

The Anisa Model: A Master Plan for Equalizing Educational Opportunity

by Daniel C. Jordan

A democracy rests upon equal access of the people to its political processes. If a society wishes to maintain itself as a democracy, its governing agencies must know in fairly precise terms what the nature of equal access is and then make provisions to guarantee it. In our modern and rapidly changing society (with its sophisticated technological achievements, its complicated economic system, its highly developed and intricate political and legal systems, and the additional complexities arising from its great religious, ethnic, and cultural diversity), viability of democratic functioning depends upon the full education of its citizenry.

Unlike the industrializing economy of 19th and early 20th Centuries, our automating economy has little need for the talents the uneducated have to offer, strong backs and clever hands, simple manual strengths and manual skills. Instead, we have a growing need for trained minds, educated judgements and conceptual skills. We have arrived at a period in human history in which man is increasingly required to manage vast categories of knowledge, to identify and solve highly complicated interdisciplinary problems, and to arrive at infinitely complex concepts and judgements in order to maintain, control, and advance the technological and social organization by which we live. The quality of intellect, the adequacy of conceptual competence, and the depth of human understanding and compassion required of those who must man that organization are not routinely produced in today's schools. And our failure to train the best qualified to the maximum extent

is but an extension of our failure to provide even the minimum survival skills for this complex age to those whom we call the socially disadvantaged. (Gordon *et al.*, 1966)

But even more critical than acquiring the talents, skills, abilities, and knowledge required to maintain western civilization as it is today will be the making of a new generation that will seek after new kinds of knowledge, struggle for higher levels of wisdom, paint fresher visions of the possibilities for man and his future, and understand the necessity for the moral courage and stamina required to transform civilization into something far better, far more humane, far more just, and far more beautiful than anything we now have. Given the present state of western society, it hardly seems a favor to anyone merely to prepare him to maintain society as it is now and thereby perpetuate a number of distressing trends which already indicate that we are venturing along the borders of disaster. The Commission on the Year 2000 of the American Academy of Arts and Sciences identified such trends as a means of gaining some perspective on the Year 2000, providing information for sketching hypothetical futures, finding ways to make better decisions by anticipating problems, and identifying means for stalling undesired developments—all in the hope of producing a new political theory that would enable us to approach the Year 2000 with some assurance of survival. The report

represents an extraordinary compendium of possibilities that might be realized in the future depending upon the kinds of choices we make now and the extent to which those choices become operational. Throughout the report, the implications for the role of education in the successful negotiation of the challenges lying ahead for our democracy were stressed:

If we are to remain true to our democratic heritage, one of the most obvious implications of the predictive increase in population is that our already crowded educational system will have to be vastly expanded and overhauled . . . put together the increased knowledge to be communicated and the increased duration of the educational experience, and then try to imagine what kind of educational system we will need by the year 2000. Can anything short of an educational revolution meet our needs? (Miller, 1967)

We believe that indeed a revolution in education is needed. But to undertake a revolution so that everyone can have an equal opportunity to participate in a civilization that may have difficulty making it to the year 2000 is pointless. Thus, in our view, the issue of equalizing educational opportunity only makes sense when viewed in the context of a broader scheme of thought and vision which also places an obligation on education

Daniel C. Jordan is a faculty member in the Designs for Effective Learning Cluster and Director of ANISA at the University of Massachusetts School of Education.

“ . . . a master plan for equalizing educational opportunity by dealing with the technological, moral and aesthetic values which are unavoidably implicated in the broader issues of survival.”

to play a major role in securing our survival while also significantly improving its quality.

Over the last few years there have emerged two extensive bodies of literature which address these two concerns. One deals more or less directly with equalization of educational opportunity¹ and the other deals with the general failure of education to foster the growth of the whole human being and to prepare him for dealing with the problems of survival. (See Illich, 1971; Goodman, 1964; Leonard, 1968; Rogers, 1969; Kozol, 1972; Dennison, 1970; Glasser, 1969; Holt, 1964; Silberman, 1970; and Kohl, 1967).

In spite of a decade of educational innovations little headway has been made to create a significant alternative to the traditional system of public education—a system which many believe to be ineffective in this era of rapid social change and unsuitable for the maintenance of a democracy because it violates a fundamental democratic principle by failing to equalize educational opportunity.

Implicit in the innovative efforts and analytic thinking of the sixties concerning how to equalize educational opportunity was a bright hope that we could eventually achieve it. But that hope has now become haunted by the notion that having an equal educational opportunity that would open doors to social participation on all levels would be of dubious worth because the society itself has grown progressively more

careless about the fundamental provisions for the survival of its members, let alone mobilizing efforts and resources to improve the quality of survival. Now, more than ever before, survival will depend on our ability to draw out the potentialities of each other in service to mankind as a whole and to refrain from using any of our resources, human or otherwise, in the destruction of others or in the suppression of human potential. We therefore accept the proposition that education is inevitably a moral affair; to pretend it isn't is to render impotent any manner of thought about its role in future survival.

In our view, then, any plan designed to tackle successfully the issue of equalizing educational opportunity must simultaneously deal with the survival issue from which the former derives its ultimate meaning. The two issues are inextricably bound up with each other. Solving the problem of how to equalize educational opportunity has far deeper implications, therefore, than simply making an effort to comply with a democratic ideal, as important as this may be. Not being able to equalize educational opportunity means the perpetuation of the institutionalized suppression of human potential. Suppression of potential is the fundamental threat to survival for it gives rise to the tragedies inherent in violence, crime, and mental breakdown. The ramifications of continuing such suppression takes us to the brink of a related tragedy of unthinkable proportions—namely, the failure of man, as the only known repository of cosmic self-awareness in the universe, to take a conscious hand in the direction of evolution—a responsible pursuit of his own collective destiny. Such a responsible pursuit will necessarily rest heavily on the

shoulders of an educational system founded on technological, moral and aesthetic values that insure a progressive increase in the quality of our survival.

The Anisa Model has been designed to serve as a master plan for equalizing educational opportunity by dealing with the technological, moral and aesthetic values which are unavoidably implicated in the broader issue of our survival. Since we do not believe that man's destiny can be safeguarded until we are successful in creating a social system which not only preserves as a basic human right the opportunity to develop one's potentiality as fully as possible, but one which also lovingly encourages it, any acceptable educational model for the future must actively help to create such a social system. Thus, while the emphasis in this article is on an explanation of the Anisa Model from the point of view of its promise for equalizing educational opportunity, it must be borne in mind that the test of its adequacy in relation to that promise will be met in the depth and breadth of its philosophical and theoretical foundations as they illumine the broader issue of survival itself.

The Anisa Model—An Overview

We believe that dealing with the issue of how to equalize educational opportunity ultimately depends upon identifying the fundamental principle at the heart of the idea in its broadest sense, establishing that fundamental principle as the basic premise of the educational system to be designed, and then organizing the concept of the system deductively around that fundamental principal. Any other approach is very likely to be no more than a superficial innovation that will evaporate without leaving a trace.

1. E.g., civil and human rights, compensatory education and teaching the disadvantaged, and all of the legislative efforts of the sixties to do something about equalizing educational opportunity: Headstart, Upward Bound, Follow-Through, Teacher Corps, Title I of the Elementary and Secondary Education Act of 1965, Neighborhood Youth Corps, Job Corps, VISTA.

To resist implementation of an innovation before it is carefully thought out and painstakingly planned is an important part of professional responsibility which federal and state funding cycles and administrative procedures have practically succeeded in destroying. Thus, most of the programs created to address some aspect of the problem of equalizing educational opportunity have been hastily conceived, prematurely implemented, undercapitalized, inadequately staffed, poorly evaluated, and almost always operated on a crisis basis.

The conceptual basis of the Anisa Model has been a decade in the making. The most intensive phase of working on the model began in 1971 with the assistance of a \$242,000 grant from the New England Program in Teacher Education, Durham, New Hampshire, to the Center for the Study of Human Potential, School of Education, University of Massachusetts, Amherst. This enabled us to mobilize the resources of faculty, graduate students, and consultants and more systematically pursue the formulation of the conceptual basis of the model on a daily basis. We believe that to be one of those exceptional instances when an educational funding agency has invested heavily in thinking through a problem over a long period of time so

that the resultant educational program has a higher probability for significant impact. The root word from which Anisa comes means "Tree of Life," an ancient symbol representing notions of perpetual fruition in a setting of shelter and beauty.

Our effort thus far has been characterized by four major thrusts:

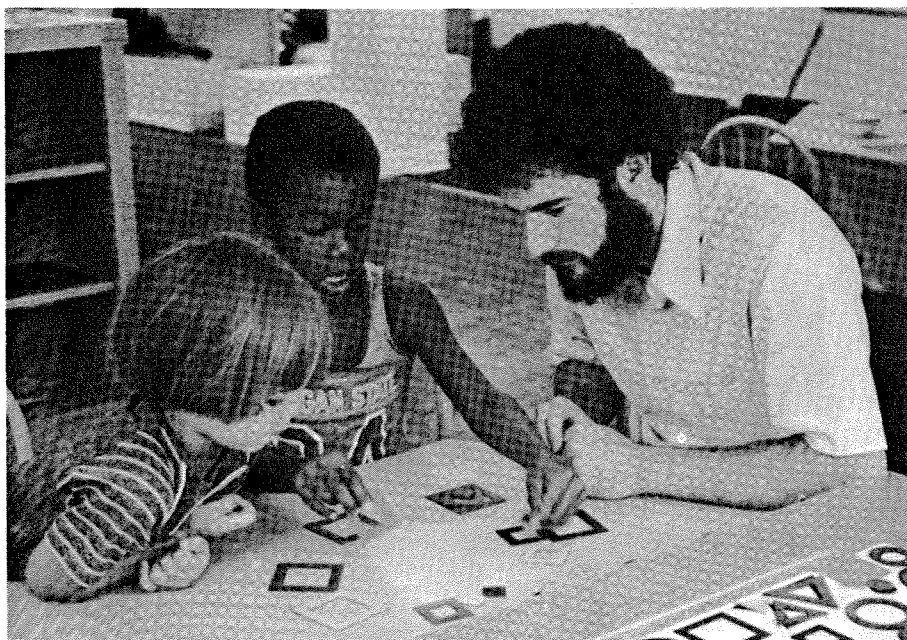
1. Specifying the philosophical basis of the model;
2. Generating a coherent body of theory concerning development, curriculum, teaching, administration, and evaluation from this philosophical basis;
3. Designing the actual model (explaining how the theory is to be operationalized); and,
4. Pilot implementation of selected components of the Model.²

The effort to develop the philosophical basis of the model centered around a clarification of assumptions about the nature of man's reality so that we would have a means for achieving logical consistency and coherence in the derivation of theory. In addition to achieving consistency and coherence, we were anxious to arrive at the broadest philosophical generalities concerning the nature of man so that comprehensiveness of theory could be attained. Because the process of philosophy of Alfred North

Whitehead is in itself an extraordinary synthesis of both eastern and western thought over the last 2,500 years, we have used his cosmology, *Process and Reality*, as a general reference against which the comprehensiveness and scope of our thinking could be tested. Charles Hartshorne, the major living process philosopher summed up Whitehead's work: "The basic principles of our knowledge and experience, physical, biological, sociological, aesthetic, religious, are in this philosophy given an intellectual integration such as only a thousand or ten thousand years of further reflection and inquiry seem likely to exhaust or adequately to evaluate, but whose wide relevance, and in many respects at least, comparative accuracy, some of us think can already be discerned." (Lowe, *et al.*, 1950)

The fundamental speculation about the nature of man in the model's philosophy is that he is an organism at the apex of creation, endowed with an infinitude of potentialities; that creativity—the capacity to translate potentiality into actuality—defines his essential reality. The presumption here, then, is not whether a given child should go on to college or should prepare for this or that occupation but that every child is endowed with an infinitude of potentiality, the development of which is the central purpose of education.

The Anisa theory of development defines the nature of human potentialities; explains how their translation into actuality is sustained by the organism's interaction with the environment; classifies environments; and, describes the nature of the kinds of interactions that are required to develop particular kinds of poten-



2. Implementation of aspects of the Model began on a pilot basis in four sites: a public school (K-3) in Hampden, Maine; preschools and public kindergarten in Suffield, Connecticut; private Child Development Center in Fall River, Massachusetts; and, the Headstart Centers in Kansas City, Missouri. Pictures were taken during the Anisa school operated by the Anisa Project staff during the summer of 1972 on the University of Massachusetts campus.

tialities. The theory indicates why not all environments and not all interactions are equally capable of drawing out a given potentiality and establishes criteria for determining or creating the most effective environments and interactions with them. Two basic categories of potentialities—biological and psychological—are established by the theory; nutrition is fixed as the key factor in the development of biological potentialities and learning is established as the key factor in the development of psychological potentialities. The theory also defines the nature of learning and the means by which learning competence is achieved.

The definition of learning was arrived at by a deductive process of reasoning from the premises derived from the philosophical base and an inductive process of reasoning which entailed the analysis of all major learning theories for the purpose of identifying their common denominator. We thus arrived at the definition of learning as the differentiation, integration, and generalization of experience, and the definition of learning competence as the conscious ability to break down experience, whether internal or external, into separate contrastible elements (differentiation); to combine those elements in a new way, thereby generating new perceptions, new thoughts, new feelings or emotions and new intentions which may or may not become expressed immediately in some form of new, overt behavior (integration); and, to transfer the new combination or integration to similar situations (generalization).

The following categories of potentialities are established by the theory: psycho-motor, perceptual, cognitive, affective, and volitional. Each of the categories is broken down into processes, each one of which is germane to learning competence in that particular category. The cognitive category, for example, is broken down into such processes as abstraction, analogy, metaphor, analysis, synthesis, causality, deduction, induction, interpolation, extrapolation, seriation, conservation, and number relations. These processes constitute "how to

think" and are therefore synonymous with "how to learn" in the cognitive area. Whereas the traditional school system emphasizes "what to think" (content), the Anisa Model adds the important dimension of "how to think."

Finally, the theory of development shows how interaction with the physical environment structures the actualized potentialities (powers) into material values on which technological competence rests; how interaction with the human environment leads to the formation of social values on which moral competence rests; and, how confronting the unknowns and unknowables in the environment precipitates the formation of religious and aesthetic values. The combinations of these values constitute the defining attributes of personal identity—the Self.

From the theory of development, we have derived theories of pedagogy, curriculum, administration, and evaluation. While it is beyond the scope of this brief article to explain these theories (see Jordan and Streets, June 1973 and Jordan, Spring 1973), it is important to know the basic propositions of the theory of teaching and curriculum.

Our theory of curriculum defines curriculum as two interrelated sets of goals; one concerns the internalization of processes on which learning depends and the other concerns content—basic factual information about the world around us. The curriculum also includes three symbol systems (math, language, and the arts) which mediate the mastery of processes and make possible the storage of information that can be symbolically represented.

Our theory of pedagogy is related to the definition of curriculum and is derived from a proposition in the theory of development which states that the translation of potentiality into actuality depends on the organism's interaction with the environment. The theory of pedagogy thus defines teaching as arranging environments and guiding the child's interactions with them for the purpose of achieving the

educational objectives specified by the curriculum.

Implications for Equalizing Opportunity

With this brief description of the Anisa Model and its theoretical and philosophical foundations in mind, we now turn to an examination of the implications of the concept of opportunity and an explanation of how the Anisa Model promises to function as a master plan for equalizing educational opportunity.

The word opportunity means the quality of being opportune—being seasonable, timely, fit, suitable, convenient, or apt. It refers to a time or condition of things that is favorable to a given end or purpose and implies a convenience or an advantage afforded by a particular position or a time when there is an occasion or a need for something. Given the uniqueness of each individual, what is opportune for one will not necessarily be opportune for another. This is why providing the same curriculum for all children at the same age at a particular place and time for the same amount of time using the same approach, the same materials, and the same teacher, destroys the fundamental notion of opportunity. There is no way in which the sameness of all of these things can be equally suitable, appropriate, favorable, advantageous, and effective, for all children at the same age at one particular time. Sameness has been confused with equality; it is, in fact, the sameness of everything which guarantees inequality, precisely because the same things cannot be, in all cases, opportune for every member of a class at a given point in time. Thus for learning experiences to be equal for any group of children, they must fit each one and will therefore necessarily be *different* for each one, rather than the same. This does not mean that there can be no teaching of children in groups or no group activities; it does mean that experiences planned for groups of children must reflect a range of interactions so that each participant can relate to whatever aspects of the ex-

periences are suitable or opportune for him.

The Anisa theory of development will ultimately enable parents and teachers to assess the child's developmental levels so that his particular needs can be identified. Parents or teachers can then arrange environments and guide the child's interaction with them to provide the experience which meets his developmental needs, thereby making the experience "opportune" (timely and advantageous) for him. Making experiences opportune depends on knowing children in their specificity—recognizing the *differences* among them and differentiating experiences to match needs and developmental levels.

Since the physical health of the child is essential to normal psychological development, assessment includes examination of biological as well as psychological needs. Extensive studies have shown how nutritional injury, particularly when it occurs prenatally and during the post-natal period, can cause irreversible damage to the biological integrity of the organism and reflect itself in impaired perceptual, psycho-motor, cognitive, affective or

volitional functioning. Obviously, any child who has sustained nutritional injury during the prenatal period or suffers from under-nutrition after he is born faces a perpetual inequality and will inevitably be at a disadvantage when compared to his peers who are well nourished.³ The applicability of the Anisa Model therefore begins a year or so prior to conception so that an adequate nutritional status of the mother and the father may be assured at the time of conception, during pregnancy and particularly throughout the post-natal months. While adequate nutrition remains generally important throughout life, it has more direct implications for efficient learning than formerly realized. We know, for instance, that it is difficult for a child to pay attention if he is suffering from a vitamin B deficiency. Very little learning can take place without attention. Obviously, a child who cannot pay attention will find a very large number of experiences "inopportune" for him and he certainly will not be on an equal footing when compared to his more attentive and less distractable peers. Thus the schools patterned after the Anisa Model will have nutritional

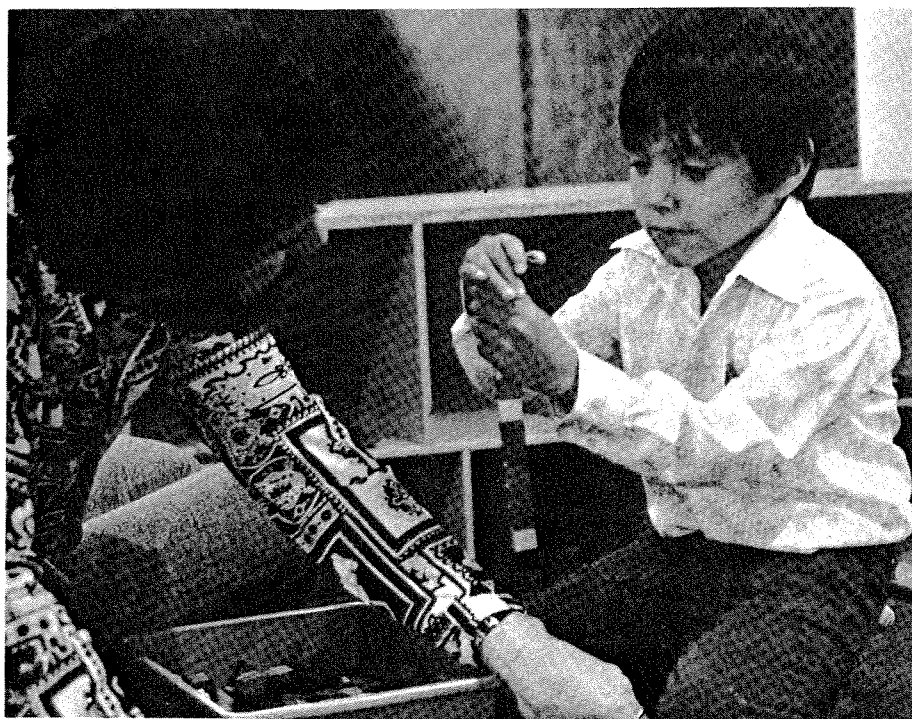
experts on their staffs who will maintain accurate records on the nutritional status of all children and staff and will work with parents of children to make certain that their diets are appropriate.

The process curriculum of the Anisa Model (which focuses on the attainment of learning competence in the five general areas) is the formal means by which the maximum development of each child's psychological potentialities is guaranteed. When fully refined, the Anisa theory of development will enable a teacher to assess developmental levels of the children in each of the five categories so that instruction can be geared to those levels and learning thereby individualized. *It is only through the individualization of instruction and the particularization of learning that differences among children are honored and educational opportunities equalized.* The ultimate purpose of the Anisa theory of development is to enable every teacher to make every experience opportune for each child. Several years of empirical testing will be required before the theory is refined enough to be used in assessing developmental levels with great accuracy. However, we believe that the fundamental elements of the theory have all been articulated and that they insure its fecundity and comprehensiveness of scope.

Most programs for individualizing instruction fail to equalize educational opportunity because they fail to particularize learning. In such programs, individualization has been too narrowly conceived as a breaking down of the curriculum content into smaller units and working with fewer children at a time. To be sure, this may be an important step, but until processes are understood and an ability to *match* both the content and process elements of the curriculum to the child's developmental levels is achieved,

3. For an extensive analysis of the relationship between biological integrity and learning, please see the position paper of the Food and Nutrition Board of the National Academy of Sciences, National Research Council entitled: *The Relationship of Nutrition to Brain Development and Behavior*, Washington, D.C., June 1973.





learning cannot be particularized in any deliberate way. Making such a match depends on using a theory of development first to assess needs and then to design an experience (by arranging environments and guiding the child's interaction with them) that is thus "opportune" for the child in question.

Since the process curriculum of the model is concerned with the universals of human development, it is applicable cross-culturally and can accommodate any child. We would therefore expect all children in an Anisa system to develop their competencies as learners as fully as possible at optimum rates. Some will nonetheless turn out to be more competent than others, but the average competence of each cultural group will be approximately the same. Thus, the model preserves the very important creative element in society, namely its diversity, while at the same time providing equal access to the

political processes on which the viability of a democracy rests.

We believe learning competence to be the greatest gift a school system can bestow upon its children, for it is the means by which each child will achieve the greatest probability of negotiating successfully all of the problems that he will confront in the course of his life. Seen in this light, learning competence functions as the guarantor of independence and the door to responsible freedom, indispensable elements in a real democracy. Both independence and responsible freedom are among the important consequences of the process curriculum which, in the cognitive area, stresses the how of thinking and reasoning and therefore explicitly places a very high value on a continual search after truth and humility before the facts. Educational systems based on the model necessarily become benevolent transformers of the culture in which they exist rather than passive

transmitters of the culture as status-quo. It is this transformation element of the model which not only complements the equalization of educational opportunity but helps to create that which makes the opportunity meaningful, namely access to participation in a society whose survival is not only guaranteed but one which provides for the perpetual improvement of its quality through its educational program.

REFERENCES

- Dennison, George. *The Lives of Children*. New York: Vintage Books, 1970.
- Glasser, William. *Schools Without Failure*. New York: Harper and Row, 1969.
- Goodman, Paul. *Compulsory Mis-Education*. New York: Horizon Press, 1964.
- Gordon, Edmund W., and Wilkerson, Dorey A. *Compensatory Education for the Disadvantaged*. New York: College Entrance Examination Board, 1966.
- Holt, John. *Why Children Fail*. New York: Pitman Publishing Company, 1964.
- Illich, Ivan. *Deschooling Society*. New York: Harper and Row, 1971.
- Jordan, Daniel C. "Anisa: A New Comprehensive Early Education Model for Developing Human Potential," *Journal of Research and Development*, V. 6, No. 3, Spring 1973, pp. 83-93.
- Jordan, Daniel C., and Streets, Donald T. "The Anisa Model: A New Basis for Educational Planning," *Young Children*, June 1973, pp. 289-307.
- Kohl, Herbert. *36 Children*. New York: The New American Library, 1967.
- Kozol, Jonathan. *Death at An Early Age*. Boston: Houghton-Mifflin, 1972.
- Leonard, George. *Education and Ecstasy*. New York: Delacorte Press, 1968.
- Lowe, Victor, et al. *Whitehead and A Modern World*. Boston: Beacon Press, 1950.
- Miller, George A. "Some Psychological Perspectives on the Year 2000," *Daedalus: Journal of the American Academy of Arts and Sciences*, Summer 1967, p. 889.
- Rogers, Carl. *The Freedom to Learn*. Columbus, Ohio: Merrill Publishing Company, 1969.
- Silberman, Charles E. *Crisis in the Classroom*. New York: Random House, 1970.

Reprinted from *meforum*, Vol. 1 (3), Fall 1974
School of Education, University of Massachusetts,
Amherst, with the permission of the Editor.