

What is “Outline Signal Teaching Method”?

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Abstract. “Outline signal teaching method” was put forward by a Russian scholar Viktor Shatalov Fedorovich (Шаталов Виктор Федорович). The “outline signal teaching method” is to grasp the essence of teaching from the aspect of symbol, information and cognition, and to pay more attention to the harmonious development of students’ cognition, emotion, and the will. It pays attention to the energy and efficiency of classroom teaching, to the teacher’s leading position, and to the “cooperation” among the teachers and students.

Keywords: Curriculum, Instruction, Outline signal teaching method

1 Introduction to Outline Signal Teaching Method

In V. F. Shatalov’s opinion [1], there are “outline signals” everywhere in the world, and every signal will cause “close association reaction” in the cerebral cortex. In order to effectively promote “close association reaction”, knowledge should be arranged into outlines during the teaching, and then will be presented to students in the form of appropriate symbols. These symbols are exactly “outline signals”, including letters, words, numbers, graphs and any other various symbols and marks, which can stimulate human senses and then be conveyed to the brain cortex. The “outline signals” embody ideas, namely, outlining, conciseness, information concentration and thinking equivalence. And “outline signal teaching method” is the teaching method where “outline knowledge” is shown and passed to students in the form of “signals”[1].

V. F. Shatalov also put forward several principles which must be followed in “outline signal teaching method”. Principles include integrity of acquisition of theoretical knowledge, repetitive training on knowledge learning, coordinative development of reproductive thinking and creative thinking, the combination of external control and self-control in learning activities, and so on.

“Outline signal method” is a complete teaching methodological system, which has clear ideas and thoughts as well as definite teaching goals, and both reasonable operating methods and steps and scientific principles to be followed. Especially, it is easy to be acquired by teachers, facilitates the teaching practice and greatly promotes teaching efficiency.

2 Values of Outline Signals

As quoted from V. F. Shatalov, the main task of school education is, in any case, to “impart knowledge”. To clarify, it’s imparting outline knowledge. In fact, “outline knowledge” is both abstract and concrete, since knowledge shall be outlined theoretically and materialized in reality. V. F. Shatalov believes that the significance of “outline signal teaching method” mainly lies in “outline signals”, which can be reflected in the whole process of teaching and learning. Firstly, “outline signals” are the “scaffold” for understanding and mastering knowledge. As indicated in Ausubel’s [2] “meaningful learning theory” and Vygotsky’s[3] “zone of proximal development”, the prerequisite of understanding new knowledge is to establish meaning connections between new knowledge and old knowledge that is firmly mastered, and between existing concept in students’ brain and specific realities, and to build logic and causal connections between each part of knowledge.

3 Reflection and Evaluation on Outline Signal Teaching Method

There is no doubt that “outline signal method” is related to the educational trend of structuralism in light of their times and natures. In the 1960s, structuralism had a wide impact on education field, while “outline signal teaching method” came into being in that era when structuralism was popular. It was in the 1950s that Gibson [1] focused on the relationship between structuralism and education in his structuralism and Education. Clearly, the achievements in the 1950s and 1960s, such as Tyler’s curriculum development principles, Schwab’s “Practice 4”[5], and Bloom’s[5] taxonomy of teaching objectives, were obtained under the influence of structuralism. Affected by Piaget[5], Bruner[6] began to specialize in the research of cognitive structure and discipline of curriculum structure, and launched a huge and far-reaching structuralism curriculum reform movement in the 1960s.

3.1. Understanding of Teaching Essential Issues

“Outline signal teaching method” clarifies the relationship between knowledge, information and knowledge representation, and reveals the deep essence of teaching activities.

“Outline signals” uncover the fact that generally recognized knowledge isn’t knowledge but information carrier and knowledge representation. For example, books aren’t knowledge, and maps aren’t knowledge either but marks and symbols of knowledge. When these representations, marks and symbols stimulate learners’ senses, they will become information, which will be changed into knowledge after the subject’s interpretation, understanding and recording. And thus knowledge isn’t objective existence but individual existence.

3.2. Practical Probe into Teaching

Here practical concepts are used to clarify and explain students' subjective participation in teaching activities. We have arrived at the consensus that activities and practice are ways and methods for humans to know the objective world, and source of knowing the outside world. Only through creativity and practice can humans grasp the essence of things and the inherent law of the things' development. It can be seen that practice is very important for cognitive activities.

On the premise of such understanding, "outline signal teaching method" emphasizes practical teachings and students' active participation and activities as well. Unlike our common understanding, "outline signal teaching method" stresses practice of thought and psychological activities rather than practice and operating activities in reality. It attaches importance to simulative similar operations, symbolic interest operations and languages' abstract operations. Humans have higher neutrality, signal operation ability, abstract reasoning ability, and the ability to obtain indirect experiences, and they don't have to participate in the real situation and practice of all things or learn everything by doing.

3.3. Understanding of Learner-centered Education

Learner-centered education has gradually become people's consensus. Teaching should be centered on students, and conducted for all students and for everything of students. Then, how should we understand and realize learner-centered education?

The practice of "outline signal teaching method" has proven that "learner-centered education" is the issue concerning idea and method. And teachers' authority and control, dignity and status are just issues of social rules and ethics, and share no direct relation to "learner-centered education". As "outline signal teaching method" sees teaching issues as conscious issues, learner-centered issues can be more regarded as issues concerning ideas. "Learner-centered education" is that teachers care about each phase of students' growth and development, and they responsibly cultivate student, and care for students. It's not equal status and rights between teachers and students, respects students' subjective position then amount to letting go.

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