasizes the mental abilities that the young specialist implements, and his muscular-motor skills. There are also different opinions about the process of forming skills and abilities, according to N.D. Levitov, “development The formation of skills and competencies in the process does not occur all at once, but rather in interconnected stages, namely: the first stage is the acquisition of skills, that is, the formation of basic competencies; The second stage - the development of skills in performing systematic actions, following the explanation and demonstration of the teacher (master) of the production training, is implemented. At this stage, basic skills are also strengthened and improved; The third stage is when elementary skills and abilities are formed and transformed into complex ones” [65]

V. Ryzhov in his article shows various approaches to solving the blind spots of the problem under consideration. In his opinion, “qualifications are based on a system of acquired skills and have higher and more complex aspects than skills.”

According to A.M. Novikov, In the formation of skills, the accuracy of movement is achieved due to the following factors:

- formation and definition of the initial contour of the movement;
- increasing the accuracy of spatial and force differentiation;
- selection of coordination structures corresponding to the smallest error value

N.Sh.Almetov refers to the following didactic principles in the formation of professional skills and qualifications in students:

“1) the specific subject being studied Conducting training sessions focused on the skills and qualifications identified in the course of practical training;

2) forming students' ideas about the development of professional skills;

3) It is possible to achieve success if the didactic content of the training and the volume of training and development exercises are selected correctly.

A.A.Abdukudusov first of all should form professional skills and qualifications in students according to the basic general laws, principles, and structure, and then the principle of professional orientation, the connection of theory with practice, is implemented. Emphasizes

N.I. According to Makienko, skills include the following stages of formation:

1. The beginning of competent thinking. A clear understanding of the goal, but not a clear understanding of the ways to achieve it. Errors in performing the action.

2. Conscious, but unintelligible performance. A clear understanding of how to perform the action, but no matter how much one focuses one's attention, vague, empty performance, blindness of excess movements, this skill lack of positive application

3. Automation of the skill The ability to perform movements more qualitatively and distribute them during the free time of free attention, eliminating redundant movements, and facilitating the positive application of skills

4. Highly automated skill The ability to perform a movement that is a means of performing another more complex movement in a clear, economical and consistent manner to do.

Any qualification takes knowledge and skills, is formed on the basis of existing skills and knowledge, and reshapes them with elements that are not enough in new conditions. It is impossible to consider or prioritize qualifications as opposed to knowledge and skills, because qualifications are built on their basis.

Professional qualifications go through a number of stages in their formation:

first Stage 1 – initial skill Understanding the purpose of the action and the search for ways to achieve it, based on previously acquired knowledge and skills; the activity is carried out by trial and error;

Stage 2 – insufficiently skilled activity Using previously acquired skills that are not specific to a particular activity to perform the action;

the third stage - a specific general competence is a set of highly developed, but narrow, skills necessary for various forms of activity (the ability to plan one's own activities, organizational skills, etc.);

the fourth stage - highly developed competence is the creative use of knowledge and skills related to a specific activity; understanding not only the goal, but also the reason for choosing the ways to achieve it;

Stage Five – Proficiency Confidently using various skills in a creative manner.

In his scientific research, O.K. Tolirov summarizes the stages of the formation of skills: the first, initial stage of the formation of skills - in this case, the learner acquires the necessary explanations about the purpose of the actions, the object of activity, the task, the place of work, the location of management bodies and the means of conveying information, their influence and incentives. The second - analytical stage. Starting from this stage Students begin to perform the movements independently. For this reason, they master the content of the lesson. Therefore, it is recommended that the student pronounce and repeat the movements he performs. His perception will be correct, the student will not accept auxiliary signals, and due to the fact that all his attention is focused on one point, he will make unclear, blind and redundant movements, and his skills will be The formation and integration of these with their predecessors is not carried out. When the content of

the movement is mastered and sufficiently generalized, the child moves to the third stage. The third is the synthetic stage, the movements are performed independently, the separate organizers of the movement are integrated, and as a result of the generalization of attention, skills begin to be mastered, the movements become faster and more automatic. To improve skills It is necessary for the learner to receive feedback on each action performed and strive to improve it further in subsequent repetitions.

“Automation of all movements is achieved only at the fourth stage of automation, in which the learner’s attention is focused on the movement process, on the goal achieved as a result of it, movements are not understood and self-control is not exercised, redundant movements disappear. Movements acquire high accuracy, speed, economy and stability, are performed easily, their purpose is and the pace can be freely adjusted.

Thus, the professional skills and qualifications of students are formed in the process of teaching special disciplines. Therefore, summing up the above, it was noted that the following work should be carried out:

• Analysis of the educational and methodological support of teaching special disciplines in the process of training specialists in the direction of "Pharmacy";

• create a systematic methodological support for the process of teaching special subjects;

• select appropriate educational content that ensures the effective formation of professional skills and competencies in the process of teaching special subjects;

• development of technologies for the effective formation of students' professional skills and competencies in the process of teaching special disciplines

In professional educational institutions, especially in public health technical schools named after Abu Ali Ibn Sino, students acquire knowledge, skills and competencies in the special discipline "Organization and management of pharmaceutical work" in the direction of "Pharmacy" Required: The student should know the following:

- The structure of the Ministry of Health of the Republic of Uzbekistan;
- The structure of the State Joint-Stock Company “Dori-Darmon”;
- The duties of the pharmacology and pharmacopoeia committees:
- The management system of a private pharmacy;
- Documenting the “Movement of goods, material assets”;
- Drawing up and filling out documents for mutual settlements with customers, accounting persons;
- Formalization of documents related to the "movement of capital", calculation of property tax, land tax, transport tax;
- goals and tasks of marketing;
- means of communication and types of advertising

In order to accelerate the editorial process during the teaching of the subject, it is planned to widely use modern editorial technologies, information tools, computers, and the Internet. The educational process includes reading problem-based lectures, organizing exercises in an interesting question-and-answer format, using advanced editorial technologies, multimedia tools, and stimulating, thought-provoking The approach is based on presenting problems to them, being a student, working individually with students, engaging them in free communication, and engaging them in scientific research.

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