METHODIC OF THE DIFFERENTIATED TRAINING ORGANIZATION FOR THE DECISION OF MATHEMATICAL PROBLEMS WITH USING ICT

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The reform of school education nowadays is widely connected with wide introduction of the differentiated training. Studying and the analyzing psycho-pedagogical literature shows that the modern concept of secondary education resolutely refuses from traditional equivalents, recognizing variety of forms of training and reception of secondary education depending on propensities and interests of pupils.

And in training to the mathematician, considering specificity of a science, the differentiation plays a special role. As the sequence and doing step by step in promotion on levels here should be incorporated and provided. It is obvious, that different leveled tasks facilitate the organization of employment in a class – create conditions for promotion of schoolchildren in educatiion according to their opportunities.

Traditionally essence of differentiation consisted in searching the receptions and ways of training which by their individual ways would conduct all schoolchildren to identical mastering by the program. And this problem could not always be solved.

The problem of differentiation the training from a position of problems and methodic of training to the mathematician is presented in works of G.V. Dorofeyev, L.O. Krupicha, V.M. Monahova, V.A. Orlova, N.G. Ryzhenko, V.P. Strezikozina, V.V. Firsova's works, etc. In all these works as in an obvious so in implicit kind the essence of the leveled differentiation dictate three stages in the organization of the differentiated training:

- diagnostic-oriented
- executive
- control-correctional

Let's stop on each of them.

Diagnostic-oriented

The purpose of the given stage is in reception of the initial information about a level of knowledge, skills of the pupil. The information is necessary for preliminary distribution on groups in which pupils will work at an executive stage.

In a school practice, usually, pupils are distributed in groups or on results of progress for a quarter, or on results of independent work, or in subjective opinion of the teacher, or (that happens extremely seldom) at a will of the pupil.

Executive stage

Here – the realization of the planned influences according to the set task. The pupil receives the educational task which corresponds his level at which performance will be involved certain heuristics. Thus, the pupil seizes necessary skills of the certain level. And in process of mastering it is translated on a following level of training and receives educational tasks corresponding it.

Control-correctional

Here – the check of efficiency of educational activity of pupils is made. In practice of training the correction is carried out after checking the results of independent works or examinations through a lesson. In communication, with what there is a number of the problems considerably reducing efficiency of the differentiated approach to training, such as:

- Absence of an instant feedback with the teacher;
- absence at the pupil of an opportunity to see result of the activity;
- irrational use (expenditure) of school hours.

All these difficulties first of all connected with necessity of realization of the operative control and correction of activity of pupils at each lesson is direct during the decision of a problem, i.e. at an executive stage. If there was an opportunity of monitoring procedure

(tracking) a course of activity of each pupil, is continuous during the decision it of a problem, and also an opportunity of operative correction in the same process all set forth above difficulties could be avoided.

According to this one of the most effective divisions of the solving occurred problems could be ICT among organizations differentiated teaching of mathematic tasks.

The usage of the new informative systems in education of mathematics have a specific importance, i.e. it helps make the necessity of studying mathematics more important not only because of computer, which by itself helps to increase the interest to education, but the ability to differentiate the tasks thought their difficulty not coming to punishment and saying right words..

Accept all mentioned in teaching mathematics there should be the following ness and observed stages in coming thought levels, it's necessary to mind it hat salvation of any task usually done through some methods and includes activizations of different blocks of knowledge and searching of those knowledge which are necessary to decide the task. The knowledge of such kind form the system. And all the components are linked. So to for the system of knowledge the children should be taught to "see" the link between knowledge, the ways of forming them, the ability to make them, and also the ability to see the elementary knowledge tin the system, which would be used to decide the task.

I.e. the differentiated education of the children the decide geometrical tasks is due to of the necessary for each type of the task links between knowledge used during education. The work of this kind can be organized with special system of tasks, which makes education according to the ICT.

Also it's connected with working on computer the child has opportunity to get the decision of any task till the end, because he occurred to need help, and if use modern technologies, the salvation is explained to him, and he can discuss its ways and find optimal.

It's connected with that application of means of new information technologies in educational process allows individualizing and differentiating process of training, realizing interactive dialogue, giving an opportunity of an independent choice of a mode of educational activity and computer visualization of studied objects. Individual work of the pupil behind a computer creates conditions of comfort at performance of the tasks stipulated by the program: each child works with optimum loading for it as does not feel influence of classmates. Moreover, opportunities of the organization of effective and modern lessons with use the information technologies and computer telecommunications have sharply increased and have extended with the advent of computer networks in an education system. It is convenient that, the structure of a network of a school cabinet assumes presence of the several computers, the incorporated themes or a different way in the general network that is necessary for reception of the greatest feedback from teaching a subject as the teacher has an opportunity by means of modern information technologies to carry out check of works of pupils in an electronic kind. Owing to this opportunity the teacher can distribute most effectively time as all work of pupils is written down on a hard disk in area specially allocated for these purposes, i.e. results gather for one computer that excludes necessity to collect on diskettes the information from each computer.

Thus significant advantages of the ICT technologies usage have been revealed.

- Active communication between the pupil and the teacher;
- control and corrections of knowledge during the decision of a problem;
- economy of school hours;
- automatic creation of the report of work of the pupil;
- the opportunity to each pupil to work in an individual mode.

Use of means of new information technologies in training mathematics has special value since allows to strengthen motivation of the doctrine owing to not only novelty of work with a computer, which in itself quite often promotes increase of interest to study, but also an opportunity to adjust presentation of problems in difficulties, encouraging correct decisions, not resorting thus to morals and censures. Working on a computer, the pupil has an opportunity to

finish the decision of any educational problem as to it there is a necessary help and if the most effective training systems to it the decision speaks are used, it can discuss its optimality and reveal the most rational decisions. Carrying out the teacher's functions a computer can: to prompt, to ask questions, to answer them, to open this or that subject domain of knowledge, including - variants, to project activity trained. Applying ICT at lessons it is necessary, that the subject-oriented task-methodical complexes corresponding the maintenance and logic of studying of a subject were used. Owing to it the didactic role of a computer as tool of knowledge will be realized.

So, we consider that application of ICT technologies is one of effective directions of the organization of the differentiated training at the salvations of mathematical problems.

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