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REASONING SKILLS AND THE GIFTED

Traditionally, the backbone of curricula innovation for the gifted has been the teaching of thinking skills and their application in the curriculum through creative problem-solving exercises. While the efforts of teachers and gifted specialists in this area have been extremely important, there is a serious concern that many teachers and curricula developers share, and that is the omission of any sense of coordination of skills toward a common objective.

The purpose of skill development is an important aspect of all teaching. Students, especially the gifted, need a sense of purpose in their schooling; thus, skill teaching should be effectively integrated into the content and subject matter of the ongoing classroom and carefully structured so that the relationship of skills which enhance thinking and reasoning to subject related skills and research is clearly apparent.

H. M. Hartoonian⁷ has produced a *Reasoning Skills Network* for the social studies curriculum which makes this application. This network of reasoning skill components has much promise as a model for other curricula areas as it directs sequential skills teaching and learning processes. Hartoonian's Network provides the process of reasoning a sense of direction and a sequential pattern which, when learned, gives to the student needed practice in the component skills leading to more mature and formal types of thinking. His analysis of the components of reasoning has greatly influenced our efforts in structuring a skills continuum involving the functions of thinking, research, creativity, and conceptual development.

An interesting report⁸ from the Educational Commission of the States (ECS)—a nonprofit, nationwide compact formed in 1966—concludes that the 'basics' of tomorrow are the skills considered to be of a high level today. The question before us now is what is being done in our schools to develop these higher level skills in our students? Although the report is lengthy, one interesting program has emerged: the College Board has targeted the development of reasoning skills as one of the six major areas to emphasize in keeping up with the accelerating change in the uses of high technology that are today affecting business and industry.

Considering this need, we too must give emphasis to the idea that as Silicon Valley continues to develop so-called 'intelligent' machines, we too must produce more than non-thinking students in our schools. Indeed, intelligent machines will require intelligent people to use them. It was V.A. Mitscherlich who pointed out more than fifteen years ago that our schools have, at least, three important tasks:

- (1) To teach students how to think, cognitive education;
- (2) To teach students how to feel, affective education; and
- (3) To teach students about life, social education.⁹

Of course, we have been reminded that one of the current problems in education is that many of our teachers have fallen into 'the memorization trap,' as if an over abundance of factual information, so digested, is what is needed to earn a living in today's world. Although vocational education is a necessary ingredient in our schools, in the larger scheme of human living, it is trivial. It is a sad fact that we tend to live and educate by transitory values and transmit these to our children. It is no wonder that their world view is often fragmented and lacks the perspective needed for living in a global universe. Herbert W. Schneider says that a well-educated person is never a finished product and that one continues throughout life to absorb the cultural resources, natural opportunities, and new experiences which

7 Hartoonian, H.M. "The First 'R' Reasoning." *Social Studies*. Vol. 71, No. 4, 1980.

8 ECS Report. *Thinking, The Journal of Philosophy For Children*. Vol. 4, No. 2, 1983.

9 Mitscherlich, V.A. *Society Without The Father*, 1969.

CHAPTER FOUR

TEACHING CONCEPTUALLY

Background:

The *Philosophy For Young Thinkers Program* focuses on both critical thinking and the analysis of selected moral concepts. Critical thinking itself will not equip the student with a single, coherent, method of thinking which can later be applied over a wide field of knowledge and information processing. But such a methodology exists. This is the method of "concept analysis." It is designed to clarify and facilitate understanding of concepts in a particular way. It provides a specialized and appropriate method which a student can be taught to utilize in answering many of the more important and interesting questions of life.

Despite the talk about concept learning, too many of our students remain concept deficient and factually oriented. Although we teach concepts and it appears that student learn them, students often fail to apply them to new situations or to similar situations. Most students in the public schools must understand concepts peculiar to their subject and it is a mistake to suppose that the understanding of these concepts seeps automatically into the student's mind in a universal way.

The use of conceptual analysis for teaching will improve communication, understanding, and student performance.

We must understand that (1) many educators are still unclear about what they think a 'concept' is. This state of affairs naturally leads to inconsistencies in understanding and communication. Facts, values, concepts, and skills are all different and must be distinguished from one another. When students are able to explain the relationship of these terms and processes, their understandings will be increased and, hence, their schooling improved. (2) Another reason for the inadequate teaching of concepts may be the assumption that concepts are learned in the same manner as facts, values, and skills are learned. There are many different methods of processing information and the processing of concepts has its own methodology. When we do not understand and use this method, we cannot be sure of student understanding and enculturation.

The method of conceptual analysis presented in this chapter provides a framework and purposiveness to thinking which might otherwise meander indefinitely, without direction, among the vast marshes of intellect and culture. Students need to spend less time in simply collecting facts and accepting teacher biases uncritically, and more time in learning how to analyze, synthesize, and evaluate.

Definitions:

Before we move to the actual technique of conceptual analysis, we must first be clear about the concepts related to this methodology. The following definitions will help us master this analytic technique:

Concept

A set of attributes common to any and all instances of a given class, type, kind, and category.

Examples

Any and all individual items that have the characteristics of a given concept.

Nonexample

Any and all individual items that may have some, but not all the characteristics of a given concept.