

Curriculum Research

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What Knowledge Is of Most Worth?

WHAT KNOWLEDGE is of most worth?

This once was the most exciting question in educational circles. It has been lost sight of in the past two decades. If we ever needed documentation that "knowledge is power," we have it every day in our current struggle for survival.

Group dynamics, child development, methodology, mental hygiene, guidance are essential, but subsidiary, to teaching and learning. Without "knowledge" (sometimes thought of as content), the very cornerstone of education is missing. It is missing, or sadly dwarfed, or distorted, or misdirected in many curriculum programs.

American education is under fire. Where there is smoke there usually will be found some fire. It would help if some of the effort being put forth in creating tomes to prove that education has lost its direction and substance, were used to come to grips with problems in theory and practice, rather than to drum up a case on warped perceptions and shaky premises. Even better would be some research in this field. It is very hard to follow the rationale of the recent literature of criticism on education.

What is proposed? That curriculum research and development take as one of its commitments that of finding better answers to the question, "What knowledge is of most worth?" Warmed-over content will not do. Nor will railing at shortages and inadequacies, such as they are, do much good either. *Scholarship,*

research, experimentation, evaluation—hard and persistent work—by teams of teachers, specialists, researchers, psychologists—this is necessary to give a basis for a sound curriculum.

The "anti-curriculum change" crowd, the "once in the curriculum, always in the curriculum-ers," the "I dare you to teach anything that was not in the curriculum when I went to school"—these forces, sometime allied with anti-intellectualism, have ganged up on the schools—while sputniks, and explorers, air age, and international pacts, move with increasing tempo across the horizon, the television screen, the press, and the minds of men.

Fortunately we are not as "short" in knowledge, as some would have us believe. The call, however, is for vigorous study and research. The call is to modernize the curriculum to meet the needs of our times.

Why is this discussed in a column devoted to curriculum research? The lack of attention to "knowledge" has brought about imbalance in the curriculum. "We don't teach subjects, we teach children," is nonsensical. Children are children, and must be so treated. But knowledge is knowledge, and deserves respect and appropriate handling. Not having recognized this is in part responsible for the plight we are in with respect to science and mathematics, as well as the many irrational proposals for getting out of our dilemma.

Theories of knowledge, concerning

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which neither curriculum research nor curriculum development has given much attention, are of primary concern. How we view knowledge is basic to our perception of the curriculum, our goals, how we teach and how we learn.

"I am convinced," said Einstein, "that the concepts which arise in our thought and in our linguistic expressions are all—when viewed logically—the free creations of thought which cannot inductively be gained from sense experiences . . . thought (however) acquires material content . . . through its relationship with sensory material. It is, however, only necessary that enough propositions of the conceptual system be firmly enough connected with sensory experiences and that the conceptual system, in view of its task of ordering and surveying sense experience, should show as much unity and parsimony as possible."

The best current summary of the place of *knowledge* in the curriculum is a report of a discussion by the trustees of the Carnegie Foundation on Liberal Education. A liberal education, the report says, seeks to provide the student with certain kinds of *knowledge* which every man is the better for possessing:

Self-knowledge—knowledge of his own biological and psychological nature, of his gifts and limitations, of his values and aspirations

Knowledge of others—a comprehension of the roots of human behavior as revealed both in modern scientific studies and in historical and literary sources

Knowledge of the physical and biological world

Knowledge of his own and other cultures—the nature of his own society and the place of that society in the larger world

A historical view of man's achievements, social, intellectual and artistic

Knowledge of his religious and philosophical heritage.

This discussion recognizes that there are, in addition, skills, competencies, attitudes, habits and values.

The *knowledge* (content) we seek to transmit (teach) and the learner seeks to learn (assimilate) must have *continuity, sequence, and integration*. Continuity is best insured by the presence of the stimulus to elicit the desired behavior in as many situations and ramifications as necessary to make learning sure. Sequence is the movement of learning to higher levels of skills, broader and deeper insight and understanding. Integration is the process by which the many interrelationships of learning are tied together and meaning and significance derived from the experience.

Broader and deeper understanding is brought about by comprehending the relationships among concepts, facts and principles.

The command of skills is achieved as behavior responses are tied to situations, and as the cumulative effect of the higher order of performance becomes fixed.

Both research and speculation are needed in a consideration of the place of "knowledge" in the curriculum. Many questions about knowledge are related to the value system and therefore require a philosophic approach. Some questions will yield to research, others to philosophy, others to both.

Some of the questions which require attention are listed below.

1. What *theory of knowledge* underlies (should underlie) a program of curriculum development? Is it the same for all fields, or does each field require a particular approach? What is the relation of the "theory of knowledge" at work and the "theory of learning" on which a program is based? What is the relation of theories of knowledge to per-

ception? to attitude formation? to skill formation?

2. Is knowledge real? or does it stand for something else? Is it personal or generalized? What part does perception play?

3. What priorities should be established for fields of knowledge and specific knowledges to be emphasized in the curriculum? At various levels? How is this related to common learnings? Are there minimum essentials? or expectations? Is some "knowledge" more appropriate and effective as a vehicle in developing behavior? For whom?

4. What design of the curriculum will give proper balance and attention to the principles of continuity, sequence and integration of *knowledge*? What gaps and shortages now exist?

5. What is the relationship of "knowledge" to "skills," "attitudes" and "appreciations"? What are sound operational definitions? What is the relation of "knowledge" to content?

6. What is the relation of knowledge (content) to methodology? To what extent does the "content" control methodology and vice versa?

7. What procedures are most appropriate in evaluating the students' mastery of knowledge? What is the difference between "knowledge about" and "knowledge of" a field? How to move from "facts" to "understanding" to "behavior"?

8. What is needed to keep a curriculum program up to date with new "knowledge"? What steps should be taken to "clear out" outmoded content, and to "upgrade" and "update" the curriculum?

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