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FACTORS INFLUENCING THE EFFICIENCY TEACHING AT SCHOOL

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Rezumat: *În articol sunt evidențiate problemele care, potrivit autorului, afectează eficiența predării la școală. Autorul atrage atenția asupra faptului că școala îndeplinește întotdeauna ordinea societății. Astfel, se creează programe de învățământ, iar instituțiile de învățământ pedagogic formează profesori. Totodată, profesorul are dreptul de a alege mijloacele și metodele de predare, care au ca scop principiul optimizării procesului educațional. Aici autorul atrage atenția asupra faptului că profesorul este obligat nu numai să transfere școlarilor cantitatea adecvată de cunoștințe, ci și să dezvolte abilitățile moștenite de aceștia în abilitățile corespunzătoare. Cu toate acestea, el sugerează o abordare prudentă a utilizării diferitelor inovații, care trebuie adaptate la condițiile locale.*

Cuvinte-cheie: *școală, învățare, dezvoltare, metode, inovație.*

Abstract: *The article outlines the problems that, according to the author, affect the effectiveness of teaching at school. The author draws attention to the fact that the school always fulfills the order of society. Under this order, curricula are created, and pedagogical educational institutions train teachers.*
At the same time, the teacher has the right to choose the means and methods of teaching, which comes from the principle of optimizing the educational process. Here the author draws attention to the fact that the teacher is obliged not only to transfer to schoolchildren the appropriate amount of knowledge, but also to develop the inclinations inherited by them into the corresponding abilities. However, he suggests a cautious approach to the use of various innovations. They must be adapted to local conditions.

Keywords: *school, learning, development, methods, innovation, novation.*

"A school is an educational institution in which teachers try to give us answers to those questions that we did not ask them."

The response of a high school student to a journalist's request to answer the question: „What is a school?"

The content of a high school student's answer to a journalist's question can be perceived in different ways. You can, for example, admire the intelligence and courage of a girl. Indeed, in the classroom at school, we teachers do not always give answers to what interests a particular student on that particular day. One, for example, is interested in how a rainbow is formed, and the other is interested in the reason for the parents' refusal to purchase a RAM board for his computer. The third is worried about the cause of the disease of a person close to him etc. On the other hand, a girl can be caught in her lack of vision of the future, in distrust of teachers, curricula and plans. On all this, you can build many hours of discussion... which will not lead to a solution to the problem. Why? Yes, because the answer is different: the school fulfills the order of the society of the state in which we live. It is enough to refer to local conditions. For enterprises that already functioned in a certain administrative area, appropriate educational institutions were created: universities, technical schools, vocational schools. Their curricula and programs should provide the graduate with the knowledge and practical skills that would allow him to successfully cope with work in a particular enterprise. The school prepared future applicants for these institutions. What the school could not cope with was made up for by individual work (tutoring). Each serious institution of higher education had its own requirements, which created a certain field of activity for a person who gave individual lessons. Physics teacher Vasily Ivanovich - prepared students for admission to the KPI, Petr Kuzmich - gave mathematics lessons to students who were going to study at Kharkov Aviation University etc. However, the dominant role, nevertheless, belonged to schools, the educational process in each subject in which was carried out according to the same programs for all. In specialized schools, curricula can be complicated. Moreover, in recent years, some universities have created their own lyceums, which provide training for admission to their faculties.

It should be noted that this problem has not arisen in recent decades. There was an order for the content and expected learning outcomes before. Let us recall the contents of K. D. Ushinsky's „Project of the Teacher's Seminary" [3]. The article was written and published in 1861 under the impression of the peasant reform. We will not discuss the content of the training offered by the great educator for elementary school teachers. We only note that he made significant efforts to train teachers who could work in the educational institutions that were being opened for the children of emancipated peasants. At the same time, he paid attention not only to the ability to teach, but also to "morality and convictions, because in the classes of young children and in public schools, the personality of the teacher has more influence on the students than the science set forth here in the very elementary principles [3].

It would be logical to move on to teaching methods. So far in the text, we have not gone far from the thoughts of K. D. Ushinsky regarding teaching methods. The same great teacher K. D. Ushinsky in the article mentioned above writes

that “the method of teaching can be learned from a book or from the words of a teacher, but a skill in using this method can only be acquired through active and long-term practice” [3].

The figure (Fig. 1) shows the honeycombs that the bees built from the wax they produced. (For information: bees wax is made from honey! I enlarged the picture many times, because even small particles of wax are visible). So, the average life expectancy of a bee is 30 days. 12 of them she stays in the hive, where she does housework. Then she flies in the field for nectar and pollen. However, she acts instinctively. Humans also have innate instincts. But in order to carry out his life activity, he must learn.

Fig. 1. *Wax honeycomb built by bees*

The simplest way of learning is to transfer a certain amount of knowledge to the student. To some extent, this is similar to copying data from one drive to another. And it is also necessary to form elementary practical skills to use this knowledge. As in the rules of the road: you can move through the intersection of roads only when the green traffic light is on. The teaching method here is very simple. For more complex cases that the teacher encounters on a daily basis, other methods are needed. Each student is an individual. As is the teacher. We sometimes forget about it. And the teacher must find those methods that will be acceptable to both. This is the complexity of our teaching profession. And information technologies, as well as the general digitalization of the educational process, will not always help us. We work on a human-to-human level. All existing teaching aids can only help us.

However, human education does not end there. A graduate of a modern school should receive a system of knowledge that would allow him to perceive the world around him from a scientific point of view. And he must also master the methods of cognition of nature and society. At least by the method of observation, which made it possible to make many discoveries.

It is obvious that further should be said about the development of the child’s in-

clinations into the corresponding abilities. First of all, these are research abilities, which include the method of observation mentioned above, as well as the ability to be creative. Research allows humanity to make discoveries, and creativity creates everything new. It is thanks to it that we have means of communication, transport, energy sources and everything else. I would like our graduates to feel the joy of a discovery made (even the smallest and subjective one), as well as the joy of a perfect act of creativity already in their school years. Wouldn't the child be surprised when, in the course of observing flowers, he discovers that the goatbeard flower opens only in the morning and only for a certain time? (Fig. 2). But what about when he discovers that dew drops can destroy the biological tissue of a plant leaf? (Fig. 3)

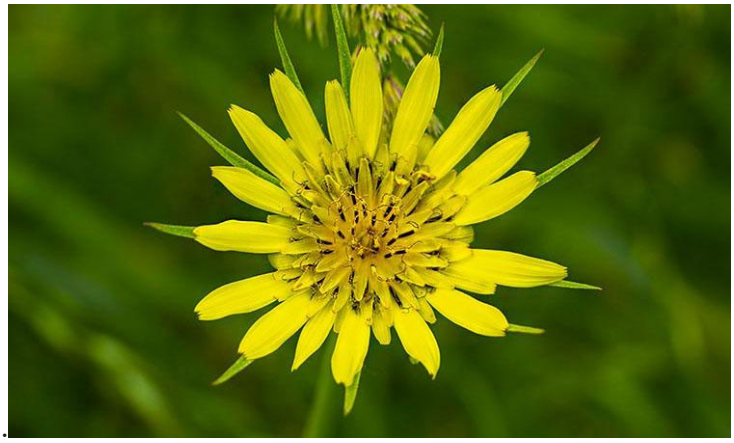

Fig. 2. *The opening petals of the goatbeard*

He will simply be surprised by his (subjective) discovery and will complete the educational project (STEM project) provided for by the program, for which he will receive a high mark from the teacher. And if he also suggests how to prevent a negative phenomenon (in the case of dew) or creates an energy device based on this, then this will already be a creative project!

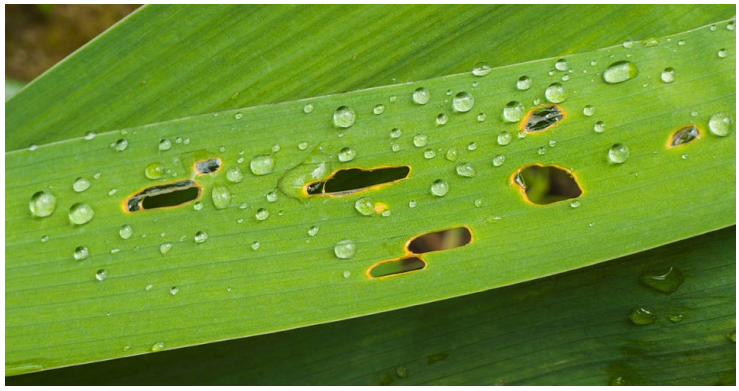

Fig. 3. *„Burned" plant leaves*

There are a lot of ideas in the world and they „lie under your feet." Please see the contents of the guide we wrote with Viorel Bocancea [4]. However, in order to implement all of the above, it is necessary to use appropriate methods of teaching and developing the child.

Of course, future teachers are introduced to the teaching methods during their student years. However, while working at school, he uses only those that, due to objective and subjective reasons, lead to a positive result. The theoretical substantiation of this is set out in the well-known manual by Yu. K. Babansky [1].

I often have questions. Here is one of them. Does pedagogical practice always take into account the results that psychologists receive in the course of their research? But psychology is a science that is similar to the „Strength of Materials" in technology! Let's look at just one example. We will talk about the principle of visibility. Following the principle: the more visibility, the better, we overdid it a bit. "It turned out," writes the well-known psychologist L. S. Vygotsky, "that such a system of education, which is based solely on visualization and excludes from teaching everything that is connected with abstract thinking, not only does not help the child overcome his natural disadvantage, but also reinforces this shortcoming, accustoming the child exclusively to visual thinking and drowning out in him those weak beginnings of abstract thinking... " [2]. And now we are surprised at the lack of logical thinking in some schoolchildren, their failure to understand the text of the textbook... Give them pictures... Suggest modern schoolchildren to solve an arithmetic problem from a textbook on arithmetic for grades 5-6 of the 50-60s of the twentieth century... How many can handle it?

Recently, more and more people began to talk about transdisciplinarity. Please do not think that I am against the new. Not at all. Development goes in a spiral and humanity can even return to the origins of philosophy, when it has not yet been divided into separate sciences.

In this case, this part of the spiral, for example, is outlined by Basarab Nicolescu. He argues that "transdisciplinarity concerns what is happening between disciplines, between different disciplines and outside all disciplines, that is, its goal is to understand the modern world, one of the imperatives of which is the unity of knowledge" [6,7].

J. Klein, President of the Association for Integrated Research, emphasizes that it is the transdisciplinary vision of scientific research that makes it possible to increase one's own intellectual potential, which has not been realized by a person. The author expresses his opinion on a number of issues: what kind of science do we need today and tomorrow; in a game that knows no boundaries, polluting science, democracy and the market economy, how can we distinguish true needs from mere fashions; how can we distinguish between necessity and fantasy, whims; how can one distinguish belief from thought; what does all this mean; where is the civilizational project; where is the universal worldview of minds, which could be able to counteract the global reach of the market; where

is the common thing that connects each of us with the other. Here he argues that what is needed is a science that can answer this need for universality, and a science that can answer these questions; what is needed is a new kind of knowledge, a new awareness, which can entail the creative destruction of certainty. The work says that old ideas, dogmas and obsolete paradigms must be destroyed in order to create new knowledge... [5].

The question arises: "Why does all this need to be introduced into the school so quickly?". After all, even a weak hypothesis put forward by the author of the dissertation requires confirmation or rejection only after a pedagogical experiment... All this would not lead to a decrease in the scientific level of curricula, to the creation of integrated natural science courses that combine such subjects as astronomy, physics, biology, chemistry, geography, which can be introduced into all schools.

It is hardly worth immediately throwing yourself at everything that is offered from the outside. There may be other goals of education, other children, other teachers, other requirements for learning outcomes... Everything must be approached with a certain measure of caution, because we work with such a fragile "material".

We underestimate our teachers. They are of a higher level than we think. How many physics teachers working in other countries can organize the research and creative activities of their students at such a level as Viktor Alekseevich Chuvaga from the Lyceum "K. Stere" City of Soroca (Republic of Moldova)?

As you can see, the school, like all other educational institutions, must fulfill the order of society. Each state has its own concepts of education development, in the context of which curricula and programs are developed.

Pedagogical educational institutions train teachers for this purpose. Particular attention is drawn to the mastery of future teachers teaching methods.

For the training and development of the child, the teacher can choose those means and methods of training and development that are most effective. Our teachers are capable not only of copying the experience of others, but also of innovation.

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