

Learning—

Now and in the Future

Research has established several important principles in education. What are the implications of these principles for learning?

WE ARE sometimes prone to reflect on "the good old days" when determining the future mode and direction of education. This is akin to driving an automobile by looking in the rear view mirror. Perhaps we can avoid this pitfall by sifting through the significant research of recent years to see what implications there may be for future educational practice.

Principles and Implications

Describing details of each research would be a monumental task; therefore, the points to be discussed are those found in many researches or are those well known in psychology.

All People Desire To Learn

Some people dispute the fact that all human beings desire to learn. They are quick to point out that an individual known to them has *no* desire to learn despite all teaching efforts. So the statement must be modified to read that all individuals not only have the capacity but the desire to learn *that which is significant to them*.

Evidence from the biological sciences and psychological findings indicates that people have a tendency to elaborate themselves, to become more complex in

organization. With greater complexity of organization there is increased efficiency in behavior. Thought of in learning terms, this suggests that a person who has learned things significant to him has evolved a more complex psychological structure and is therefore capable of more efficiency in future learning behavior.

A fifth grade girl spends endless hours collecting rock samples, identifying them in the library and discovering how there came to be different kinds of rocks. These pursuits are significant to her, she works diligently on them and becomes more efficient in learning where to get information as well as what her physical world is like. However, her teacher reports that the girl is indifferent to the class unit on early settlers. Like most people, the fifth grader is eager to learn those things which she perceives to be important.

Things which have significant meaning to people motivate them to learn and have the greatest impact on behavior. In self-directed situations people are free to learn and grow, and rarely if ever do they need to be threatened or promised rewards. Learning that is significant to people is reward in itself, serving as a tonic to the individual and encouraging him to learn more.

As to the Future: When educators fully realize that people want to learn those things significant to them, we will witness great change in education. Education will have as its beginning point the identifying, planning and organizing of problems by the learners. Of course, this cannot happen unless teachers first accept and encourage the uniqueness of each individual, recognizing that every person has worth and dignity. Our teachers will do this not only because they are dedicated people but because it will make their jobs infinitely more interesting and rewarding.

Since education will begin with the problems of learners, we will no longer have need for materials and procedures that stereotype or "pattern" classroom activities. The logic in this is simple. The pace and direction for education will stem from learners and so the sequence of classroom activities will emerge from them. Teachers will not force learning by using specialized directions and cues; instead the cues and directions will be taken from the learners.

People Cannot Be Taught Directly

Each of us has probably tried to teach with a one-to-one relationship in mind—specific teaching with the same specific learning intended. The more diligently we taught, the less definitive and even more diverse was the learning. Whether trying to teach division of fractions to an elementary school child or balancing of chemical equations to a college sophomore, results were the same. We cannot teach another person directly, we can only facilitate his learning.

But we must not delude ourselves into believing that people learn nothing from a teacher who tries to teach them directly. They learn even though there is impermanence of learning, poor recall and in-

adequate application to problems the individual faces in daily living. Such learning as does occur tends to obscure the relationships on which people base good thinking and wholesome adjustments to all aspects of their lives.

As to the Future: As we learn that people cannot be taught directly we will lose interest in being teachers and will come to see ourselves as learners. True, we will be concerned with learnings of a different nature than those of the people who enter our institutions; nevertheless, we will want to be learners. For example, the fifth grade teacher will become less interested in learning how to teach division of fractions and more interested in discovering how children learn this skill. With emphasis on learning instead of teaching, people will *seek* learning situations. It is delightful to speculate on the effect this would have on home-school relations, secondary school drop-outs and discipline.

"Teaching units" will become known as "learning experiences" with appropriate change in organization and content. The content will focus on ways in which educators can facilitate richness, variety and continuity of those perceptions which will bring about positive self development of people. Accompanying these changes will be a changing perception of the educator by laymen. Educators will be perceived less in terms of a technician with a multitude of tricks for purveying knowledge and more in terms of a professional person who understands the learning process.

Complexity Limits Learning

Complexity is a relative term when used to describe learning. What is complex for one individual is less intricate for another. However, there is a limit to the complexity of that to be learned by

any particular individual at any particular time.

The factors which limit the complexity of that to be learned are many. The degree of physical maturity attained by the individual is one important factor, for two people of the same chronological age may have bodies differentiated to an entirely different extent. One of these persons is potentially capable of more complex learnings since the degree of differentiation of the organism and the behavior of which it is capable are closely related.

It is a platitude to say that health factors determine, in part, that which is to be learned but it is nonetheless true. People who are poorly nourished, plagued with infections or fatigue are not in a state of readiness for new perceptions. Their perceptions are inclined to be limited and even distorted.

Another factor limiting the complexity of that which is to be learned is the experience brought to the learning situation. What the learner already knows will determine, in part, what he shall learn. Some children lack favorable circumstances and have a meager experiential background whereas some children have a rich and varied background. Viewed in the light of research findings which indicate that early or primitive learnings are most difficult to come by, and yet have more stability and influence on behavior than later learnings, we can see that complexity of learnings is involved.

As to the Future: Recognizing that complexity of the material to be learned always influences how much is learned, we will find that learning will begin with vivid, rich and varied sense experience. Thus people will have opportunity to organize, abstract and generalize on the basis of experience. Contrarily, learning

WALTER B. WAETJEN is associate professor of education, Institute for Child Study, University of Maryland, College Park.

situations that originate with generalizations or knowledge organized by anyone other than the learners will no longer be found unless initiated by the learners. Because of these trends we will have less tendency to use mass produced instructional materials and more tendency to develop our materials. The development of outdoor education programs in which children spend time in a camp situation and have rich sense experience in the natural sciences is but a harbinger of the future.

Since we learn about ourselves and the world through interplay with people, the future mode of education will place strong emphasis on interpersonal relationships. A primary learning method will be working and discussing in groups where the emotional climate is one of warmth and acceptance. Situations of this type permit people to perceive things which they might have resisted previously and, consequently, they will permit learning of more complex things.

Why Won't They Learn What Is Good for Them?

Jerry, an eighth grader, is a poor reader and has difficulty with many of his school subjects. He really *should* learn to read in order that his learning of material from the printed page proceeds harmoniously with his learning of game skills and social skills. However, he wants to learn about Elvis Presley, building model racing cars, the split-T formation and cartooning.

Jerry's case is not exceptional. Many children and adults do not wish to learn some of those things which would be

good for them to learn. Research has made it clear that people seek to learn those things compatible with their perceptions of themselves, their world and their aspirations. These people are not rebellious; they recognize that they should learn certain things to help them function adequately in their society and sincerely try to learn these things.

Every teacher knows that some people are like Jerry, they don't even attempt to learn that which we think is good for them. In either case, the content of the learning has little or no relation to "me" and to "my" growth.

As to the Future: The implication this has for future educational procedures can best be stated by following up on Jerry. Being sensitive to the fact that Jerry was kinaesthetically inclined, his teacher scheduled some of Jerry's time in the industrial arts laboratory because of the availability of graphic arts experiences. Jerry cut linoleum blocks and silk-screen stencils using cartoon figures as subjects and progressed well. Then came hand-composition which requires putting type upside down into a composing "stick." To test the accuracy of his work it was not only necessary for Jerry to be able to read, but to read type in an upside down position! This manipulative experience was so consistent with Jerry's way of seeing himself that he began to ask for help in reading. The industrial arts teacher carried on the reading "instruction" and Jerry did well in learning what he "should" have learned. At this time it was a significant learning as Jerry saw it.

So it will be in the future. Teachers will become expert "bridge builders." They will help to bridge the gap between what a person should learn and what he wants to learn. Significantly, they will do this in ways respecting the tendency of

people to behave consistently with themselves and their experience.

There Are Times When Learning Cannot Occur

Numerous experiments indicate that people who have been progressing well in their learning suddenly may be unable to learn. These people have become preoccupied with disturbances or emotional upsets.

Receiving information which is contradictory to one's conception of himself or his world may cause emotional upset. Inconsistent information tends to "upset" a person's private world which is built on consistency of perception. Being alert to defend himself against this threat the person is unable to allow *any kind* of new information to become known to him even if it is compatible with himself and his experience. In short, he cannot learn. Furthermore, when a person is defending himself against threat he is prey for more threat. This is like the fighter who has been stunned by a blow and drops his guard, whereupon he is apt to be stunned again. The more preoccupied one is in defending himself the less favorably inclined he is toward learning.

As to the Future: "Acceptance" will be the watchword of the learning situation. Children will learn to be acceptant of each other not through dictum, but through teachers' warm acceptance of each individual. Teachers will not necessarily approve of the behavior of their charges, but they will accept the fact that each person must behave as he does. This in itself will considerably reduce threat and better learning will ensue.

Greatest change will occur in our expectations. We will expect that our primary role is to free learners of their psychological fears and not to purvey knowledge. To do this we will need much information about people in order to

know the conditions that facilitate or hinder their learning. We will expect the function of education to be the achievement of individual freedom (freedom from threat) and not the cultivation of intellectual cleverness. We will expect people to learn their own value judg-

ments and to think independently *because* they have achieved individual freedom. People in the educative process will experience broadly and richly, learning to have faith in their own experience and that of their fellow man.

Education will focus on *people*.

JOHN R. GINTHER

Putting Scholarship To Work Today and in the Future

Two major routes are discernible on the frontiers of advanced study related to education.

FOR THE purposes of this essay, scholarship means advanced study. Thus we are talking about putting advanced study to work, and five areas of problems from the field of education are presented for consideration. The particular subject matter which should be involved is dictated by the various problems, but the characteristics of scholarship remain fairly constant throughout. Advanced study of most of these problems requires that, in various areas of subject matter, we begin to sort hypotheses from tentatively-warranted conclusions and test the former. At the same time, we must continue our exploration of the latter so that we may develop a fuller understanding of the presently warranted generalizations so that they may be made useful in teaching.

Scholarship Related to How We Learn

To what extent do we busy ourselves providing unnecessary kinds of learning

experiences in classes? Is it not possible that students bring to the classroom a rich background of experiences which can be used in teaching and learning? Abramson strongly suggests that we have been overlooking this possibility.¹ His study involved an experimental group which did very little more than discuss pictures projected upon a screen in their darkened classroom. The discussions included personal experiences which were suggested by a given picture. The instructor guided the discussion to insure that the principle of mechanics, embodied in the picture, was related to the discussion. The control group used the facilities of a well-equipped laboratory, which is ordinarily conceived as a place where we provide experiences for children. The experimental group was superior to the control group not only in what they

¹ Bernard Abramson. "A Comparison of Two Methods of Teaching Elementary Mechanics in High School." Unpublished Ph.D. dissertation, New York University, 1950.

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