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Cover: A child completes an exercise in seriation—a kind of thinking essential to understanding mathematics. In this picture the boy is ordering cylinders on the basis of decreasing diameter. The child also demonstrates his attentional powers. Like seriation, how to pay attention—how to concentrate—is taught as part of the Anisa curriculum.

Photographs of activities at the McGraw School in Hampden Maine, including the cover, were taken by Philomena Baker. David Walker took the photographs of staff at the implementation sites in Suffield, Connecticut. Pattabi Raman photographed scenes outside of the school settings.



Anisa comes from a root word that refers to a flowering and fragrant plant or tree. It has been used to represent the "Tree of Life," an ancient symbol which connotes the qualities of beauty, grace, nurturance, shelter, and cycles of fruition. The Anisa logogram was designed to illustrate these qualities and to suggest their significance for an organismic conception of education.

Education is the guidance of the individual towards a comprehension of the art of life; and by the art of life I mean the most complete achievement of varied activity expressing the potentialities of that living creature in the face of its actual environment. This completeness of achievement involves an artistic sense, subordinating the lower to the higher possibilities of the indivisible personality. Science, art, religion, morality, take their rise from this sense of values within the structure of being. Each individual embodies an adventure of existence. The art of life is the guidance of this adventure.

Aims of Education, p. 39.

The Anisa Model is a blueprint for a new educational system that brings iov to learning without losing sight of the need for self-discipline and hard work. Underlying this new system is a philosophy about life and the wonders of the universe, and a theory of education that connects the two. To ensure the coherence, depth, and comprehensiveness of the philosophical and theoretical foundations of the Model, we have drawn heavily on the works of the great philosopher, logician, and mathematician, Alfred North Whitehead, from whose writings selected statements appear throughout this publication.

The purpose of this brochure is to disseminate basic information about the Model as part of a systematic effort to broaden the base of interest and support for a new phase of research and development.

Daniel C. Jordan Director, ANISA Project In the conditions of modern life the rule is absolute, the race which does not value trained intelligence is doomed. Not all your heroism, not all your wit, not all your victories on land or at sea, can move back the finger of fate. Today we maintain ourselves. Tomorrow science will have moved forward one more step, and there will be no appeal from the judgment which will then be pronounced on the uneducated.

Aims of Education, page 14.

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### What Can Anisa Do for Children?

The opportunity to become a competent learner is one of the greatest gifts a child can receive. It is a great gift because learning competence enables a child to take full advantage of all other opportunities life may bring. And if life seems to bring few opportunities and many problems, a competent learner need not despair because he can work through problems and knows how to create opportunities for himself and others.

How can we give this gift to our children?

To transform schools and homes into places where children will develop into competent learners reguires a comprehensive plan for educational renewal. The Anisa Model is such a plan. It is a scientifically-based educational system that fosters each child's natural love of learning and helps him to become a confident and productive human being. If a child loves to learn, it stands to reason that he will be attracted to learning opportunities, and will therefore enjoy taking on responsibilities that require new learning. Problems and the challenge of finding their solutions will interest him. With this attitude toward learning he will continue to develop and grow throughout his life.

The first thing that a teacher has to do when he enters the classroom is to make his class glad to be there.

Science and Philosophy, pages 179-80

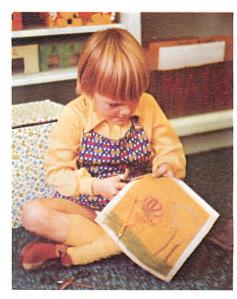
The solution which I am urging, is to eradicate the fatal disconnection of subjects which kills the vitality of our modern curriculum. There is only one subject-matter for education, and that is Life in all its manifestations.

Aims of Education, pages 6-7

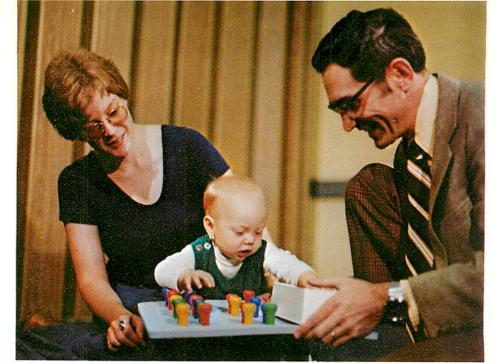
An effective and competent learner knows how to learn. Yet, how to learn is itself something that has to be learned, but it is rarely taught in schools. A traditional curriculum emphasizes what to learn, rather than how to learn; what to see or hear, not how to see and listen; what to think, rather than how to think; what to feel, but not how to feel; what to strive for, rather than how to strive. The Anisa curriculum emphasizes the "hows" of learning.

Adding the "hows" to the "whats" of the traditional curriculum makes the Anisa Model comprehensive and ensures the development of the whole child, rather than just that part of him concerned with the memorization of facts. Although memorizing different kinds of information is certainly important, learning includes far more than that. In schools based on the Model, five other kinds of learning concerned with the "hows" are given high priority. The part of the curriculum designed to develop learning competence is organized around these five types.

- 1. Learning how to move and gain maximum control over the voluntary muscles. This form of learning is essential to many important human activities such as riding a bicycle, playing the violin, writing, or performing surgery. The expert use of tools and the operation of machinery depend on this kind of learning.
- 2. Learning how to perceive. Development of the senses—seeing, hearing, smelling, tasting and touching—is important to all other forms of learning. Through proper training, children can increase their efficiency in processing in-



Stitchery helps development of fine motor coordination which is an important preparation for handwriting.



Hand-eye coordination and visual discrimination exercises can begin early in the life of a child. The Anisa Model includes a training program for parents which enables them to carry out at home a full educational program for their babies.

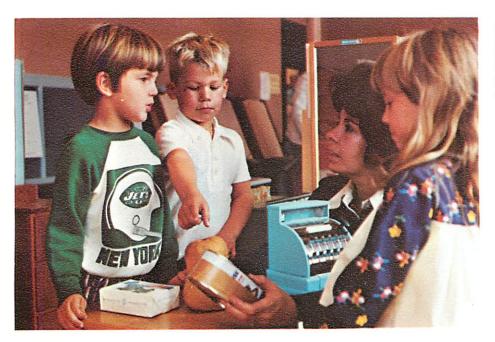
Learning to coordinate, control and direct the movement of muscles is the basis for many other kinds of learning, including how to read and write. Balance and posture are essential aspects of poise and important in the development of confidence.







Observation is a cognitive-perceptual process essential to the scientific method. These children are observing distinguishing characteristics of the hamster in order to vote on a name for him at a later time.



Nursery school children operate a grocery store which provides a setting for classification of goods and calculating costs. Learning the names of products is a part of the process. A parent volunteer guides the interaction.

formation taken in through the senses and can learn to make use of it to the best advantage.

- 3. Learning how to think clearly. There are many kinds of thinking emphasized in the Model, especially problem-solving through the use of logical reasoning. Problem solving is given emphasis because no child can gain independence nor can he secure the best kind of employment as an adult if he cannot identify and solve problems.
- 4. Learning how to exercise the will. This form of learning produces self-discipline and the ability to concentrate or pay attention. It includes learning how to set goals, how to initiate action to accomplish them, and how to persevere in the face of obstacles until they are achieved. Without this kind of learning, a child cannot become a productive, self-reliant, self-directed adult.
- 5. Learning how to feel and respond emotionally to any situation appropriately. To become fully human, a child must learn how to love and how to be loved; how to

An education which does not begin by evoking initiative and end by encouraging it must be wrong. For its whole aim is the production of active wisdom.

Aims of Education, page 37

cope with sadness and disappointment; how to manage anxiety; how to control anger or jealousy. His emotions need to be organized so that he likes the things that further his development and dislikes things that do not. For example, learning to love justice and honesty and to dislike injustice and dishonesty will enable him to be a morally responsible person who keeps out of trouble and attracts friends who will meet his social needs in a beneficial way. When emotions are organized the other way around, the child feels that injustice and dishonesty are acceptable. The stage is then set for delinquency, crime and disrespect for legitimate authority. The Anisa Model therefore does not leave the emotional and moral development of the child up to chance, but treats it as an obligation of high priority. To do otherwise is to deprive the child of a promising future and a decent life.



Complex skills such as speaking, reading, writing and mathematical reasoning, all of which are given central importance in the Anisa Model, involve the five kinds of learning mentioned above. Concentrating first on the "hows" of learning enables each child to achieve the prerequisites to these skills as soon as possible, but in his own time. In this way children who are ready for learning the skills are not held back and those not yet ready can still proceed at their own pace without being made to feel that they have failed.

In summary, Anisa can serve children by providing a comprehensive educational experience that will enable them to develop their potentialities fully and at an optimum rate.

The process of self-creation is the transformation of the potential into the actual, and the fact of such transformation includes the immediacy of self-enjoyment.

Modes of Thought, page 151

To make the sounds that letters represent is an engaging activity for children in pre-reading learning experiences.

### What Can Anisa Do for Teachers?

We are discovering that in schools you cannot do without genius, genius of character, genius of insight, and genius of intellectual enthusiasm. Authorities who want successful schools must see to it that the conditions in the teaching profession are those in which genius can thrive.

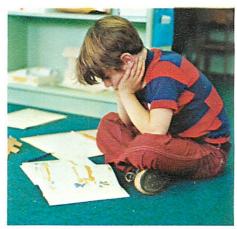
Science and Philosophy, p. 180

The most important factor in giving a child an opportunity to become a competent learner is a teacher who knows how to nurture a love for learning and who can teach all of the "hows" of learning. The Anisa Model incorporates a plan for the systematic and thorough training of teachers in this new approach. With such training teachers also become more effective learners and are better models for their students. Anisa teachers gain their greatest satisfaction from watching each child become an independent and competent learner, rather than from covering so many pages of a textbook by a certain time. The curriculum of the Anisa Model clearly specifies the education objectives that lead to learning competence and outlines the principles that must guide the actions of the teachers and children if the objectives are to be met. Both the educational objectives and the means of achieving them have been formulated on the basis of an analysis of a vast amount of scientific



The Anisa Model is functionally defined by specifications which insure its replication, evaluation, and refinement. Anisa staff members Dr. Lois Abeles and Dr. Magdalene Carney, both teacher trainers, examine the content of an Anisa Specification in the Volitional domain prior to its introduction in the field.

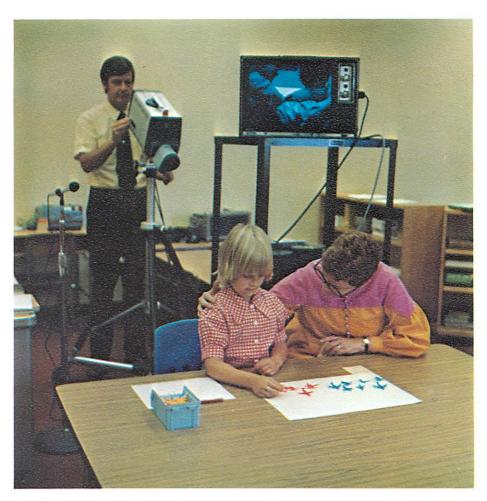
This student is able to concentrate fully on his reading because the arrangement of the physical environment of the classroom and the observance of ground rules permits the child to proceed at his own pace uninterrupted by others.



The environment within which the mind is working must be carefully selected. It must, of course, be chosen to suit the child's stage of growth, and must be adapted to individual needs. In a sense it is an imposition from without but in a deeper sense it answers to the call of life within the child.

Aims of Education, pages 32-33

The demonstration of a principle of teaching is recorded on videotape to be viewed and discussed by teachers as part of the Anisa teacher training program.





Teacher trainers, Dr. Nancy M. Rambusch and Dr. Susan Theroux, prepare for videotape a demonstration which teaches the concept of number through the manipulation of concrete objects. The Anisa system emphasizes that planning time for teachers is essential to providing high quality educational experiences for children.

There can be no mental development without interest. Interest is the sine qua non for attention and apprehension. You may endeavor to excite interest by means of birch rods, or you may coax it by the incitement of pleasurable activity. But without interest there will be no progress.

Aims of Education, page 31

research about how children learn and develop. The research has been condensed, organized, and presented in the form of principles of teaching and learning which can be understood and used. By applying these principles, the Anisa teacher is relieved of many discipline problems and most of the difficulties of classroom management. Equipped with such knowledge and principles, teachers are not bound to specific places, materials, equipment, or lesson plans. Instead, they are free to concentrate on the diagnosis of each child's needs and the prescription of educational experiences which meet those needs, and they can create settings appropriate to each prescribed experience where every child can work alone or in small groups at his own pace, giving expression to his own interests and preferences.

Anisa can also help teachers by upgrading the profession through excellence of training and high certification standards. Since we believe that teachers themselves must be

competent, enthusiastic, and knowledgeable learners so that they can model the learning process effectively, teacher preparation programs based on the Anisa Model are rigorous and demanding. They are also individualized so teachers can progress through the training at their own pace. The emphasis is not on memorizing what is in a variety of textbooks about teaching but on knowing the Model's specific educational objectives and understanding the principles necessary to help children achieve them. How to teach in the new way is accomplished by teaching day after day under careful supervision and by learning how to evaluate every act of teaching. Because Anisa teachers know how to evaluate their own teaching, they are able to improve continually their services to the children and the profession.

The Anisa approach to certification is straightforward. A student who goes through a training program and is not able to teach effectively is counselled into some other occupation and is not given teaching credentials. In traditional systems it is possible for students to receive "straight A's" in course work and become certified even though they are incompetent as teachers, whereas others might receive lower grades but be extremely effective in working with children. To be certified in the Anisa system, a teacher must have superior knowledge of the

subjects to be taught and must know how to work with children so that they become competent learners. Certification and re-certification depend on demonstration of teaching competence and knowledge of subject matter and not simply on the accumulation of course credits.

## How Can Anisa Help Parents?

Because of the critical nature of pre-natal development and the first five years of life, the Anisa Model includes a program to assist parents in nutritional planning before conception, during pregnancy, and after birth. Good nutrition is essential if children are to develop strong minds and bodies and since the health of parents affects the well-being of their children, it is also important for them to acquire and maintain excellent physical health.

Just as the nutrition and health of the parents affect the development of the child's body, so do the learning environment and emotional atmosphere of the home affect the development of the child's character. It is vital that such qualities as love, order, honesty, trust, happiness, discipline, respect, and justice pervade the life of the family. These qualities have a strong influence on a child's ability to learn because they determine what he believes about himself and how he will regard the world and interact with it.

Recognizing that parents are the most influential educators of children, the Anisa Model provides a way to unite parents and the school into a single system of support for the growth and development of the child. It incorporates a home-based educational program which begins at birth and continues through the elementary school years. When a child enters school, the active par-

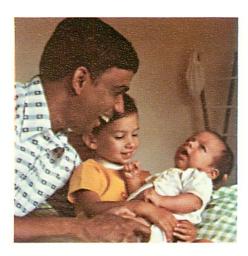


Since nutrition is the key factor in the maintenance of good health and the ability to learn, emphasis is placed on this aspect of human development at all ages.



Nutrition plays a very important role in helping a child become a competent learner. Dr. Pattabi Raman, Anisa staff member whose professional preparation is in two fields, biochemistry and developmental psychology, helps to prepare parents in the home-based training program.





The Anisa program begins for children right after they are born. It therefore has a well-defined, home-based curriculum for parents and children in which the role of the father is stressed.

ticipation of parents in his education continues. In this way, discontinuities between the experience of home and school are avoided and the transition into the formal educational setting is smooth and easy.

Experience has shown that parents who have an organized approach to rearing children based on knowledge of human development, who take the need for good nutrition and exercise seriously, and who can create the proper learning environment in their homes will have a successful and happy family life. They enjoy child rearing, feel confident in coping with troubles and difficulties, and develop a wholesome relationship with their children that lasts throughout their lives.

Parents are the first teachers. The Anisa system encourages a continuation of parent involvement with children in the school environment. A parent volunteer engages a small group of children in an exercise that teaches them the nature of symmetrical patterning and how to create sequences using colored beads.

## How Can Anisa Help the Community?



The children gathered and classified a variety of edible items, priced them, and set up a small grocery store. During this experience, they strengthened their understanding of classification and its practical application, how to evaluate foods in monetary terms, and how to run a small business.

The aim of education is the marriage of thought and action—that actions should be controlled by thoughts and that thoughts should issue in action.

Science and Philosophy, 180

The strongest possible foundation for the security and advancement of future generations is established when a community provides an educational system that enables its children to become competent learners. In such a community, the energies of its citizens will always be devoted to improving the quality of life for everyone.

Crime, delinquency, mental illness, drug addiction, alcoholism,

unemployment and poverty are among the most serious problems facing any community. While no school system can be expected to solve these problems by itself, it has the obligation to assume a major role in dealing with them. The Anisa Model has been designed to help prevent these problems from arising. When they do occur, however, it also provides the means for dealing effectively with them in collaboration with home and community agencies.

Crime, delinquency, and mental illness have their roots in frustration, anger, anxiety, and failure—all of which cause the student to strike out against society or to withdraw

into a fantasy world where no one can reach him. One of the most common sources of frustration and failure for many children is a school that neither fits them nor serves their needs. Children kept in such a situation have their love of learning destroyed and come to hate school, teachers, and school administrators. They have no chance to develop good work habits and important qualities like dependability, responsibility, and respect for legitimate authority. Instead, they feel rejected, unwanted, and mistreated. They have little confidence in themselves and not much hope for a better future. Under these circumstances, they have no

These children are being briefed about the voting process in connection with naming their hamster. The timing of this event coincided with the National elections.

alternative to dropping out. The same problems that lead to dropping out make finding and keeping a job unlikely. Unemployment and poverty follow. If no help is forthcoming, crime, mental illness, drug addiction, and alcoholism are almost inevitable. These problems also guarantee the instability of marriage and home life. When the new generation is born into such conditions, the cycle will repeat itself. The Anisa Model functions as an effective intervention in the cycle by addressing the root causes of these social problems.

While it is important to find a remedy for its most serious problems, a community needs more than that. It also requires an enlightened citizenry, willing and able to participate in self-government so that the affairs of the community can be managed to the benefit of all. Children in Anisa schools are trained from the earliest years in the skills of group decision-making—skills which are essential to the effective operation of government on all levels. They are also taught the nature of justice and the function of law in the maintenance of social order.

In our view, it is foolhardy to continue believing that social problems will go away if we give them short-term, superficial treatment. Nothing short of a systemic transformation of the basic social institutions which



create and sustain the problems will work. For this reason, we believe that the comprehensive educational program represented by the Anisa Model can, over time, make a significant contribution to the stability of community life and help it bring into being a better future for everyone.

# What Makes Anisa Different from Other Educational Systems?

The fading of ideals is sad evidence of the defeat of human endeavor. In the schools of antiquity philosophers aspired to impart wisdom, in modern colleges our humbler aim is to teach subjects. The drop from the divine wisdom, which was the goal of the ancients, to text-book knowledge of subjects, which is achieved by the moderns, marks an educational failure, sustained through the ages.

Aims of Education, page 29

Many features of the Model that make it different from other educational systems have already been discussed. These combined with other distinctive features presented in the following paragraphs support the claim that the Anisa Model is the most comprehensive plan for educational renewal in existence today.

An Explicit Philosophical Base. Anisa is based on a philosophy that recognizes man as a spiritual as well as a physical being whose capacity for development is limitless. By spiritual we mean that man has a consciousness that makes him aware of unknowns, such as his own future, which he has to approach on faith. Faith is the ability to deal with unknowns by making assumptions, developing plans, and formulating ideals all of which can guide action in the face of the unknowns. Man is unique not because he reacts to physical forces but because he is

Your character is developed according to your faith. This is the primary religious truth from which no one can escape.

Religion in the Making, page 15

responsive to assumptions, ideals, plans, aspirations, hopes, and a sense of purpose which he himself can create. Furthermore, he is endowed with the capacity for articulate speech and the ability to make use of symbols to record and communicate information. Such attributes make him different from animals; they give him the power to take an active part in forming his own character thereby determining his own destiny.

The character of a child is shaped by his experiences and the way he interprets them. Those who are with children most of the time, such as parents and teachers, have an awesome responsibility to make certain that the experiences they provide are developmentally sound and that they are interpreted by the children in ways that support further growth. Out of these experiences emerge the attitudes, values, ideals, and beliefs that make up the child's character. The Anisa Model stipulates the kinds of experiences required to form ideals that will influence the development of those values, attitudes, and beliefs which, in turn, will sustain continuing growth and development. A child without ideals

You won't get interested in what you are doing unless you have some ideals before you—some hopes for the betterment of human society, some joy at making others happy, some courage in facing the obstacles to progress. Such ideals bear essentially upon your school work. Ideals which are not backed by exact knowledge are mere fluffy emotion, and often lead to disastrous action. Science and Philosophy, page 181.

has no sense of future and nothing to strive for. Without a sense of values he has no standards to apply in making judgments. Without belief or faith in his ability to cope with life's problems and seize opportunities when they appear, he will have little confidence and take no initiative in planning his life.

The Anisa Model thus holds that if education is to counter the social ills which have brought us to the point of crisis in many communities, it must be based on a philosophy that regards man as a noble creation capable of continual development.

An Emphasis on Moral Development. The Anisa Model provides for the moral instruction of children so that when they become adults they will help maintain order and unity in society while making constructive efforts to change it to improve the quality of life for everyone. Because cooperation is the basis for democratic activity, learning how to work effectively in groups













Moral competence, in large measure, depends upon children learning how to appreciate diversity in the human family and treat each other fairly. The Anisa curriculum for moral development rests firmly on the principle of the oneness of mankind.

The moral code is the behavior patterns which in the environment for which it is designed will promote the evolution of that environment towards its proper perfection.

Adventures of Ideas, page 292

is stressed. The Model upholds the principle of the oneness of mankind and the equality of men and women and it affirms the necessity for racial and ethnic diversity within the classroom and the community. Its curriculum acquaints children with the damaging nature of prejudice and how to detect and rid themselves of it.

A Central Role for the Arts. Creativity is the ability to explore pos-

sibilities and arrive at a different order or combination of things to produce something new. The arts provide the most natural means by which children can explore a rich variety of possibilities and develop their capacity for creativity and inventiveness. In addition, music, dance, theatre arts, poetry, and the visual and plastic arts are the greatest resources for developing learning competence, particularly in the young child.

The arts are also important for other reasons. They are indispensable in helping the child to understand order and the nature of beauty. Without a sense of beauty, a child is deprived of a

You cannot, without loss, ignore in the life of the spirit so great a factor as art. Our aesthetic emotions provide us with vivid apprehensions of value. If you maim these, you weaken the force of the whole system of spiritual apprehensions. The claim for freedom in education carries with it the corollary that the development of the whole personality must be attended to.

Aims of Education, page 40

dimension of meaning in his life necessary to the full development of his potentialities.

A High Priority for Science. Children who are not educated in the sciences will not be equipped to participate fully in a modern, in-

Activities in the visual arts strengthen the child's ability to translate threedimensional objects into two-dimensional representations and to appreciate principles of form, such as contrast, balance, pattern, proportion, and unity.



History shows us that an efflorescence of art is the first activity of nations on the road to civilization. Yet, in the face of this plain fact, we practically shut out art from the masses of the population. Can we wonder that such an education, evoking and defeating cravings, leads to failure and discontent?

Aims of Education, page 40

The arts are at the core of the Anisa curriculum not only because they help a child to appreciate beauty, but because they are the natural means for developing all other potentialities of the child. Musical activities improve auditory acuity and promote the development of hand-eye coordination in conjunction with the auditory memory of patterns and rhythms.





Art activities develop the child's ability to understand part-whole relationships and the nature of form and pattern. Dr. Aino Jarvesoo, art theorist and specialist in aesthetic education, provides a demonstration for the Anisa staff.

Measurement is a cognitive process which also implicates perception. Children cooperatively measure corn using the same basic container. On another level this task can extend to conservation—a form of thinking important for mathematical reasoning.

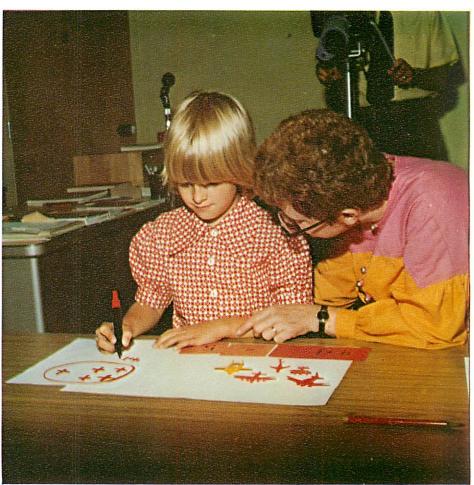


No man of science wants merely to know. He acquires knowledge to appease his passion for discovery. He does not discover in order to know, he knows in order to discover. The pleasure which art and science can give to toil is the enjoyment which arises from successfully directed intention.

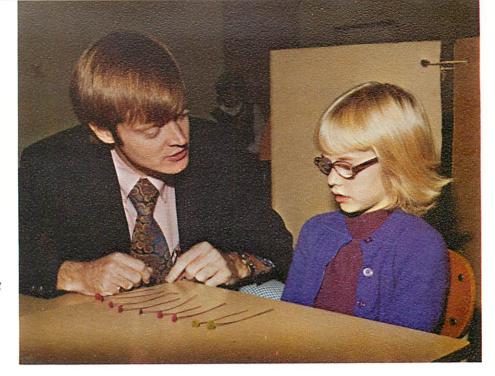
Aims of Education, page 48.

dustrialized and technological society. The Anisa Model introduces at an early age the basic principles of scientific thought: causation, hypothesis formation and testing, logical thinking, measurement, and mathematical reasoning. Science not only plays an essential role in guaranteeing our survival and improving the quality of life through technology, it also provides a rational basis for living and prevents faith from degenerating into superstition. Adults who have not been trained in the fundamentals of scientific thought can easily become victims of their own superstitions. Lacking a welltrained mind, they can be manipulated by others and easily persuaded to become involved in affairs that lead to financial and personal difficulties.

Guaranteeing Success and Avoiding Failure. The formation of ideals and sound values, the appreciation of beauty, freedom from superstition, and the development of good character are all undermined by injustice.



This exercise requires the child to record a mathematical operation performed by manipulating concrete objects and to represent the operation using numbers and symbols for addition and subtraction.



In this exercise staff member, Mr. Geoffry Marks, tests the child's understanding of class inclusion, a way of thinking prerequisite to comprehending addition and subtraction. He asks, "Are there more red flowers or more flowers?" To answer the question, the child must be able to apprehend the relationship of the parts to the whole.

Perhaps one of the most subtle but pervasive forms of injustice in the life of a child is setting him up for failure in school, making him believe it is his fault, and then punishing him for it. How can this injustice be avoided?

The successful accomplishment of any learning task depends upon certain prerequisites. If a teacher sets a learning task for a child when he has not yet mastered its prerequisites, his failure is almost guaranteed. Many children are locked in school systems that perpetuate their failure. Their confidence as learners is destroyed and they come to hate learning in school. A child who hates learning suffers from a very serious disability. His feelings and attitudes work against him. Things are made worse by blaming him for failures he can do little about. The consequent frustration, guilt, and anxiety-all too common in our schools today—make life miserable for millions of children. Such misery is a prelude to more serious difficulties and troubles.

In the Anisa system, creating the conditions for success while avoiding failure is a central feature. This is done by finding out what each child knows and what he can do so that learning experiences that match his developmental needs can be provided. Children educated in this way are highly motivated to learn and do not become lazy; in-

stead, they develop an industrious attitude towards work that insures steady employment.

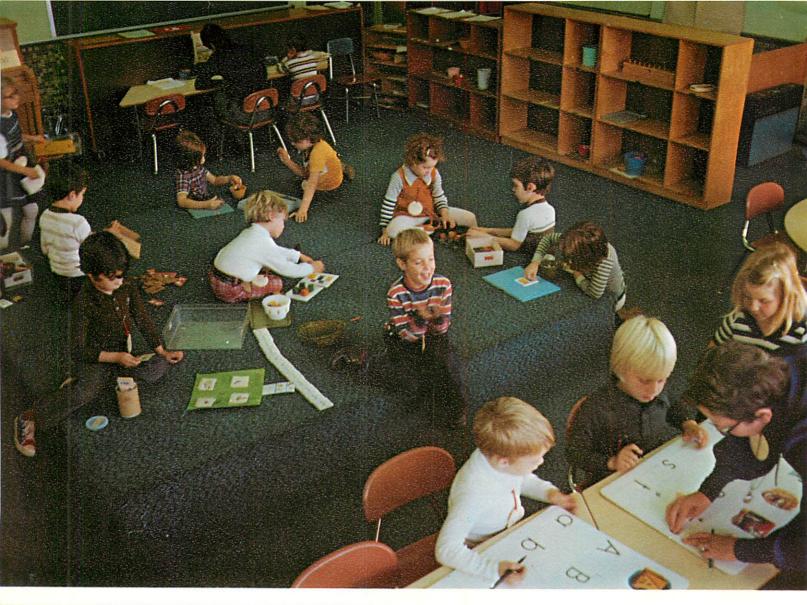
Individualizing Instruction and Learning. Because children develop in different ways at their own rates. the school that wants its students to succeed must treat them as individuals. Children have different strengths that need building on and different weaknesses that need attention. The learning experiences each child has must fit his particular needs. Moreover, children work at different paces. In traditional systems, this is often disregarded. For example, an entire class is frequently required to begin a task at a specific time and to stop working on it at a specific time. Some children finish within the time allotted and gain a sense of accomplishment. Others do not finish in time and are therefore frustrated because they did not finish their task. Yet, many slow workers are more thorough and in the long run may be building a more solid foundation for future learning. If their efforts to work thoroughly are undermined by the continual frustration of not being able to finish, they may become indifferent to learning opportunities and grow to dislike school. The Anisa Model individualizes instruction so that each child can have whatever experiences he needs, when he needs them, for as long as

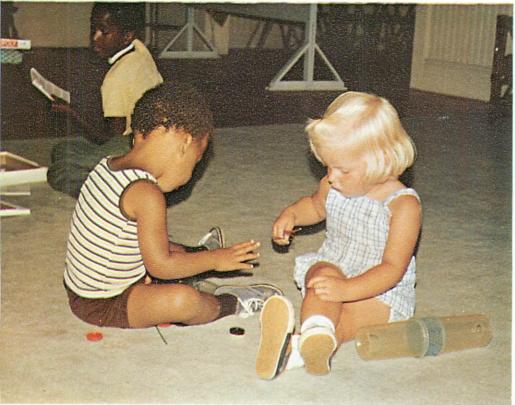
he needs them. This nurtures his love of learning and keeps him confident in his ability to learn.

Flexible Grouping. Age is one of the most misleading criteria for grouping children for instructional purposes. If science has established anything certain about the nature of human beings, it is that they grow and develop at different rates, both physically and mentally. For example, some children are ready to learn to read at age four. Others are not ready until age seven. Yet, both groups of children are normal. To expect every child to read at age 6 (first grade) is unjustifiable and a

The "soft" corner provides a quiet, cozy area for children to enjoy books, alone or with a friend. Because the environment is comfortable the children are engrossed and attentive to their experience.





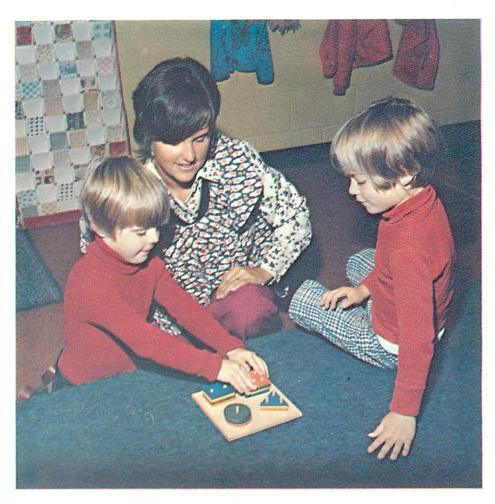


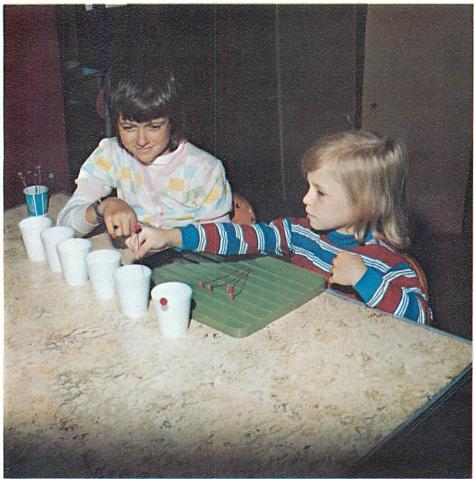
An Anisa classroom for young children accommodates a wide range of developmental levels by having available a variety of manipulable materials for pre-reading, pre-math, and pre-writing learning experiences as well as materials for fine-motor coordination. A music center complements the arts program.

Children working in small groups of 2 or 3 can become actively involved in learning and develop social skills at the same time.

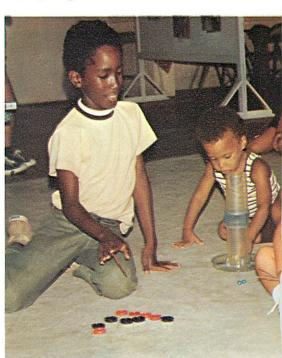
A five-year old demonstrates to another child an exercise in one-to-one correspondence which requires placing geometric shapes with holes on the correct set of pegs. The Anisa Model advocates children teaching other children. It helps a child consolidate what he has learned, gives him confidence, and teaches cooperation.

An eight-year-old child is instructing a five-year-old child in a sorting and matching exercise which is prerequisite to understanding multiplication. The Anisa math curriculum is based on research which demonstrates that manipulation of concrete objects accompanied by questions concerning quantitative relationships is a better approach to teaching math than one which depends primarily on pencil and paper work with numbers.





It is a primary principle of the Anisa approach to teaching that older children should assume responsibility to help teach younger children.





An Anisa teacher gives a child direct feedback on her progress while engaged in the process of completing a pre-reading task. This is far more effective than using letter grades.

good many children suffer because of it. In the Anisa system, children are grouped according to their developmental level rather than age. In this way children can work in groups where they have the right amount of challenge. This approach creates interest, avoids failure, and gives them a sense of accomplishment out of which confidence grows. It is important to note that a child who reads well may be very undeveloped when it comes to math or social skills. Thus a child cannot be assigned to the same group for all things. The formation of groups must remain flexible so that the needs of all children who make up the group are served.

Children Teaching Children. Experience has shown that learning is consolidated by teaching others. In the Anisa system all children consolidate their own learning by teaching other children for a certain amount of time each day. On these occasions children are grouped so that the more experienced children help those with less experience.

Grading and Evaluation of Performance. In most school systems, grades are not a measure of a child's own progress based on his own efforts. They are partly determined by what other children do. For example, a "B" usually means the child is doing better than most of the

others; a "D" means he is doing worse. A grading system of this kind is unjust for the child who starts behind and has farther to go. Such a child may receive a "C" or "D" and yet work three times as hard and make twice as much progress as another who receives an "A" but makes little progress. A grading system that ignores how much effort is put forth and how much progress is made is undesirable because it is unjust and discouraging. Other types of grading systems may use "S" for satisfactory and "U" for unsatisfactory. This approach is not very useful because it doesn't convey enough information on which to base action for improving performance.

The curriculum of the Anisa Model solves the problem by selecting for each child specific objectives suitable for his developmental level. He is then given feedback regularly on how he is progressing toward those objectives. The feedback is not given just in terms of "good" or "bad," determined by a comparison with how others are doing, but in the form of a detailed appraisal of progress with an explanation of why the progress is good or why it is not. This kind of evaluation enables the child to know what he needs to do to improve. In the Anisa system, teachers do not ask children to do things over without giving them help and

making certain they understand how and why they need to be done over. Useless busy work is avoided and every required task has meaning and purpose. This approach to evaluating performance enables a child to appreciate high quality work and eventually to demand it of himself.

The only avenue towards wisdom is by freedom in the presence of knowledge. But the only avenue towards knowledge is by discipline in the acquirement of ordered fact. Freedom and discipline are the two essentials of education.

Aims of Education, page 30

# Equalizing Educational Opportunity

The number of children who can be productively involved in a learning experience depends on the nature of that experience. In the learning experience shown—a musical game which involves identification of body parts—many children can participate. The arrangement of the physical environment facilitates the task for teachers and children alike.



Many educators and parents believe that the central problem facing education is how to equalize educational opportunity. Although progress has been made, no real solution is possible if educators continue to believe that equality means making things the same for every child. Equalizing educational opportunity means providing experiences to meet the needs of each child and this necessarily means that they will be different for different children. What is opportune for Johnny is not necessarily right for Josué; what Susie requires may not be good for Michelle. The Anisa Model goes to the heart of the problem and solves it by providing

the means for individualizing instruction—diagnosing the child's developmental needs and prescribing experiences that meet them in ways that take into account the child's cultural background. This ensures the maximum possible progress for every child and thus equalizes opportunity for educational advancement.

Implicit in the idea of equal opportunity is the equality of educational outcome. Under the individualized program of the Anisa Model, there will be considerable variability in achievement levels among individuals within a given ethnic or racial group, but no differences between the average performances

of different racial or ethnic groups. It is in the latter sense that equality of educational outcome is a necessary and legitimate expectation of a democratic society. To achieve it is to make justice a hallmark of the educational system.

The Anisa Model regards justice in the educational system as the primary guarantor of each child's opportunity to become a competent learner. Ultimately, this great gift must become a common right of all children.

# How Has the Anisa Model Been Developed?

Over fifteen years of research, planning, and experimentation were invested in the completion of the first phase of development of the Anisa Model. During this time experimental work, teacher training activities, and collection of data from the field were combined with efforts to develop the theoretical framework of the Model. Grants of over \$300,000 from the Office of Economic Opportunity supported early experimental endeavors carried out under the auspices of the Institute for Research in Human Behavior at Indiana State University. In 1969, a \$50,000 grant from the Massachusetts Advisory Council on Education to the Center for the Study of Human Potential, School of Education, University of Massachusetts, was used to study compensatory education (primarily Title I ESEA programs) in the Commonwealth. This study demonstrated that if the educationally "disadvantaged" are to be effectively served, instruction must be individualized by concentrating on the development of the processes underlying learning competence. A \$76,000 training and technical assistance grant from the Office of Child Development, Region I, put staff members of the Center in touch with the needs and problems of Headstart children, their parents and program staffs. Such experiences in the field were an impor-

tant inductive influence on the development of the Anisa Model.

The most productive period in the formal development of the Model began in 1971 when the New England Program in Teacher Education, Durham, New Hampshire, granted \$242,000 to the Center for the Study of Human Potential to complete the conceptualization of the Anisa Model and to initiate the development of a teacher preparation program based on it. A team of scholars comprised of faculty and graduate students was assembled to formalize and extend the philosophical basis of the Model and to derive deductively from this basis a coherent body of theory concerning development, teaching, curriculum, administration and evaluation. These deductive formulations have been inductively validated to the fullest extent possible by the empirical findings and promising theory accumulated by anthropological, sociological, psychological and biological sciences as they pertain to the growth and development of human beings.

Implementation of the Model in selected sites began in 1973 with the assistance of grants from Title III ESEA funds through two school districts, one in Hampden, Maine and the other in Suffield, Connecticut. Funds were also received from the Office of Child Development for a small pilot project in two Head-

start centers in Kansas City, Missouri. Other implementation efforts have been supported by private sources for private day care and child development centers.

Implementation of the Model in these various sites represents the first effort to apply the Anisa theory in practice and initiates a new and more extensive phase of development which will be devoted to full implementation of the Model, teacher preparation, research, program evaluation, and refinement of the Model.

Updating and refining the Anisa Model is possible through a computerized information storage and retrieval system. A part of that system is inspected by Dr. Daniel C. Jordan, Director of the Anisa Project, and Dr. Donald T. Streets, Associate Director.



## How Do Other Educators View the Anisa Model?

Over the last ten years, presentations on the Anisa Model have been made to audiences totalling over 50,000 people. National and regional conferences that have featured presentations on the Model have been sponsored by such organizations as the National Association for the Education of Young Children, the Association for the Education of Children International, the American Educational Research Association, the Association for Supervision and Curriculum Development, State Associations for Children Under Six, and the American Montessori Society. Numerous presentations have also been made at conferences, institutes, and workshops sponsored by state and local educational agencies, school boards, and private institutions. The reaction of those attending has been extremely positive. The following statements reflect the views of educators who have observed the development of the Anisa Model or have sponsored and participated in its implementation.

We believe that Dr. Daniel C. Jordan and his colleagues have developed a philosophy and a theory of education which are unique and remarkable in their potential and promise. The Anisa Model provides a comprehensive synthesis of knowledge about human development, learning and teaching which has been

notably absent in American education. I wish to firmly state that the community, the State Board, the administrative staff, and faculty have a commitment to try to develop and implement the Anisa Model of education because it provides for us, and we think ultimately for a large segment of the nation, the only truly comprehensive plan of education which we have seen.

Malcolm D. Evans, Ph.D. Superintendent of Schools Suffield, Connecticut

My staff and I are delighted to participate in the implementation of the Anisa Model. The response to the training has been accepted with great enthusiasm. The Model has a sound scientific base, is extremely comprehensive, and creates a great deal of excitement among teachers.

Willard Hillier Principal of the McGraw School Hampden, Maine

I am very positive about your work with the Anisa Model. It is, in my opinion, the most fully developed, fully comprehensive model in existence today. Your outline for the future of Anisa is a very positive, but ambitious, undertaking.

C. Ray Williams, Ph.D. Former Executive Director The Child Development Associate Consortium Washington, D.C. The Board of Directors of S.A.D. No. 22 and I are very pleased and proud to have the Earl C. McGraw School serve as a pilot school for the implementation of the Anisa Model.

Our two-year association with the Anisa Project staff has convinced us beyond any doubt that the Model is extremely well researched, is based on sound psychological principles, is very comprehensive in scope, and that it is structured such that it can be implemented in any school system that is interested in the improvement of education for its young people.

The teachers at the McGraw School are enthusiastic and excited about Anisa, and they are appreciative of the intensive and practical in-service training that they have received from the Anisa central staff in helping to translate theory into classroom practice.

John W. Skehan Superintendent of Schools Maine School Administrative District No. 22 Hampden, Maine

The New England Program in Teacher Education has supported the development of the Anisa Model for the last four years. We have provided financial, personnel, and dissemination resources to this research effort. We believe that the Anisa Model holds great potential

for teachers who seek to maintain and develop the highest standards of quality for instruction. We are particularly impressed by the interrelations of learning domains and the specificity of prescriptions for teaching articulated by the model.

Careful step-by-step thorough analysis and review of information about learning and teaching is the style of research and development of Anisa. Teachers and educators we have worked with are impressed by the insight and practicality of the resulting integration of knowledge in a targeted, coherent, demonstrable, instructional program. The pilot tests of aspects of the model demonstrate the potential impact of the model.

Roland Goddu, Ph.D. Director, The New England Program in Teacher Education Durham, New Hampshire

I know of no well-researched, comprehensive educational model that has the potential for productive change that Anisa possesses. During my two plus years as the NEPTE project monitor, I developed a respect for the Model as conceptualized, researched, and finally piloted. In short, I became a project advocate as well as a project monitor. The Anisa project has my strongest possible support in its efforts to expand to additional grade levels and additional schools.

Leroy O. Nisbett Director, School Facilities Department of Educational and Cultural Studies, State of Maine

Even though we knew last year how great Anisa was in helping us to train our teachers, it was not until this year that we began to fully realize its lasting power as a model and that we could continue to apply the theory in new ways again and again.

The strength of the Anisa training program lies in its comprehensive theoretical base as a framework for understanding what you're doing. There is nothing that gives teachers a greater sense of power and confidence than being armed with a comprehensive theory as a guide to

practice. We think it is the most exciting thing we have seen or experienced for training teachers. It's the best thing we've ever found. You can't compare it with other programs because it's much greater in scope and the information is so much better organized.

While we were doing many things right before we received training in Anisa, we now know why they were right. Furthermore, we now see education and teaching in a much broader context. And that's important.

Norma Busch, Director Kansas City Head Start Program Kansas City, Missouri

In the Anisa Model there is a unique blend of theories of teaching, learning, and curriculum. The integration of these theories makes possible a comprehensive teacher preparation program where the emphasis on using theory to guide practice provides the framework for evaluating the effectiveness of practice thereby testing the adequacy of the theory. Such evaluation and testing are the means by which the preparation of teachers can be improved and the quality of education upgraded. For these reasons, I believe the Anisa Model to be one of the most promising developments in contemporary American education. William E. Engbretson, President Governors State University

I believe that the Anisa project represents the most promising comprehensive model of education ever constructed. Thus, I predict that it will provide the framework within which educators can begin to understand previously unfathomed dynamics in the processes of teaching, learning, and human development. Richard J. Clark, Jr., Ph.D. Assistant Dean for Teacher Education School of Education University of Massachusetts

Park Forest South, Illinois

Anisa has brought many changes in my thinking as well as changes in my approach to teaching.

Ground rules have simplified the

management of children. Our rooms are low-keyed usually, and quieter. Children are able to attend and are learning independently. They approach activities with purpose and are eager to work. We are teaching on a more individual basis and it seems to be a more efficient, exciting way to learn.

The children are respectful and polite to one another, share willingly and resolve their differences in a friendly manner.

They handle responsibility well and appear to be ahead, academically, of the group last year.

Barbara Dowd, Toacher

Barbara Dowd, Teacher Suffield Cooperative Nursery School

Following are comments written by parents of children attending kindergarten classes based on the Anisa Model in Suffield, Connecticut. The comments are from parents who have worked as volunteers in the classroom for over 40 hours.

"I am pleased by the lack of confusion. It is good that the child is able to pick his activities. There is a loving feeling between teachers and children."

"There isn't any fighting between the children and they show a lot of patience when it comes to waiting for a turn. There is such a variety of activities for the children"

"I like the freedom children have to choose activities which interest them. It pleases me to see the interaction with all kindergarten children. The many types of snacks pleases me too. I see the respect that children have for each other and their growth toward independence."

"I like the idea of having a purpose behind an activity, which I find in Anisa, rather than the space-filling 'artsy-craftsy' things I've seen in other kindergarten programs."

"I have been pleased by the absence of clutter on walls and shelves, the quiet atmosphere, the absence of busy work, the emphasis on making a choice, and a greater variety of activities available to the children."

#### Acknowledgements

The development of the Anisa Model and its implementation could not have been possible without the cooperative efforts of large numbers of people and institutions. We are grateful to the School of Education, University of Massachusetts, Amherst, where much of the development of the Model has taken place; to Mr. Charlotte Ryan, Chairman of the NEPTE Board, and Dr. Roland Goddu, Director of the New England Program in Teacher Education, which provided generous financial assistance; to Mr. Leroy O. Nisbett, who has served as project monitor on behalf of NEPTE and who was instrumental in making arrangements for the implementation of the Model; to the Board of Directors of School Administrative District No. 22, Mr. John W. Skehan, Superintendent of Schools, Mr. Willard Hillier, Principal of the McGraw School, and the teachers, children, and parents participating in the project in Hampden, Maine; to the Board of Education in Suffield, Connecticut, Dr. Malcolm Evans, Superintendent of Schools, Mrs. Eileen Oleksak, Director of Early Education, Mr. Richard T. Lincoln, Director of the Anisa Project in Suffield, Mr. George Bondra, Director of Cooperative Special Services, and teachers, children, and parents participating in the Anisa programs in the public schools and cooperative nurseries; to the St. John's Child Care and Development Center, Fall River, Massachusetts, and Father Harold Wilson, Director, Sister Kathleen Harrington, Educational Director, and the teachers, children, and parents associated with the Center; to Miss Norma Busch, Mrs. Phyllis Jones, and teachers, children, and parents who have participated in the Headstart programs in Kansas City, Missouri, where the Anisa Model was piloted; to

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Persons interested in more detailed information about the Anisa Model may write to:

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