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A PHILOSOPHY FOR PRESENT-DAY EDUCATION

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Introduction

It seems that public education is being attacked more and more concerning the lack of quality education. In part, what is being challenged are the methods of teaching children, governed by an established and practiced philosophy.

Many school systems don't operate with a stated philosophy and therefore cannot implement such. Moreover, it would seem unlikely that one could find two teachers, in such a system, who would be teaching with the same philosophical objectives in mind. In short, there is no consistent "practice what you preach" format for teachers to follow in many school systems.

If such a philosophy is not available for teachers on a school-wide basis, there is a need for each department, then, to construct a working model, something the teachers within the department can all identify with and implement.

A few years ago, Malcolm Price Laboratory School underwent an NCA (North Central Association) evaluation. In the preparation year that precedes the visit of the evaluation team, the Science Department (as was the case with all departments) was faced with the responsibility for evaluating and putting the departmental philosophy in writing. It is toward this end that this paper is being submitted: to share a philosophy.

A Philosophy Statement

A philosophy statement sets the tone by which a department, or in some cases a teacher, is able to operate. A philosophy is a theory regarding a sphere of activity or thought; the beliefs and attitudes of an individual or group. In short, it is the underlying theme that allows a teacher a meaningful and successful venture with a class or program and it provides a governing set of ideals to enhance his or her teaching.

In the writing of our philosophy, we identified our belief to be that our students are the purpose for which we are formulating an educational program. Therefore, we needed to establish goals that would serve the students. The goals selected for the science program at Northern University High School (Malcolm Price Laboratory School) were in the following categories:

1. Personal sensitivity
2. Social sensitivity
3. Cultural sensitivity
4. Intellectual development

Though these areas are interrelated, this classification provided us with an organizational structure for our objectives. Let me expand on each of the categories listed above.

Personal sensitivity involves an awareness of self. It is our intent to provide learning situations that enable an individual to develop a realistic self-image in which emphasis is placed upon the positive attributes which should result in an adequate feeling of self-esteem. The individual, however, should accept personal responsibility for his or her own welfare and progress, and direct his or her efforts towards some acceptable long-range goals.

Social sensitivity enables an individual to relate favorably with others in the immediate group, the community and society in general. This requires a sensitivity to the feelings and welfare of others, coupled with tolerance for others and concern for their welfare. Each individual should recognize his or her role in the social group and accept the responsibility to make favorable contributions to group enterprises.

Science education is often considered as contributing only to the materialistic aspects of the world. We believe that science can also make a contribution to the *cultural aspects* as well. Much of the science taught at the secondary level has no immediate application for the individual. The knowledge, the form, and the thought process involved in learning, coupled with the aesthetic effects of the contacts with science, become the cultural aspects. It is these processes that will show the students the value of science for the betterment of life, for the technical advancement to bring about a better way of life for themselves and for all.

If the science experiences are to have cultural implications for the individual, it is necessary that these experiences result in the kind of feelings that cause the individual to respond in an aesthetic manner.

Each student should be able to take a pro/con position on the value of technical advancements that are meant to be for him/her and for all. We feel that teaching science concepts must carry some importance beyond the concept itself. This, we want our students to know how such concepts are applicable to themselves and we want each student to take a stand on the issue. This isn't always easy to do since some students tend to be all-accepting and, therefore, quite passive.

Intellectual development in the area of science requires a program that contributes to the development of knowledgeable individuals who can function intelligently in the realm of diverse science experiences during an era of expanding knowledge. Two compatible approaches to intellectual development in the area of science seem to be most promising when they are combined in a meaningful pattern. One of these is referred to as the process approach. This approach actively involves

each individual in real experiences with the processes of science. The other approach, referred to as the structural approach, proposes to achieve knowledgeability in the vast domain of science by developing a structured framework of scientific principles that are learned in a sequential pattern within the confines of the discipline of science. This conceptual frame of reference is structured and presented so that each individual should be able to fit new experiences into the emerging conceptual schemes and thus perpetuate his or her learning.

The skill required to effectively fit knowledge into the structure of science and to give perspective to the understandings of science is developed through actual experiences with the processes of inference, prediction, measurement, classification formulating hypotheses, interpreting data, communication, model building, mathematical operation, etc. These skills are combined with experiences in the model of reasoning, *i.e.*, inductive and deductive reasoning, reasoning by analogy, and the use of intuitive reasoning.

Summary

The secondary science program at Malcolm Price Laboratory School has been designed to be responsive to the personal, social, cultural and intellectual growth of the student. It is with this working model that instructional goals are formulated.

Hayburgers

Imagine driving into a parking lot of your favorite drive-in and ordering a hayburger.

No? Well, then, how about an alfalfa shake, a nice dinner of meatloaf or bread made of alfalfa flour?

A nightmare? Not really! But not yet reality either, though each of the above foods has been made and tried at Michigan State University.

Some scientists think leaf protein is a food of the future. Some advantages of using alfalfa leaf protein in food are as follows:

1. Alfalfa is a nitrogen-fixing crop, improving the fertility of the soil;
2. Alfalfa is a low energy crop, using less energy to produce the same amount of protein found in seed crops;
3. Alfalfa leaf protein is better than soybean protein since it has a better balance of those amino acids required by humans;
4. Alfalfa can be grown almost anywhere, and provides soil with year around cover that reduces erosion.