



# *Technology: New Goals for Individualization*

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INTERPRETATIONS of individualization range widely. Such interpretations vary from absolute freedom of the learner to choose what he will do, when, and under what circumstances, to individualization within the constraints of a prescribed curriculum. An adherent of the liberal meaning of individualization would most likely select the first interpretation. Those who believe that the school's primary function is to transmit knowledge and beliefs and to prepare learners in tool subjects would subscribe to the latter meaning.

Students, particularly at the high school and college levels, are disenchanted with traditional programs. Disenchantment is even being voiced by elementary school students. Criticisms are leveled at irrelevance and dehumanization: "Why should I learn those things which I don't see as applying to my life?" "How can you help me to decide for myself which changes in social behavior are beneficial to me and my peer group?" "How can I cope with world problems?" "Why don't you pay more attention to my personal needs?"

These are difficult questions to handle. Yet there is a legitimacy in their being raised. Schools must meet the challenges of new generations and new ideas; but over many years schools have served also as perpetuators of social institutions and beliefs which are

the very roots of their existence. How to provide opportunities for vibrant, relevant experiences for learners and still not bury lessons of the past in the passion for immediacy becomes a difficult juggling act and a test of basic values.

A partial reaction to this ferment is to move toward more individualization of instruction and to apply the "new technology" to these patterns. Individualized instruction should not be confused with the more traditional independent study. Independent study describes a learner engaging in his own pursuits, sometimes under the guidance of a teacher, sometimes on his own with no guidance. Independent study, a popular form of individualization in higher education, less frequently used in lower schools, occurs either under careful tutelage or under no more direction than suggesting that the student read from a bibliography. Few materials are prepared which fit his peculiarities alone.

Individualization of instruction refines independent study as it involves school personnel, sometimes parents, and the student in planning his course of study and sequence of activities. Many goals are specified more carefully in terms of behaviors expected than

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in independent study. In many cases the learner may choose among a number of options as pathways to his goals. Activities usually involve a mix of independent reading, group instruction, and private tutoring, and other forms of learning. The ultimate in individualization of instruction is the option for adjustment of goals and directions as a result of inputs from the learner. Ideally, data on the progress of the learner and the effectiveness of his educational experiences are utilized for improvements.

### **Whose Purposes?**

Involving the student in deciding goals and directions raises conflicts about purposes of the school. A liberal position allows the student the complete right to choose his own curriculum, minimizing any imposition of the will of school authorities regarding what is to be learned and under what circumstances. Thus the student may propose to do nothing as one of his alternatives, the assumption being that the student should be given the opportunity to learn the consequences of his own choices. Perhaps a logical opposite would be that school officials have the equal option to say that since the school has nothing to offer, the student must look elsewhere for his education. So-called "free" schools are an attempt to provide unrestricted options.

A more moderate approach is one more widely used. Here the student selects optional paths and time units for accomplishing certain goals, even some he may suggest as radical departures from accepted school routine. Instead of an arbitrary division of the day into traditional units, the learner proceeds toward his goals at his own pace and with a distribution of time more suited to his needs. In high school, for example, a learner may decide to spend a week or two working solely on a science project. The fundamental understanding in this arrangement is that the learner will demonstrate competency in all the subjects demanded by the legal educational agency, although in some places even the arbitrariness of legal agencies is being questioned. The student's

job is to plan his own activities to meet requirements.

The most conservative level of individualization provides optional ways for individuals to learn a prescribed curriculum. Flexibility may be provided in the time a learner spends on a given task, but the nature of the content and the deadlines to be met are fairly circumscribed. Individualization may mean simply preparing materials for independent study, with goals and activities prescribed, with standard materials used by each student.

In this setting where fundamental functions of schools are being questioned and where new patterns of instruction are emerging, what are contributions of the new technology?

### **The New Technology**

The first point to be made is that expecting the "new technology" to be a panacea for solving educational problems is apt to be misleading. Most educators would associate such things as television, video tape recorders, computer assisted instruction, remote access information retrieval, 8mm film loops, cassette tapes, and information miniaturization as typical of the "new technology." While these materials and devices are part of the new technology, focusing upon them outside the perspective of teaching-learning processes may lead to unwarranted expectations about their capabilities.

One of the problems that has arisen in individualized instruction has been the expectation that almost any of the new devices are applicable. Closed circuit television, for example, has had its greatest use in reaching a large, dispersed audience simultaneously and in demonstration magnification. Less attention has been paid to making the "distributed" television a way for individualizing instruction.

Closed circuit television is primarily a group instruction system which, in a sense, averages the individual's capabilities according to some assumed group norms. This in no way can be true individualization of instruction. One needs only to record the variance

in abilities and motivations among members of a group organized on some "homogeneous" criterion to determine this fact. Realistically, closed circuit television must be recognized as instruction of groups, and individualization of instruction in only the grossest sense. On the other hand, where stored television images are made available to individuals via some retrieval system, we may begin to approach the application of television to the needs of individuals, assuming that the retrieval of the visual image is subject to each learner's personal request for visualization.

The potentials of the new technology for the individualization of instruction are realizable only out of an adequate perception of what is really meant by the new technology and upon a system of instruction which consciously organizes to determine the uniqueness of all means or *media* of instruction for different kinds of learners and for different kinds of instructional purposes. All forms of media are capable of helping learners to comprehend concepts, to acquire skills, and to shape feelings.

Much research regarding the contributions of media to learning has tended to be non-additive in the sense that discrete research under isolated circumstances is not usually based on some broad theoretical conception of learning. This lack of clear evidence about media and the "new technology"

is due also in part to the lack of precision in analyzing their place in the educational setting.

### Potentials of Technology

A case in point is the glib use of the term "instructional technology," popular jargon, but oftentimes not completely understood. To some, this term refers to the uses of equipment for teaching, as though technology refers to the mechanization of instruction. In actuality, technology is derived from the Greek word "technologia," which means "systematic treatment," or the process of analyzing a problem and then deriving a system of logistics and support, both material and personnel, to solve that problem. Given this context, *media* as traditionally known are only part of the total array of resources available for solving instructional problems. Also, *media* as a term is not confined to the new machines and the "software" they require.

It is more precise to say that *media* refers to mediators between the learner and his environment, interpreting "environment" in the broadest sense. One of a teacher's primary responsibilities is to select and prepare *media* or *surrogates* to represent the "reality" of the world. Most of what is provided in schools is a substitute for reality, most often of a symbolic and abstract nature.



## Racism and Education

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When the teacher uses words and gestures to give "reality" to some concept, the teacher is acting as a medium, one of an array of media available for representing reality. Thus, the teacher's biases, perceptions of reality, knowledge level, and skill in communication color the message to which the learner must react. The teacher, therefore, must be regarded as a message system and scrutinized as carefully as a motion picture, a filmstrip, or a graphic device for the *uniqueness* each has to offer. Understanding this concept of *media* and *mediation processes* allows the teacher to analyze more objectively which *medium* or combination of *mediums* will provide the best learning situation for each learner.

The potentials for individualizing instruction for masses of students are greater today because of some of the newer instructional devices that can tirelessly present instruction on demand, can maintain records of student performance, and can print-out each learner's progress. Where information, concepts, and skills to be learned are amenable to the expository process and can be organized into retrievable forms, whether in a complex remote retrieval system, a multi-media system, or simply in the traditional textbook, the teacher can be relieved of activities he formerly had to perform because of the lack of substitute forms.

Given well prepared materials, independent of continuous teacher direction, the potential for the teacher to begin to exercise more uniqueness as counselor, guide, confidant, synthesizer, provocateur, evaluator, creator of unique materials grows in proportion to the availability of those well prepared materials. Please note that the teacher is not being replaced by machines, nor is the process of individualization inherently dehumanizing. Just the opposite is the real possibility. Group instruction should be used only when proved to be the best form for the occasion. Humaneness will come when personal attention is given each learner, adjusting for his unique abilities and assisting in the decision making which he must engage in if there is to be compatibility between the purposes and processes of individualized instruction.

The reality of "new technology" applications to individualized instruction is much less than could be realized. This is due to several conditions. One is minimal understanding and commitment to the notion of individualization. It is naïve for educators to expect that individualized instruction is going to blossom behind the façade of traditional programs which are being exercised in new forms, such as team teaching and modular scheduling.

Individualized instruction requires ample lead time to convert traditional instruction to the individualized format. It requires almost inordinate amounts of time of staff planning. It requires budgets which realistically face the problems of supplying adequate quantities of well designed and validated materials. It demands logistics to uncomplicate the flow of people and materials. It demands an evaluation system which systematically gathers data about successes and failures. It requires a hard look at the viability of grades. It takes the time-consuming task of the actual production of materials out of the hands of teachers and allows them to concentrate upon the content and structure of these materials.

Individualized instruction requires a philosophical and professional commitment to the notion of allowing students and others to have a say in the content and form of instruction. It requires a fresh look at media and mediation processes, even to the point where part of the teacher's responsibility is to supply alternatives among mediation forms from which the learner chooses to suit his learning style, abilities, and goals.

Individualization of instruction is consistent with the basic American dream of helping each learner to achieve his potentials. The obligation of the educational setting is to provide the best forms for learning about the essentials of one's society and a climate which allows one to accept the consequences of his own decisions. "New technology," "newer media," *all* media are central to this dream. How to provide the best *mediation* circumstance for each learner in a complex educational system needs a great deal of study. □

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