

The dialogue-based principles of a textbook projection in a higher school distance learning

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Abstract

Purpose: It is important to develop the principles of projection of the textbooks, which would help the student not only to obtain the necessary knowledge, but also simultaneously would develop experience of his creative activity as a component of the educational system.

Material and methods: The methodology of the research was based on the pedagogical works in the field of didactics of heuristic learning, psychology of the man speech-thought process, theory of the collective unconscious, philosophy of the dialogue between West and East. Used the method of generalizing analogies.

Results: We distinguish the following didactic components of a modern textbook: 1. dialogue in the contents of the educational material as a remedial unity of differentiation and integration of knowledge; 2. treasure-emotional component of the educational contents of the information; 3. component determining process of new knowledge creating by the students; 4. component ensuring reflexion of the students in their learning-cognitive activity.

Conclusions: We've made a conclusion, that heuristic dialogue, thinking of the man, and dialogue of two societies – eastern and western – are closely related. Thus development and introduction in higher school practice of such a form of a statement of the learning information which would comprise a combination of dialogue with the integrated form of a material are obviously important to us.

Key words: heuristic dialogue, question, image and logic, civilization.

Introduction

The problems of educational system at the present stage is the necessity to help the student get the knowledge by himself, be guided in packed information space, that is to learn him to work creatively. The expanse of the distance education requires to project general principles of such types of education. It is important to note that the worktext is the important part of the distance educational process. It is important to develop the principles of projection of the textbooks, which would help the student not only obtain the necessary knowledge, but also simultaneously would develop experience of his creative activity as a component of the educational system.

Traditional knowledge-oriented medium assumes one-way influence of multicultural knowledge on the integral whole world of the student [1]. The response of the inner world of a student as not whole knowledge, potentially kept in him, on polycultural external influence is insufficiently effective for modern distant educational medium.

The opposite process looks logically proved, when the response of the student becomes a reason for influence on a polycultural educational component. Here the inner dialogue of the student while he is putting a question is on the foreground, rather than the external dialogue. Such a priority indicates the importance of the heuristic dialogue. Generally, the distance learning dialogue between a tutor and a student in which the activity in interrogation belongs to a student we called as the heuristic dialogue. In such a case, a question asked by a student can be considered as his own product of heuristic training activities.

Materials and methods

The methodology of the research was based on the fundamental works in the field of pedagogics conformable to nature (Lock J [2], Komensky Y [3], etc.), psychological and pedagogical bases of the heuristic learning (Kapterev PF [4], Hutorsky AV[1]).

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The basic directions of analysis of the given problem were to determine a role and a place of dialogue in historic-cultural life aspect of the man and reflectance of characteristic features of the dialogue interaction on the process of learning. A method of generalizing analogies of the philosophical and psychological categorical concepts describing development of a human society, such as “civilization”, “culture”, “religion” etc., allows to make a conclusion that in philosophical-psychologic aspect these concepts are connected with various systems of question-answer activity of the man.

Results

Considering the variety and depth of dialogue in culture history one can emphasize the priority significance of a question in the dialogue interaction. We distinguish the following didactic components of a modern textbook: 1. dialogue in the contents of the educational material as a remedial unity of differentiation and integration of knowledge; 2. treasure-emotional component of the educational contents of the information; 3. component determining process of new knowledge creating by the students; 4. component ensuring reflexion of the students in their learning-cognitive activity.

Let us consider the principles of modern textbook projection in details. Practically in all structural components of traditional knowledge-guided educational system, there is no unity of integral and differential knowledge as an educational dynamic process directed on the development of creative experience of the student. The analysis of the researches of philosophical, scientific, psychological-pedagogical problems of a question has allowed us to distinguish the two most important functions of a question in dialogue process of learning: integrating and differentiating.

The integrating function of a question is connected with variety and integrity of objects of the surrounding world, on cognition of which the question is directed. Development of skills of the students to put a question correctly to gain the necessary information about cognitional objects inevitably results in the necessity to integrate the intersubject and intrasubject knowledge in educational process.

The differentiative function of a question is closely related to the concepts of inner and external speech. The correctly put question (series of questions) allows to differentiate the complex object into its constituents, that is in essence to differentiate knowledge from ignorance.

The two mentioned above functions of a question: the differentiative and integrating, correlate with two constituents of thinking of the man: the logic thinking (interrupted or discrete) and creative thinking (continuous).

We consider the dialogue of the student with the teacher, in which the student by means of the question gets new knowledge, reflects dialogue of the integral and differentiative as:

1) interaction of external and internal speech, 2) dialogue of an image and logic of the man, 3) interaction of consciousness and unconscious, dialogue between East and West.

On the basis of the stated above, we've made a conclusion, that heuristic dialogue, thinking of the man, and dialogue of two societies – eastern and western – are closely related.

Thus development and introduction in higher school practice of such a form of a statement of the learning information which would comprise a combination of dialogue with the integrated form of a material are obviously important to us.

Discussion

As an example of the distance worktext we are presenting the integrated dialogue-based textbook “Integrated dialogue-based course in Medical and Biological Physics” which includes the educational materials of some natural sciences (physics, mathematics) and the humanities (philosophy, science of culture, history, mythology and others).

Such synthesis of integrated and dialogue-based forms of the educational material presentation has a number of advantages.

First, the dialogues of this textbook teach to prove one's own opinion and disprove another point of view. The question of the student proves to be an “instrument” of cognition and the efficiency of self-instructive gaining new knowledge depends on his skill to employ this so-called instrument since there is interrelationship (correlation) between an ability to put questions closely connected with already obtained knowledge and skills.

Secondly, integration of some disciplines of natural sciences and the humanities promotes the formation of the whole integrated image of the universe in students. This textbook allows the students “to turn time back” – to create the whole integrated image of human knowledge from differentiated, isolated fields of it.

Third, the information presented in the form of dialogues provides a student with better cognition of every subject in its integration with other disciplines, and allows to consider some complex aspects of a subject using such methods as comparison, generalizing analogy, etc.

Each dialogue in continuity with the topic of the lecture proof and disproof of a statement are given through consecutive questions. Such form of material presentation makes it possible for a student to get acquainted with the existing types of questions and ask them in proper succession.

Then the students are offered practical tasks for self-instruction and self-control, which include proofs and disproofs of the author's statement. The multidirection of thought operations of the student (when proving and disproving) results in intensifying his thinking, which is accompanied by generation of emotions as a whole [5,6]. The emotion of the heuristic dialogue enhances both the intensity of cognition of the student, and his reflexion. Actually, the emotion gave a rise to the development of western culture as well as to the development of the human activity concerning transformation (differentiation) of the world surrounding him [7,8]. In a projection to an educational plane, it is possible to state that the positive emotions promote the effective cognitional activity of the student.

An integrated form of knowledge presentation concerning the man and societies created by him is the most efficient for understanding close relationship between natural sciences and the humanities.

Proceeding from the principle of microcosm and macrocosm likeness the dialogue between the East and the West is reflected in the dialogue of image and logic, which is referred to the features of the distance heuristic dialogue [6,9]. Besides, the tasks were selected in such a way so that not only to develop students' logic when proving or disproving teacher's statement but to develop their visual thinking as well. Such synthesis of two complementary parts of man's thinking is the condition for creation.

Acknowledgments

The part of this work was presented in the Euroregional Conference "Building Information Society in the Healthcare in Euroregion Niemen".

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