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THE ANISA MODEL:
PHILOSOPHY, THEORY AND APPLICATION

A Thesis Presented

BY

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1.0 INTRODUCTION

Many of my school years were spent in rote learning situations and unstimulating atmospheres in the public schools, allowing for little creativity or personal interaction with the subject matter. Often times, I could not understand why I was supposed to learn the material being covered; it had no connection to my life, it was like dead information. At times, even my teachers were bored by the material.

In my struggle to understand myself and my enviroment, and in my attempt to integrate this knowledge into a personal belief system about the nature of man, I developed several conclusions. Education is spured by creativity, is relevant to life, important and stimulating to the individual and can be very exciting; if, and this is a major if, it can be allowed to unfold at the individual's unique pace and follow directions that are personally meaningful.

A personal goal has become defined: To establish an educational environment which fosters creativity, instills a desire to learn, and promotes the use of knowledge and skills for the benefit and advancement of our society. A major motivation behind this goal is for my own children to have an opportunity to grow and interact with this new type of educational environment. Hopefully they will not find it necessary to share my personal frustrations of a less than stimulating school experience.

This goal is not a small task, but then, I have a lifetime worth of energy to devote to its accomplishment. Also, it is not

necessary to re-invent the wheel each time a new project is started. There is a ocean of information and research to draw upon, regarding educational administration, curriculum and teaching methods, as well as the results of each, as observed in student behavior and learning. This report is the result of my preliminary investigation, dipping into that ocean of information, in my attempt to discover a workable course of action which will lead me closer towards achieving my goal.

There are problems in our schools today. This statement will shock no one. Educational literature delineates many observable behavior problems and focuses our attention to where these behaviors might lead the individual student. Problems such as: A student not paying attention in class and not gaining good reading and writing skills. Is this problem due to the teacher's ineffectiveness? Or, is the child arriving at school with a significant learning handicap caused by poor nutrition? We know the production technology in the agricultural industry has changed the dietary patterns of the society in the last forty years, but how has this favorably or adversely effected nutritional values? There is research evidence to indicate that poor nutrition effects motivation and the ability to concentrate, thus effecting the ability to learn.[1] This same problem is later reflected in the formation of the child's attitudes and system of values. Can we not consciously address these problems by looking at the development of the whole child; his biological well being and his psychological development from a broader perspective than just the cognitive structure, i.e. where he is functionally able

to read or not? Another problem: The student who does not suffer from undernutrition but has a difficult time keeping pace with the class, falling further and further behind; is he dull or stupid? Is conformity the criterion by which a student should be judged? Or, should the schools' curriculum recognize the diversity of capacities and needs that exist in different human beings?

When we have a problem to solve, we must look at the foundations of the problem, not just its symptoms. Foundations of most problems or issues lie in their fundamental or philosophical orientations. We need to look for a philosophy which addresses the issues inherent in the problems. Issues like; "Why have individualized instruction?" or "Why address education with a holistic approach?". In other words, a philosophy that embodies a coherent nature of man is necessary if we are to consciously construct clear goals and models for our educational system, rather than haphazardly muddle through attempts to patch this leak or repair that rip, never realizing that actual solutions involve more profound work.

A philosophy of education must go beyond studying the history of schools or examing ideas formed from contrast or reaction. To understand how education takes place, we need to know more than the criterion for judging what goes on in schools. Where as this is important, we also need to know the nature of the creature which is gaining this education. John Dewey stated this point well, in 1934:

> ...the only way of deciding what education should be, at least, the only way which does not lead us into the clouds,

> is discovery of what actually takes place when education really occurs. And before we can formulate a philosophy of education we must know how human nature is constituted in the concrete; we must know about the working of actual social forces; we must know about the operations through which basic raw materials are modified into something of greater value. The need for a philosophy of education is thus fundamentally the need for finding out what education really is.[2]

The literal meaning of philosophy is the love of wisdom, and this certainly is a part of the reason for examining a philosophical system of education. Alfred North Whitehead's love of wisdom, no doubt, was a driving force in his research towards gaining an understanding of the nature, origin and purpose of human life and the universe. He attempted to create a consistent ordering of these beliefs, which will serve as the bases for the philosophical system used in this paper. His ideas are further discussed in section one. His educational theory identifies first principles and derives some of it's generalizations from his broader philosophical conclusions; bringing some coherent thinking and unity to the way of looking at the educational nature of man. His views offer originality, sensitivity and convey a sense of significance for the individual. His major concern was to free education from "inert ideas" by translating these concerns into possible courses for action.

From Whitehead's philosophical viewpoint, a theory of human development and a model of an educational system has been developed. An interdisciplinary team of scientists, headed by Daniel C. Jordan, at the University of Massachusetts, Amherst, (1970-1978) continued the application of Whitehead's philosophy to educational theory and developed an education model; The Anisa

Model[3]. If the Anisa Model is to be a paradigm, it must rest on the best thinking of human beings. Whitehead's thinking was a summary of much of mankinds intellectual history. Section two of this paper contains a brief outline of the major aspects of this comprehensive plan for educational renewal.

A practitioner will not have a basis of understanding unless he is connected to a theory and that theory is connected to a philosophy. Without a theory or philosophy, he will only be a technician. A new school structure should not emerge just because a technician created of a new curriculum. On the contrary, a new school needs a new vision of the future of the education of children, a new ideal, and based on a sound philosophical understanding of the nature of human development. A well stated theory will serve as a framework for the school's overall planning, identifying goals and objectives and will be a helpful tool in daily operational decisions; the more comprehensive the theory, the greater its efficiency. One such practitioner has adopted and implemented the Anisa Model in the operation of a school; The Kipohtakaw Education Program, on the Alexander Indian Reserve, Alberta, Canada. The reason this school adopted the Anisa Model arose from desire to deal with the Reserve's frustration over the education of their children; the need for educational reform was great. This example of the Anisa Model in action will be explained in section three of this paper.

The concluding section of this paper will evaluate and compare the actual operations observed on the Alexander Indian Reserve with that of the ideals set forth by Whitehead and within the structure of the Anisa Model. How practical is this model?

Which of the concepts work? What areas need further developing?

Of course, any study of viewpoint contain limits; in the case of this paper, Whitehead's views, the complexity of the Anisa Model and the cultural concepts used in Alberta are much richer than could possibly be expressed in this brief study. There are many other philosophers, theorists or practitioners in the area of education. However, I chose these three examples because they address the problems in education from the foundations of the problems, not just the symptoms; using both a rationalist and empiricist perspective. With this philosophical basis and an operative model as a guide, my own work can be continued; the development of an early childhood educational center.

2.0 THE PHILOSOPHY

Education should provide the means and the stimulus to a good life in a civilized society: Alfred North Whitehead was devoted to this ideal. His writings on education offer wholistic patterns which can be used for revising educational theory and practice. His thoughts were an extreme departure from the current modes of thought (in 1925, as well as now) and were connected to his overall speculative and cosmologic philosophy.

The philosophy of Whitehead did not throw out older philosophies, but attempted to connect and harmonize all sciences. He excepted and expanded upon the ancient principle that everything in the universe is connected to everything else. To understand any one thing, it is necessary to also understand it's relationship to all things it is connected to. To understand man, it is necessary to understand his relationship to the world around him and within him. Man connects himself (through his use of memory, consciousness and use of symbol systems) to every aspect of the universe, including ultimate unknowables.

In his quest to understand man, Whitehead realized the need for a broad base of reality. He organized creation into five ontological levels:

1) mineral (non-living)
2) vegetable
3) animal
4) man
5) deity (pure potentiality).

Any comprehensive theory needs to be well ordered and

contain excellence in thinking. In working for a balance in ideas, his theory of excellence unified theories of the rationalist and the empiricist.[1] Whitehead listed four criterion of excellence in thinking. Thinking must be: a) Logically consistent. Statements about the system can not be self-contradicting. b) Coherent. For a system to be coherent, it needs a first principle or set of principles upon which the whole system should rest, (everything should "hang together" smoothly). c) Applicable. It needs to be applied to life, have relevance in life. d) Adequate. The scheme should be so big and so general that no idea or item of experience would be left uninterpreted, (a metaphysic of "openness", i.e. indeterminism, as opposed to strict "determinism"[2]). The concluding section of this paper will use these four criterion for evaluation of The Anisa Model in a theoretical sense and as implemented at the Kipohtakaw Education Center.

2.1 Whitehead's Set of First Principles

With his criterion of excellence in thinking, Whitehead proceeded to identify a set of "first principles" of the universe, principles that are common to everything.[3] The most fundamental operation, the one thing that is always present is change. To understand the reality of anything is to understand the change process. Every individual is in his own process of change, his own continuum of growth; the process of becoming. As an example; Whitehead feels that man is on a never ending search for truth, which man never fully attains, only moves closer

towards a greater understanding.[4] This process of becoming is not a static actuality, but a changing process.

Another "first principle"; change presupposes potentiality. Potentiality is constantly being actualized. This process is called creativity. Education should be the thrust behind creativity. Education is the process of drawing out each individual's potential into developing actuality. Thus, education is synonymous with development. Everytime you release your potential, there is a new basis of potential; this makes the potential unlimited. "Education is the acquisition of the art of the utilization of knowledge."[5]

For a system of beliefs to be relevance to life, there needs to be an understanding of what is reality. Another point Whitehead makes in his set of "first principles" is to identify two forms of reality, both in operation simultaneously; actual forms and non-actual forms of reality. Actual forms of reality can be seen, felt, predicted, measured, tested or proven. The non-actual forms are subjective; things felt in the mind, heart or soul, one's intuition, hope, faith or any other abstract notion that can have an effect on your life. For example, both truth or falsehood effect your reality.

To translate this to the field of education: At any one time, man is a product of his immanence and his transcendence; an effective teacher or parent will recognize and help develop both aspects of man. His immanence is everything he has ever done, his past. It reflects his actual form of reality and is stored in his memory. Transcendence is the entertainment of possibilities

or what he can become; the non-actual form of reality. To be able to see the possibilities of the child and believe in him or to make the child believe in himself so the child can understand he has unlimited potential is a possible definition of an effective teacher or parent.[6]

2.2 Self-realization

A reoccurring theme in Whitehead's writings states that the purpose of education is to stimulate and guide self-development; the precess of self-realization. The joy of discovery, through creative thinking, leads to an understanding of the individuals experiences; which comprise his life. One aim of education is to allow an individual to effect his or her self-creation; this adventure leading to growth and advancement. The process of self-realization is a natural goal. Self-realization is accomplished through an internal drive to reach this goal: A goal which needs not be imposed by society.

Learning is the means which allow man to move beyond himself; a "creative advance in novelty". This ability is realized by accumulating the knowledge of the past, bringing it into focus on the present, and with this knowledge, structure the future. Thus; creative advance is transcending apparent limitations through learning.

The formal process of education is to maximize situations which encourage an interest in creativity and understanding. The job of the educator is that of assistance to the individual towards his goal of self-realization. The job of schools or teachers can only be that of guidance, it can not perform the

task for the individual. Each individual is responsible for his own education.

2.3 Whitehead's Main Visions of Education

2.3A Education is alive. Children are living and growing active organisms. Their only concept of value or the meaning of importance lyes in the present. Gaining understanding is the joy of discovery, leading to an understanding of the stream of events which comprise life itself. Lessons from the past, a full sweep of history and a full scope of organized thinking in math and science, can help in our understanding of our life today. It must be meaningful for today!

Whitehead lists two aspects which are vital to the process of gaining understanding: First, the student must find and appreciate the importance and value in what he is studying, and second, he must prove its worth to himself. He must see a relationship to some essential characteristic of his intelligent or emotional perception.[7] Ideas are utilized and meaning is gained through sense preception, mental activity, feelings, hopes, desires and adjusting thought to another thought. Ideas are the tools of his actual and non-actual form of reality or his immanence and his transcendence.

In the activity of gaining understanding, Whitehead emphasises learning a few large ideas, "actively considered, and constructively used" rather than a monotonous panoply of details. This self-activity is a basis for education; of critical importance however, is that this awakening must be enjoyable or

it will not progress. Enjoyment or satisfaction is accomplished in many fashions, several suggested by Whitehead are; doing things skillfully, understanding what you are doing, and thinking how this idea relates to life around you.

2.3B Education has unity. Not only does the student need to see the value and importance of education, but it must be useful in some personal way and have some social value. With the enormous amounts of information and the shortness of time for education, combined with the national demands for educated individuals, there is a paramount and vital need for a coordinated curriculum. Whitehead describes curriculum should be as the "seamless cloth of learning".[8]

When deciding on curriculum, Whitehead feels there is really only one topic; life and all of its manifestations. There are several major beliefs regarding this curriculum. The student should have the ability to utilize his learning and through its application, to improve the world. The material being covered should be sensitive to beauty and harmony of pattern. The learning experience should reach a religious awareness for it stretches beyond the immediate experience, into the non-actual forms of reality.

A good educational objective would naturally be to assist the student in actualizing his ideals. Whitehead offered some very definite suggestions on curriculum design that could assist this process. "We enunciate two educational commandments, Do not teach too many subjects, and again, what you teach, teach throughly."[9] There is always a problem of time, not all worthy subjects can be mastered. Instead of fragments, reduce bulk and

the dead useless details, emphasize the important, valuable leading truths in a general education through secondary school Then the student will select an area of specialization according to capacities and interests.

There are three main areas of curriculum outlined by Whitehead; literary curriculum, scientific curriculum and technical curriculum.[10] Each curriculum should include elements of the other two.

Literacy Curriculum: This is the study of language, verbal expressions, structure of language, analysis of the relations of language to the states of mind conveyed. There is a relationship of language to feelings, language leads to expression of aesthetic appreciation. A most important aspect, "wisdom of the world is preserved in the masterpieces", studying them aids to learning in all the curriculums; development of language, logic, philosophy, history and aesthetic appreciation of literary beauty.

Reading the classics gives the student not only history lessons, but allows the student to experience the mind sets of the culture represented; the feelings, thinking and acting of the culture. This process sharpens their own logical thinking process. Literary education has value in the satisfaction of many interests and gives vision which is necessary before you have control of life or a personal direction. Whitehead states:

> The sort of ideas we attend to, and the sort of ideas which we push into the negligible background, govern our hopes and our fears, our control of behavior. As we think, we live. This is why the assemblage of philosophic ideas is more than a specialist study. It moulds our type of civilization.[11]

The study of philosophy has a definite value in helping us avoid a biased emphases or fuzzy thinking. There develops a sense of importance by looking at fact, theory, alternatives and ideals all together, as well as in finding and understanding criticism of principles when determining the proper meaning to fundamentals of various sciences. Philosophy aids in the development of foresight and insight in the development of a sense of importance and worth of life.

Studying the classics can produce a necessary enrichment of intellectual character more quickly than any other alternative discipline, however, it is necessary to keep in mind that the study of the past has its uses as well as its dangers. Whitehead warns us: "Nothing does more harm in unnerving men for their duties in the present than the attention devoted to the points of excellence in the past as compared with the average failure of the present day."[12] He also warns us about knowledge not keeping any better than fresh fish. If the student is to be excited about knowledge, it must be presented with freshness and a sense of immediate importance, as if it were just drawn out of the sea.

Scientific Curriculum: Training in the art of observing natural phenomena and in the knowledge and deduction of laws concerning the sequence of such phenomena. The task of science;

> ...is the discovery of the relations which exist within that flux of perceptions, sensations, and emotions which forms our experience of life. The panorama yielded by sight, sound, taste, smell, touch, and by more inchoate sensible feelings, is the sole field of activity. It is in this way that science is the thought organization of experience.[13]

Science is the art of thought, of making clear conceptions of the

important points; inductive logic is the logic of discovery, deductive logic is the logic of the discovered.[14]

Math is the art of deductive logic. One of the main objects of the inclusion of mathematics in the educational program is to train pupils to handle abstract thoughts. This is reached through a building block approach. Practical examples enable the student to learn and retain the basic concept, necessary for day-to-day application. Students with inclination to math can advance to higher mathematical learning; developing the ability to relate the specific instance to the general scheme of thought. Mathematics can be used as a tool for understanding the characteristics of physical science, such as phenomenal objects, time, space or fields of force. Whitehead feels the contribution of science is "the exposition of the fact that our experience of sensible apparent things is capable of being analyzed into a scientific theory, a theory not indeed complete, but giving every promise of indefinite expansion. This achievement emphasises the intimate relation between our logical thought and the facts of sensible apprehension."[15]

Technical Curriculum: The art of using knowledge for the manufacture of products. It requires hand-eye coordinated action. It also requires judgement about the natural processes of which must be utilized in the manufacture of products. The scientific side of knowledge is important here.

There is a connection between intellectual activity and the body; coordination of the senses and thoughts and a coordination between material, creative activity and brain activity. This connection is intimate and reciprocal. A lack of handicraft

contributes to brain lethargy.[16] Let's look at an example: "First-hand knowledge is the ultimate basis of intellectual life."[17] What are we doing by reading books? It is a form of second-hand knowledge. We do not remember it as well as something we physically did. Looking at this concept from another direction: Book learning is a cognitive approach to mental activity; a left brain activity. A right brain approach would be to use the affective domain; that of feeling, using the senses.[18] The ideal for a curriculum would be to combine right brain and left brain learning skills or to translate thought into manual skill and manual activity into thought. If you want to understand something; make it yourself. "The second-handedness of the learned world is the secret of its' mediocrity."[19]

This creative experience, which Whitehead defines as technical education, happens while you think, it helps release your thoughts and teaches you to coordinate your thoughts with your actions. This activity will help you to relate thought to foresight and then on to achievement. Technical educational leds you to discover theories and to see where the theories do not work.[20]

An effective pace, according to Whitehead, in implementing a technical curriculum; it should slowly be intergrated into the standard school curriculum around age thirteen and each year increase in proportion.[21] Technical education should not be highly specialized manual aptitude but needs to be broad in scope, resulting in workers with adaptable skills.

Societal Advantages: Whitehead lists many advantages for

this three sided curriculum, the following are a few of the outstanding reasons[21]. The society needs a large supply of skilled workmen who: 1) Enjoy their work; this will lead to increased production, quality of work and pleasant co-workers. 2) Have inventive genius, with new ideas and better ways of doing things. This requires pleasurable mental activity. 3) Refreshed workmen are more productive. Workers need relaxation. Literature develops imagination, which is creative, which is enjoyable. Literature is really creation; its written word, its music, its associations are just the stimuli. The vision they evoke is our own creation. Thus, literature gives relaxation or exercise to mind. If you are working a technical job, you suppress this activity during working hours. Art has a similar relaxation function through creativity. The relaxation service of literature and art is an important basis for physical and mental health, and probably is second only to sleep and food for a healthy life.

> The curriculum must have unity, as Whitehead stresses.
>
> There can be no adequate technical education which is not liberal, and no liberal education which is not technical; that is no education which does not impart both technique and intellectual vision. In simpler language, education should turn out the pupil with something he knows well and something he can do well."[23]

2.3C Education has Rhythm. Whitehead's doctrine of rhythm is a major contribution to educational philosophy. In a striking and sound manner, he describes the novelty and intellectual progress of children as they grow in general and in particular as they advance in learning any subject. This doctrine takes into account the periodic character of growth, changes in interest and

attention of the child.

Whitehead's entire concept of concrescence emphasises the individual's development in a unique and creative manor. It follows that education should also promote maximum individual uniqueness, not social sameness. Several important individual developments come together here; individualized instruction, learn-by-doing techniques, and continual cycles or rhythms of growth. Each point to the importance and uniqueness of the individual. The problem is, how to make education correspond to the natural rhythm of growth in each and every child. As an attempt to answer this question, we will look at a very general overview of Whitehead's concept of rhythm.[24] At the core of each stage of growth is the necessity for the student to be enjoying the process, or we are not maximizing the process of education.

The first stage of mental growth is termed, Romance. This is the first apprehension of a subject, filled with vividness, novelty and discovery. With freedom to react to glimpses of material, there is excitement in moving from experience to a relationship of importance; the discovery of value, and then to other unexplored relationships. This is the development of curious thought, ideas and imagination. The age of this period spans from infancy to around twelve years old. The subjects introduced include language, history, science.

The second stage happens for different subjects at varying ages, in the range of twelve to sixteen or around the end of secondary schooling. This is the stage of Precision, the important aspects are exactness, analyze fact and then fitting fact into analysis. One danger in this stage is that the stage

of romance must have occured completely for each of these subjects or this stage of precision is barren. Without excitement and imagination about a subject, developing facts and analysis of such will have no sense of importance - no value.

The third stage of mental growth is Generalization, occuring during the age range of sixteen to twenty-two, or university level. This stage is a return to "romance" with the added classification of ideas and relevant techniques gained in the "precision" stage. This is a very individualized period, where the student's interest governs the direction, going from passive training to active application. The student looks at general ideas and how they apply to concrete cases, shedding details for principles. The purpose of this stage is to convert knowledge gained in prior education to the power of action as an adult. "Mental cultivation is nothing else than the satisfactory way in which the mind will function when it is poked up into activity."[25]

A source of failure of educators, according to Whitehead, has been our inability to cope with the particular and unique patterning involved in individual development and individual achievement. Some progress towards a solution to this problem is one of the greatest contribution which any philosophic system can make to education. Whitehead has developed a doctrine which answers for individual differences.

2.3D Education has Quality. It is Whitehead's conviction that the purpose of education is to stimulate and guide self-education, which is self-realization. "Beauty, moral and

aesthetic is the aim of existence and artistic satisfaction are among it's modes of attainment."[26] The study of aesthetics reveals the ultimate good sense of a civilized society. The ideals of the good life are; truth, beauty, adventure, art and peace. Art inspires men to greater efforts and more exhaulted goals because it can make unpleasant living conditions more tolerable. This desire towards beauty will send the student into the world with a desire to use his powers of creation towards achieving the ideals of the good life. The courage which urges men towards new creative adventure is the final educational end.

> The essence of education is that it be religious. Pray, what is religious education? A religious education is an education which inculcates **duty** and **reverence**. Duty arises from our potential control over the course of events. Where attainable knowledge could have changed the issue, ignorance has the guilt of vice. And the foundation of reverence is this perception, that the present holds within itself the complete sum of existence, backwards and forwards, that whole amplitude of time, which is eternity.[27]

The educational program can only be given value in accord to the particular combination of that program and the individual's acceptance and adaptions; a mutual relationship between the individual and the entire universe. Whitehead's hope is that he sketched out lines for further work, and he has indicated the importance and immensity of the task. One such attempt, The Anisa Model, applies the philosophic theories and educational thinking of Whitehead to educational practice.

potentiality. Potentiality is translated into actuality by interaction with the environment. This is the process of creativity. Traditional schools tend to view children in terms of their products, not their process of becoming. All people are in the process of becoming and are making a perpetual creative advance into novelty. The process of becoming involves both an individual's immanence (collective past stored as memory) and his transcendence (the capacity of a human being to entertain possibilities and go beyond them). Essential to transcendence is the organization of one's energies around an ideal. Without ideals, we try to avoid pain and seek pleasure. This reveals a society with a lack of trust in self, which is a lack of faith. An educational model must address the questions: What are the culture's ideals and do our children pursue these ideals?

The Anisa model identified two broad and mutually dependent categories of potentialities; biological and psychological. Nutrition is the primary element, (also includes, water, air, sunlight, exercise, rest, and shelter), in actualizing biological potential and learning is the main factor in the actualization of the psychological potential. The implications for education are numerous, there is an obvious link between proper diet and the ability to pay attention to what the teacher is saying; limited attention means limited learning.[2] All individuals have the potential for both good and bad health. The key factor to releasing biological potential is the presence of nutrients, (all the nutrients you need, when you need them and for as long as you need them), along with the absence of toxins; determining the

3.0 THE THEORY AND MODEL

Whitehead's philosophy specified the nature of human development as it relates to the universe through interaction with the environment. Whitehead defines development as the translation of potentiality into actuality; this translation is creativity. Using these characteristics of development, a theory has been generated; the Anisa theory identifies the process by which this transition takes pace. This chapter is an attempt to briefly summarize this process, with regard to human development, curriculum, teaching, evaluation and administration. All these areas need to be logically consistent and coherent with the philosophy.

3.1 Human Development

Following Whitehead's philosophy, each individual, as a self-creating organism, is involved in a continuous and progressive stage of forming his personal identity. A successful educational model must have a clear understanding of the developmental nature of the individual it is to effect, and to be practical it must demonstrate the workability of the new system. The focus of the Anisa theory is that man's purpose is to gain mastery over its own environment; the educational objective is to thus provide the means by which man can take charge of one's own becoming.[1]

The process of becoming is viewed as changes in the individual. Change presupposes process, which means there exists

availability of energy to clearly think, feel and act at optimum levels. With this proper combination, and if there are no genetic deficiencies and the interaction with the environments are right, the biological integrity of the individual can be safeguarded. The school and the family must work together in understanding the relationship between nutrition and the capacity to learn. Diagnosis and remediation for students with biologically-based learning disabilities is a prerequisite to successful learning. Diets need to be individualized. The model calls for a nutrition education program which will help establish a right attitude toward nutrition, development of good eating habits and acquisition of actual knowledge about nutrition. The collaboration with the home will insure changes in eating habits that is consistent with the knowledge on nutrition and human development. Mental or psychological potentials can not be achieved without the biological potentials being achieved.

> The implications for education are fairly obvious. Not only is proper nutrition essential for maintaining the biological integrity of the organism, but it is also indispensable for the release of psychological potentialities because biological integrity is a necessary, though not sufficient, condition for their expression.[3]

Psychological potentials, an individual's abilities, skills and talents released through learning, have been established into five basic categories: (see Appendix I)

Psycho-motor Potentialities: This involves the capacity of the individual to organize the body and its movements in relation to space, gaining maximum control over the voluntary muscles. This functional awareness will contribute to the development of

balance and posture. This aspect of learning is essential to many types of activities (walking, writing, playing, working) and is highly integrated with the other developing potentialities.

Perceptual Potentialities: Perceptual competence referes to how you receive the information of the environment through the five modes of the senses, differentiate and integrate that information into generalizable patterns which interpret the individual's reality. Through proper training, efficiency in processing information can be increased, allowing the individual to make use of it to the best advantage. It is through perception that the individual is kept in touch with his enviroment; the ability to take in information and make sense out of it.

Cognitive Potentialities: Learning how to think, using the senses, the body and the emotions to gain a mastery over the environment is a major focus of the Anisa model. Some of the areas of importance are the ability to abstract, find relationships, and establishing problem solving through the use of logical reasoning.

Affective Potentialities: The capacity for organizing emotions and channel them to appropriate avenues is the basis for stability in life. How one feels is generally learned, but rarely taught in a deliberate mannor. Emotions are organized around hope and fear. Affective competence is organizing the emotions in such a way that we enjoy hope related emotions and do not enjoy fear related emotions. Schools today produce students with emotions organized in a reversed manor.[4] Taking charge of you own emotions includes coping with and managing emotions in

terms of a sense of purpose or subjective aim.

Volitional Potentialities: This is the capacity of the individual to plan, to organize, and execute a task; to willfully affect one's environment. Setting and creating steps to accomplish these goals are necessary skills in life, which can become more efficient when explicitly taught and developed. It is also necessary to know the consequences of ones' actions.

Development and growth involves the translation of these potentialities into actual powers for the individual's use. This process reflects the individual creativity or learning competence. Simply stated; learning competence is knowing how to learn. It is:

> the conscious ability to differentiate aspect of experience, whether internal or external, integrate them into a new whole, and generalize the whole to different situations. Differentiation, integration and generalization thus comprise the common denominator of all types of learning reflected in the different categories of potentialities."[5]

Learning **how to learn** is rarely taught in the classroom. This is one aspect where the Anisa model operated differently from traditional schools that focus is on **what to learn**, becoming a storehouse of information.

> Since the development of learning competence enables the child to become an active determiner of his own destiny and gives him the fundamental power of extending and releasing all other potentialities, it constitutes the major pedagogical thrust of the Anisa Model.[6]

Developing learning competencies will depend on the individual's experiences which permit him plenty of opportunities to differentiate and intergrate these experiences in accordance with some purpose and to then generalize the intergration by utilizing this new understanding as power in dealing with slightly

different aspects of the environment at some later experience. These learning competencies are critical features of each category of potential. In the model there is a breakdown of each category of potentialities in sub-processes, further explaining learning competence in that category. (See Appendix I for a more complete breakdown.) Each category contains a complete description of the process, a theoretical justification, means to translate that process into an educational objective, a number of suggested learning experiences designed to foster mastery of that process, and a means of evaluation to aid in determining if the educational objective has been achieved by the learner.

Being a competent learner enables the individual to take advantage of opportunities in life and to handle problems by working through them towards a solution, instead of falling victim of despair. This model is a scientifically-based, comprehensive plan for educational renewal that will foster each individual's natural love of learning, so they can take charge of the actualization of their own potentialities.

3.2 Curriculum

The focus of the Anisa curriculum is based on the individual and his experiences as he interacts with the environment. The theory of human development rests on learning competencies within a category of potentialities, similarly, the theory of curriculum rest on categories of the environment and organization of information about each category which will provide experience for developing learning competencies. The aim of the curriculum is

to help each student to become a highly competent learner; to understand basic facts about the world; to master the basic symbol systems; and to form values which will be of positive benefit to himself and society.

The categories of environment in the Anisa theory corresponds to whiteheads ontological levels of creation; as shown in the chart below. The curriculum is designed to enable the student to gain an understanding of each level of the environment and to intergrate this information and develop a generalization of the whole environment. This generalization will effect his own destiny and process of self-realization.

ONTOLOGICAL LEVELS

AND

CLASSIFICATION OF ENVIRONMENTS

ONTOLOGICAL LEVEL (Whitehead)	CORRESPONDING CATEGORY OF THE ENVIRONMENT (Anisa Model)
MINERAL VEGETABLE ANIMAL	PHYSICAL (or non-human)
MAN	HUMAN
DEITY (pure potentiality)	UNKNOWNS (ideals and/or assumptions about the unknowns)

Curriculum, as defined by Anisa,[7] is comprised of two interrelated sets of educational goals: The Process Curriculum is designed to assist the child to gain competence as a learner (actualizing potential) while interacting with the Content

Curriculum; the information about the world. Culture is the source of this information and the organization rest on the categories of the environment. This information is taken from the culture, is organized by the categories of the environment and requires the use of symbol systems (math, language, art) to convey that information. As the student develops competencies with these symbol systems and they become integrated, attitudes and values form. These values guide the individual through life and constitute his personal identity.

3.2A The Basic Developmental Competencies: The five basic categories of psychological development, as discussed above (psycho-motor, perceptual, cognitive, affective, and volitional), each constitute an area requiring the development of learning competence. Each category is comprised of numerous processes. All together these are concerned with the "how's of learning": how to perceive, how to think, how to to feel, how to formulate goals and accomplish them. The curriculum outlines experiences required to give particular kinds of interactions with particular environments which will allow the student to master the basic processes of each developmental dimension.

3.2B Symbolic Competencies: In our attempt to understand reality, (both forms; actual and non-actual) and consciousness (the ability to know that we know), we form and use symbols (letting one thing stand for another). The vehicle of consciousness is symbolization. The three basic symbol systems are mathematics, language and the arts. These interlated symbol

systems are the primary transmitters of culture from one generation to the next. They are of major emphasis in the curriculum for they "are used to assimilate information about one's own self and to manage the overall process of self-actualization."[8]

Mathematics involves the process of understanding abstract relationships; measurable quantity and various types of relationships among phenomena. It includes the logical structures of classification, seriation and conservation, use of numbers in arithmetic operations, and all higher and specialized forms of mathematics. Mathematic competence is the tool used in understanding the mechanics of the physical environment, (I will return to this concept later).

Language is the symbol system used to communicate information and ideas. There are three basic components used to communicate; phonalogy (speech sounds), syntax (grammar), and semantics (meaning). Effective communication and memory is essential in all areas of development. For this reason, developing the ability to speak, read and write effectively is at the center of the content and process curriculum. Language competence is the tool used to comprehend and interact in the human environment.

Art refers to all artistic forms; music, dance, theater, painting, sculpture, poetry or literature. The basic function is

> ...to create visions of possibility through the construction of imaginative forms. The order expressed is the beauty produced. The criterion of beauty is the creation of order and order has an ultimate kind of significance because it is necessary for survival.[9]

It is for these reasons that art is heavily emphasized in the

curriculum. Artistic competence assists the self in structuring the unknown environment. The unknown environment is made up in part by our non-actual forms of reality and in part by our consciousness which enables us to know when we do not know or dealing with the unknowable. Curiousity is developed from knowing we do not know something, artistic forms help us to give structure to these unknows and partly satisfy our curiousity.

The traditional curriculum is usually only organized around content and has no transfer of knowledge between the disciplines. For example: A student proceeds from a class in biology to music to English to mathematics and often sees no connection between the work. The Anisa curriculum provides for integration by emphasizing the process as well as the content. For example: The English teacher can make the student aware of the cognitive process of classification as a way to organize parts of speech. This same process is required to organize information in music or mathematics or science, thus a large portion of what is learned in English can be transferable to the other subjects. This transferability of knowledge is a component of learning competence.

3.2C Higher Order Competencies: With a blend of the basic competencies (process curriculum) and knowledge about the world (content curriculum) and a mastery of the symbol systems (structured in reference to the three basic environment or ontological levels), the student will begin to develop values and higher order competencies in each of the three basic environments. This value formation is the culmination of the

process of individualization.

Development of Technological Competencies: To interact more effectively in the physical environment, using mathematics as tools, the individual can begin to discover and understand the laws of science. Technological competence is putting this knowledge to use, in the operation of natural and man make objects, to improve the quality of life. An individual without technological competence in this age of increasing technology will be at a considerable disadvantage. There is a danger to society if technology is uncontrolled and thus not blended with the other higher order competencies; moral/social and religious/philosophical principles.

Development of Moral Competence: When interacting with the human environment, equiped with information about mankind and a language to communicate, an individual develops social attitudes and values. These attitudinal values are the basis of moral competence; the degree of effectiveness in developing and applying principles of human relations. The fundamental principle underlying human relations is justice; it gives order to society and insures the highest quality of life for all people. Children learn moral principles in several ways; example, instruction, reward and punishment. They apply these standards (honesty, truthfulness, avoidance of back-biting, being helpful and supportive to others) in determining their course of action; whether dealing with a group, family or self.

> A vital aspect in the development of moral competence is that children need to feel that they are worthwhile and valuable human beings, which will lead to the generalization that all human beings are of value. In this way, a proper

regard for the value of life and of the needs and feelings of people can be established and sustained.[10]

Development of Religious/Philosophical Competence: When dealing with unknowns, one begins to give it structure, develop ideals and arrive at basic beliefs about the ultimate truths of the world. This interaction leads to the development of religious or philosophical values and attitudes. To use these values will give perspective to one's life; acting according to one's principle rather than according to material considerations or social pressures. Facing unknowns requires faith; faith in oneself to deal with unknowns in a constructive way or faith in counting on other people around you. It is this act of faith which is called religious, not in the sense of any particular religious denomination.

Self Development: As the student is mastering these processes, he is developing himself, (Whitehead refered to this as self-realization). To clarify this, the chart below lists the basic categories of learning competencies and the three higher order competencies along with the corresponding learning which constitute the process of self-identification.[11]

PROCESS OF SELF-IDENTIFICATION	
Mastered Competency	Accomplished Learning
Basic Competencies:	
Psycho-motor	Body Awareness
Perceptual	Self-image
Cognitive	Self-concept
Affective	Self-esteem
Volitional	Self-determination
Higher Order Competencies:	
Technological	Maintenance of Health
Moral	The Social-Self
Spiritual	The Ideal-Self

3.3 TEACHING

The Anisa theory of teaching exemplifies the following statement by Whitehead:

> 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's 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.[12]

Teaching is defines as the process of arranging the environment and guiding the child's interaction in such a way so the child can become a competent learner, while achieving the goals specified by the theory of curriculum.

Arranging the environment requires an analysis of the environment and adjustments made so that the learner will have opportunities for differentiating, integrating and generalizing

experience for the proper level of development. Several factors to consider in arranging the human environment; proper materials for particular educational objective, proper lighting, temperature, sound and ventilation, and appropriate social grouping. Social groupings are an important consideration. Some educational objectives are better met with group interaction, at other times it is preferable to work alone. Using more experienced children to teach less experienced children is promoted by the non age-graded classrooms in the Anisa model. These adjustments to the environment will allow the child to maximize the learning experience.

The Anisa model incorporates a plan for training teachers who know how to nurture a love for learning, how to assist the student to become a competent learner and who can teach the **"how's of learning"**. Since teachers are a model for the learning process, it is important that the teachers themselves be competent, enthusiastic, and knowledgeable learners.

"Learning is facilitated by acting upon environments rather than passively receiving stimuli, teachers must know how to turn passive learning experiences into active ones."[13] Other critical objectives and abilities[14] for Anisa teachers are:

1) to create learning experience that promotes the educational objective.

2) to analyze ongoing activity and suggest a number of possible educational objectives that pertains to process or related content.

3) to intervene at appropriate times to naturally guide the child's interaction, enabling him to achieve the educational

objective.

4) to be able to distinguish between process and content so the enviroment can be properly arranged to both master the process and assimilate the content.

5) to balance learning activities between providing explanation or demonstration and guiding the interaction with the environment in such a way that the child will discover the idea or events for himself.

6) to understand the dynamic power and effective use of feedback, reinforcement, reward and punishment in guiding the interaction towards internalizing the desired process which underlie learning competence.

7) to arrange the environment to allow for the needed space or the proper organization of time to achieve the educational objective.

8) to possess techniques that will give novelty or interest to learning activities which require repetition and practice, allowing the student to learn how to transfer that knowledge instead of being bored.

9) to understand the role of modeling competency in learning and the use of feedback in developing a relationship with the student.

These teaching techniques will assist the student in actualizing his potential. Whitehead adds one more role for the teacher, "The first thing that a teacher has to do when he enters the classroom is to make his class glad to be there."[15]

3.4 Evaluation

Before an effective program of teaching can be implemented, an extensive evaluation of the child's abilities is required. An Anisa system employs a specialist for the purpose of testing basic competence levels, makes assessments and recommendations for the individual student. By knowing the individual's abilities, the teacher can, through the means of individualized instruction, provide the opportunity to differentiate, integrate and generalize experience at the appropriate level and sequence. Initial evaluation includes testing for perceptual competence, development of the motor-base capacities, as well as the cognitive level of the student.

As the student develops, he will assume a more active role in diagnosing and evaluating his own needs. At this point, he will start to arrange his environment and interaction within it, based on his own interests. As an independent learner, he becomes a teacher of his own self. This follows Whitehead's conviction that the purpose of education is to stimulate and guide self-education. He insists "that the principle of progress is from within: the discovery is make by ourselves, the discipline is self discipline, and the fruition is the outcome of our own initiative."[16]

Teacher certification and evaluation is dependent upon the demonstration of teaching competence, not just accumulation of course credits. Teachers must also know how to evaluate their own teaching and thus can continually improve. Anisa is attempting to upgrade the profession through high standards and

excellence in training.

The evaluation of both students and teachers is to provide better and higher quality of opportunities in the learning experience. According to Jordan, evaluation should be in terms of the purpose of the activity or program being evaluated.

3.5 Administration

Accomplishing the goals specified in the theory of curriculum, (to actualize human potential at an optimum rate) and the theory of teaching, (arranging the environment and guiding the child's interaction, so as to achieve the goals specified by the curriculum) is the task set forth in the theory of administration.

A social system, like individuals, has potentiality which must be translated into actuality: this is the responsibility of the administration. There are two basic functions of administration; leadership and management. Leadership deals with present performance requirements by stimulating and influencing the activities of the organization with a vision of possibilities for the future (it's transcendence). Management is concerned with the present, dealing with organizing and allocating human and physical resources representing past accomplishments and accumulated knowledge (it's immanence). There is an equilibrium between the change brought on through leadership and the stability maintained through management.

This administrative process means institutional growth and

self-renewal. Administration provides the opportunity for staff differentiation and provides for their means for intergration around institutional objectives. Complete staff integration is only possible when each of the staff's role is unified around a well-articulated and institutional objective. It then must be excepted by each of the participating staff. As stated earlier, the philosophical and theorical base of the model, it's main objective is to promote the development of learning competence in children. This unified purpose will enable both flexibility and consistency. The Latin root of administration means "to serve"; in the Anisa context, to serve it's organization is to facilitate the release of it's potentialities and to guide the organization toward the fulfillment of it's purpose.

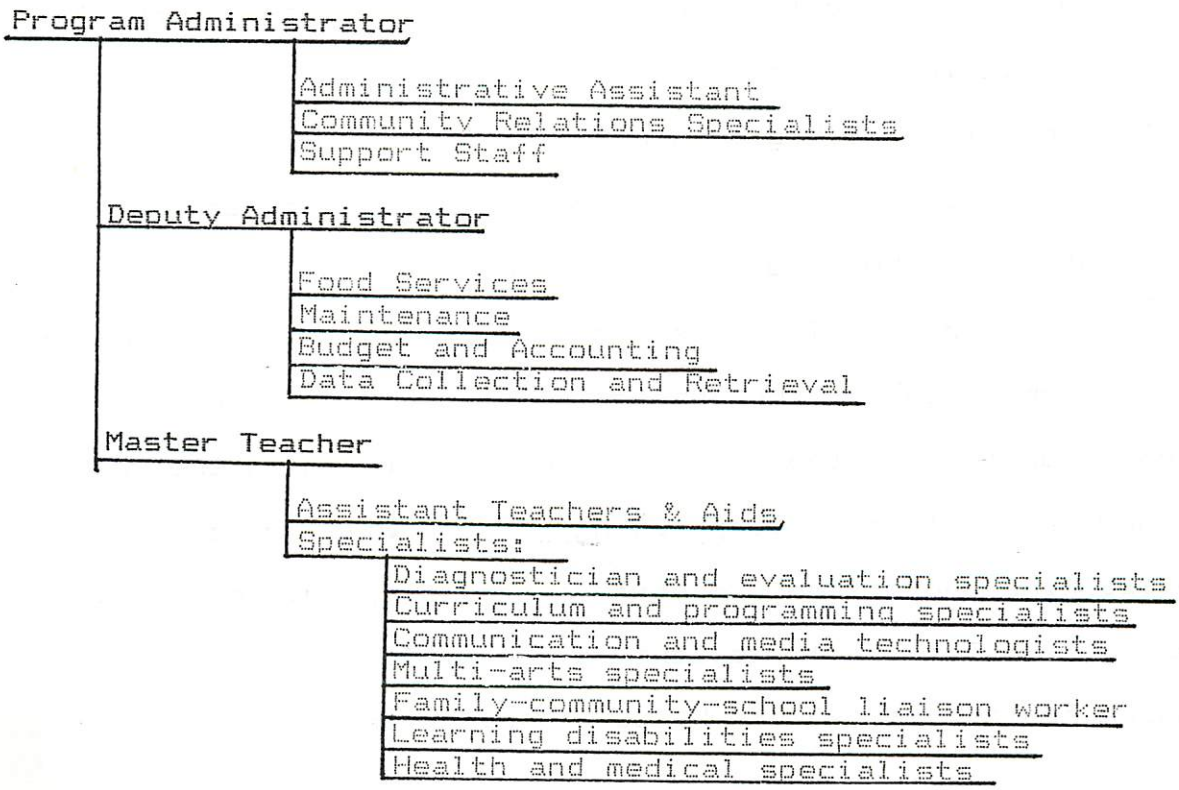
The program of individualized instruction requires specializing staff assignments according to each child's needs. The Anisa Model calls for a highly skilled staff which has many areas of specialization. These specialists are coordinated by the key staff person, the "Master Teacher". The Master Teacher has a wide array of competencies and serves many roles. Among them are making decisions regarding the arrangement of the environment, proper guidance of the students' interaction with the environment; including instructional activities, curriculum development, supervising teachers, and coordinating the work of the specialists.

An early presentation of the administrative structure [18] called for the Master Teacher to have the central role in management. The Master Teacher's responsibilities can not be accomplished without authority to implement the programs.

Realizing the potential for disorder and conflict in the relationship between the master teacher and the program administrator, the concept of an administrative team was suggested.[19] The entire faculty and staff are accountable to the administrative team. Their job is the overall operations of the school, the proper allocation of human and material resources, along with their interactions with the community, and progressively and productively moving towards the future goals.

The members of the administrative team are: The Program Administrator is chairman of the team and its chief executive. A Deputy Administrator would supervise several supporting departments, and the Master Teacher would coordinate the other teachers, aids and a varity of specialists. The administration structure is as follows:

ADMINISTRATIVE TEAM



4.0 THE APPLICATION

The near-by local schools were not meeting the needs of the Cree Indian people living on the Alexander Indian Reserve. Several parents grouped together to take action. Through an educational evaluation they found the following problems:[1]

* Not one student from the Reserve had graduated from high school in the past ten years.
* The school drop out rate was 100%.
* Alexander children were about three grade levels behind children in other parts of the Province of Alberta.
* Spiritual, emotional and economic depression were becoming the norm; a liability the community could not afford.
* Almost 40% of school age children were suffering from hearing loss.

The Elders (spiritual and cultural leaders of the community) saw their people losing their pride, values, and way of life. Rather than continue with government directed programs, the Council decided to take on the responsibility for the education of its' youth, and thus, took local control of a school on the Reserve. They hired professional educational consultants to help evaluate several models; they chose The Anisa Model. This model was chosen for its adaptability and compatibility with the Indian philosophy and culture; incorporating joy and willingness as part of the learning and at the same time emphasizing self discipline and hard work. The staff was sent to school for training and more Anisa trained staff were hired. A plan for success was

developed.

This chapter will highlight a few of the developments in the last two years, since the Anisa Model has taken effect.

4.1 Human Development - Native View of Man

The traditional Indian philosophy promotes living in harmony as a social grouping, individually, and with the environment and the Creator. The educational system must reflect this approach. Several of the philosophies are divided into four sections; i.e., four seasons, four races, four guardianships, four powers, four ontological levels. The list below compares the ontological levels to that of Whiteheads.

ONTOLOGICAL LEVELS	
NATIVE INDIAN	WHITEHEAD
Unity	Mineral
Growth	Plant
Senses	Animal
Soul	Human

This division of fours is symbolically represented by the Medicine Wheel. (see picture section) The medicine wheel is hanging in every classroom and is used daily in teaching various concepts to the students.

4.2 Arranging The Environment

The center has a safe, peaceful and stimulating atmosphere. colors and space are decorated in part by the students. The wall

collages of family photographs promote a feeling of community connections and gives a feeling of personal importance. The students feel part of the environment, with their paintings, handicrafts and Cree symbols decorating the buildings. In some cases, the school has become a favorite place, creating a desire to go to school.

The classrooms and common areas are equiped with full spectrum lighting[2], air cleaning filters[3], and child-sized furniture. The classrooms have plants, birds, fish and small animals; students having the responsibility for their care and nurturing. In the first year, over a $1,000 worth of plants and animals were lost, but a lesson in responsibility was being taught, so by the second year, less than $100 worth was lost.

4.3 Human Development - Biological

Fundamental in the Anisa Model is an early intervention program and understanding of the role of proper nutrition as essential for the maintenance of the biological integrity of the individual. The center gives practical application to the theory in several of its programs. Upon enrolling at the school and at regular intervals, each student is given a hearing and vision assessment. Necessary treatment and early intervention is reducing related disabilities and increasing the student's learning capacity.

The school does emphasize health programs in numerous ways. Once a week, each class prepares a nutritionally balanced meal for their school mates and staff members. Each teacher presents

a nutritional education curricular, including a school-wide "Vitamin-A-Day" program. Another example; the young children have a "sugar bug" chart hanging on the wall. They learn about foods containing "sugar bugs" (i.e. food containing excessive amounts of sugar, thus promoting hyperactivity and other related effects) and the bad effects they have on the students body. Each morning the students eagerly report on not having any "sugar bugs" and place a star on the chart for that day.

These health programs have increased the health awareness for the entire community as the students carry their newly learned habits home. Community activities held at the school feature nutritious snacks. The school newspaper suggests new recipes and carries announcements of those individuals due for shots or other medical check-ups. Parents are reporting that their children are sharing the nutritional information learned in class or in the school kitchen and are often requesting nutritious snacks or cooking meals at home.

A goal of the Anisa theory, and one shared by the Council, is the transformation of the community, not just single individuals. One example of the transformation taking place can be seen in the latest arrest statistics.[4] There has been over the last 18 months, a continual decline in alcohol related arrests. The nutritional information which are being shared with the family, include awareness of the harmful effects of alcohol. The increased number of activities sponsored at the school (which prohibits alcohol) corresponds to a decline in the level of alcohol consumption.

4.4 Curriculum

The curriculum is related to the child's interests, aims and past learning experiences, coupled with the teacher's objectives for future development of the five categories of learning potentialities. A great emphasis is placed on the importance of an active learning environment, keeping education a stimulating three dimensional experience; through the use of books, extensive use of the arts, cooking, physical activity, computers, and other manipulative materials. The following situations will show examples of the efforts to coordinate the development of several potentialities in the same lesson.

In the fifth through seventh grade class, the students were angry with the sterotypical presentation of Indians in their school books. The teacher encouraged them to vent their frustration through proper channels (Affective - lesson on handling aggression). The class wrote a letter to the publisher (Cognitive - an English lesson on the proper style of business letters). A copy of the letter is enclosed in the appendix. Their confidence and self-image were improved through the successful completion of this project. Another example of methods used to develop thinking and writing skills (cognitive) and promote the awareness and understanding of the students' spiritual, physical, and mental issues (affective): Each morning the students write in a personal notebook, anything that comes to mind, within a five minute time frame. Early in the year, one or two sentences were scratched out, but with practice, and acceptance of the projects, full paragraphs, with sensitive

insight have been appearing.

An example involving both the volitional and affective competence is practiced each morning; the Wheatgrass Ceremony. The Elders, teachers and students gather for prayers and the burning of wheatgrass (a ceremonial rite of the Cree Indians). This process acts to defuse the children through touching and the symbolic bleeding out of hostility and anxiety. The first thing the student learns is acceptance of himself and peaceful unity with his classmates.

One teacher explained his method of utilizing the steroscopic brain function: He puts some new concept on the board and does not talk about it for several days (Perceptual). On the third day, he refers to it lightly, in passing. On the forth day, he explains the concept (Cognitive). The brain has had time to become familiar with the material and it is now ready to connect it to some meaningful purpose; the material is not foreign to them, thrust upon them one moment with the expectations of instant learning or comprehension.

The reading program starts around age eight. Emphasis is first placed on thinking skills, then reading can have a connection to meaning. There is great motivation and reinforcement given with the reading program; recognization is given to all students reading 2000 pages or more per year. Older students are not asked to do book reports, but to develop "mind maps" conveying the meaning of what they read, thus enhancing their reading comprehension through the "right-brain" approach.

The organizational structure at the center is different from the public school where the students all sit at the same desk,

work at the same median pace in age graded classrooms, with little or no individual or developmental assistance and no recognization of diversity of culture. At the Alexander school, the students are placed in multi-level classes, the pace and the graded evaluation are based on the individual's own performance, not the standard of the class. The classes are structured so that the students are challenged, not frustrated. A real bonus for the students is the center's recognition of culture. A major problem with the government reserve school was that the children could not readily develop clear and positive self-images in a school where their culture, their family and their heritage were not understood, dispised and denied expression. Now, they can proudly say, "I am an Indian" and have a real knowledge of what such an identity implies in all its positive aspects.

4.5 Teaching

Regarding the teacher's first pirority; Whitehead's philosophy, the Anisa theory, and the administrative and teaching staff at the center are in full agreement: To start, in the classroom, by developing a rapport with the child and help the child to feel good about themselves. A strong belief in the immanence of the child creates teachability. The teachers are focusing on assisting the students to develop a strong sense of purpose - a personal identity. It is encouraged to believe that what you believe you can do, you can do. The students study the society outside the Reservation; the wars and distruction. They question their future and look at: "What am I going to do?", "What do I want from life?", "How can I achieve my goal?". They

are learning, "We have each other".

Teaching the Cree Indian culture is often used as an aid for developing a better connection with one's self-image. To build an ecological connection with the future, there is a need for a carrying on tradition; but striving to understand why things are done. Cultural folk tales, supersations, and symbols all help build a connection with plants and animals; symbols can globalize more than one meaning. Many lessons can be learned from cultural heritage. To understand one's own culture, one can be strong, proud and secure within oneself. At that point, other cultures can be understood and appreciated for their differences; other cultures will not be able to inflict change or control but integration may occur through self interest. Peaceful co-existance in the world is then only one step away.

Computers are in every classroom and assist in many of the cognitive development areas. Computers also allow the student to increase his volitional competence with the use of the Logo program. This program supports the development of spatial relationship, ability of thinking, planning strategy, and executing. The center is using computer technology to aid the student to capture his own vision, not to be trapped by the vision of others.

Children often teach other children. The young teacher has an opportunity to reinforce their own learning and create a bond with the other child.

4.6 Evaluation

A winning situation is created with the classroom rules. They are displayed in each classroom and are stated in a positive manner. This allows for positive reinforcement by obeying the rules. Discipline is not a problem. Attendence is voluntary, thus, the students attend with some type of a personal motivation that has created a desire to attend. A key concept being used: There are only a few rules in the school, consequently there are only a few to break. The Medicine Wheel is also used for discipline; it represents desired characteristics, if an individual is displaying behavior "outside the wheel" (outside acceptable behavior), the group attempts to assist the individual to behave "within the wheel".

Much growth has taken place in the last two years under the Anisa system. The library has grown from 550 to 8500 volumes; interest is not in volume size but in scope and sequence.

There are 160 students, ranging in age from 5-23. The older students (age 16-23) enrolled in the Recovery Program. This program is offered to students who have dropped out of other schools but now wish to finish high school or to gain further educational development.

Report cards indicate two areas of development: a) the level at which the child is working and b) how well he is doing at that level. There are basic Provincial government competency tests that are given. At first, the students were three to four grade levels behind other students their age, in Alberta. Now the average skills are one to two years behind and some students

are on grade level or above. Within a few years, the administrative staff feel confident that the center's test scores will be higher than the local public schools. These tests are only used as a data base, a source of information; there is no emphasis placed on teaching to the test and the anxiety level of the student for these tests is low.

4.7 Administration

The administrative structure at the center does not match the Anisa model. They feel they are not ready for the Master Teacher role. Instead, there is a three member administrative team; School Administrator, Director of Planning and Development, and Principal. Together they provide leadership in guiding the future and management to organize the efficient operation of the school. They report to the elected School Board, who reports to the Alexander Band Chief and Council. The administrative team exercise a philosophy of participatory management with their staff; staff have a say, but not always their way. The staff agree with the management's decisions about 75% of the time.

The hiring of teachers is quite an involved process. After nation-wide advertising, three screenings are set up; first by the administrative team, second by the school board and third by the staff. A new teacher must pass all three screenings before being considered. For the ten month school year, the salary is compariable with the public school, the benefit package is superior. The teachers have input on issues of pay rates. For example, last year the teachers voted to bring on a new staff in special education instead of a pay raise.

The administrative team submit a budget proposal, with priorities listed, to the federal government for their funding through the Bureau of Indian Affairs. The financial cost per student is similar to the public system (approximately $4,000 (Canadian) per student). There is a federal youth program which stretches the budget and gives training and work experience to youth from around Canada. Currently there are five youth working at the school financed by these grants. Canada Manpower training is funding a three year training program for teachers aids; funding 70% - 50% - 30% of salary over a three year period. No official reports need to be filed with the federal government, because the Alexander Band control the school's finances. However, detailed reports, with pictures of progress, are sent to the Provincial government, which has provided grants to the school.

A major difference with the public school is seen in the different use of money. Funding of projects are started by looking at needs of the student; evaluating how the new proposal will effect the student's self-image or aid in the development of the student's potential. Allan Murray, the Director of Planning and Development, stated four criteria he uses in setting financial priorities:

1. Systematic - Programs or materials phased in the logical developmental stage.

2. Organismic - Deals with all cultural values.

3. Statistical - In education today, problems exist, he tries to develop alternatives to work on problems. Murry feels an administrator is only as good as your current information and only as strong as your willingness to share information.

4. Consensus - Appeal not to develop festering wounds but to deal with the truths of the underlining problems.

Murray feels you should spend the greatest amount of time with the community in discussion of problems before acting; then you do not have to redo this action later. His approach to the center's organization is to be loose enough so the community understands what you are doing but tight enough to create logical outcomes (i.e. retrieve needed material).

The administration feels open internal communications are essential; labor unions are not necessary or desired. How the teachers deals with the administration is how they deal with the children. Thus, the teachers and administration can deal with problems on a personal bases so that both parties feel comfortable with the solution.

4.8 School-Community Relations

Community involvement is what originally started this school, and it has been continually increasing. The Elders are used to teach the Indian culture; an excellent example is "The Principal for the Day" program. Each day, a different Elder is given the honorary position of "Principal"; leading prayers, teaching culture and language. The program allows the children to learn many things, including respect for the Elders. At first the program was moderately accepted, it has now become a very prestigious symbol to be the "Principal" and the Elders are anxious for their turn, with a growing number of Elders participating. The group of Elders function as a counsel for decision making and suggestions for school operation.

Several news letters are sent out to the community, one to the Reseveration at large which contains much more than school news; it informs and unites the entire Reserve. The other is a letter to surrounding schools, sharing new educational research information and reporting on their progress using the newly adopted Anisa model.

A varity of after school programs are offered in crafts or sports. This serves to increase the development of the affective and psycho-moter potentialities of the students. It also serves as supervised care until the parents return from work.

The school facility is used as a community center; meetings, weddings and funerals. In experiencing all of these different functions, the students learn that pain and suffering are part of life and something they must learn to deal with effectively.

4.9 The Future

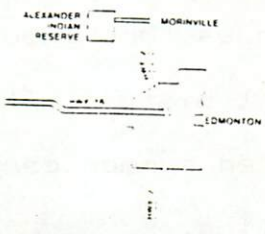
The accomplishments in the last two years have been immense. A strength and pride has returned to the Alexander Reserve. With continued belief in their dreams, there are high hopes for the future.

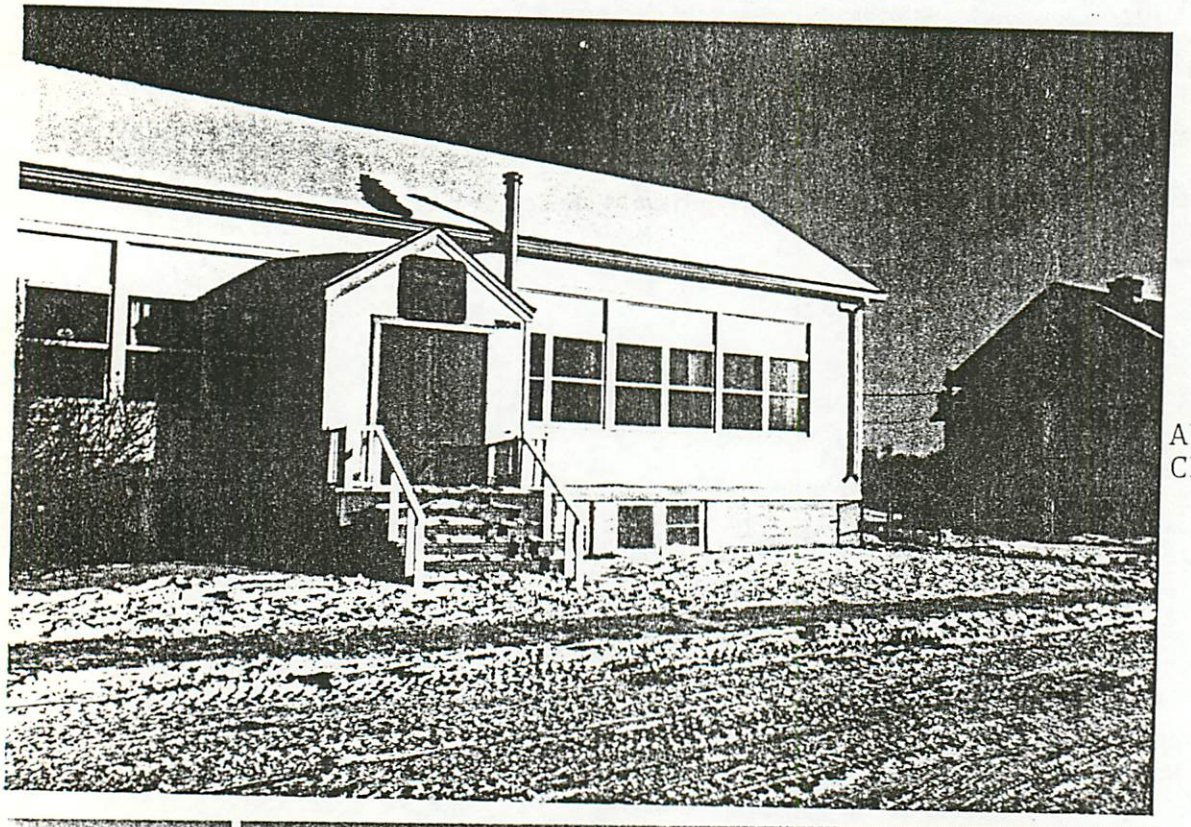
There is a five year plan for expansion of educational programs and services throughout the community; designed to continue learning and growing in a wholistic way. Since learning begins even before conception with the education of potential parents, future developments include a pre-conception and pre-natal education of parents, and an infant stimulation program (birth to three years). Currently there is a program for 3-5 year olds,

designed to stimulate basic learning processes and to involve parents as the first educators of their own children. Learning continues throughout one's life; the center plans to develop support systems within the community, such as; parenting courses, children summer camps, apprenticeship training programs and adult education.

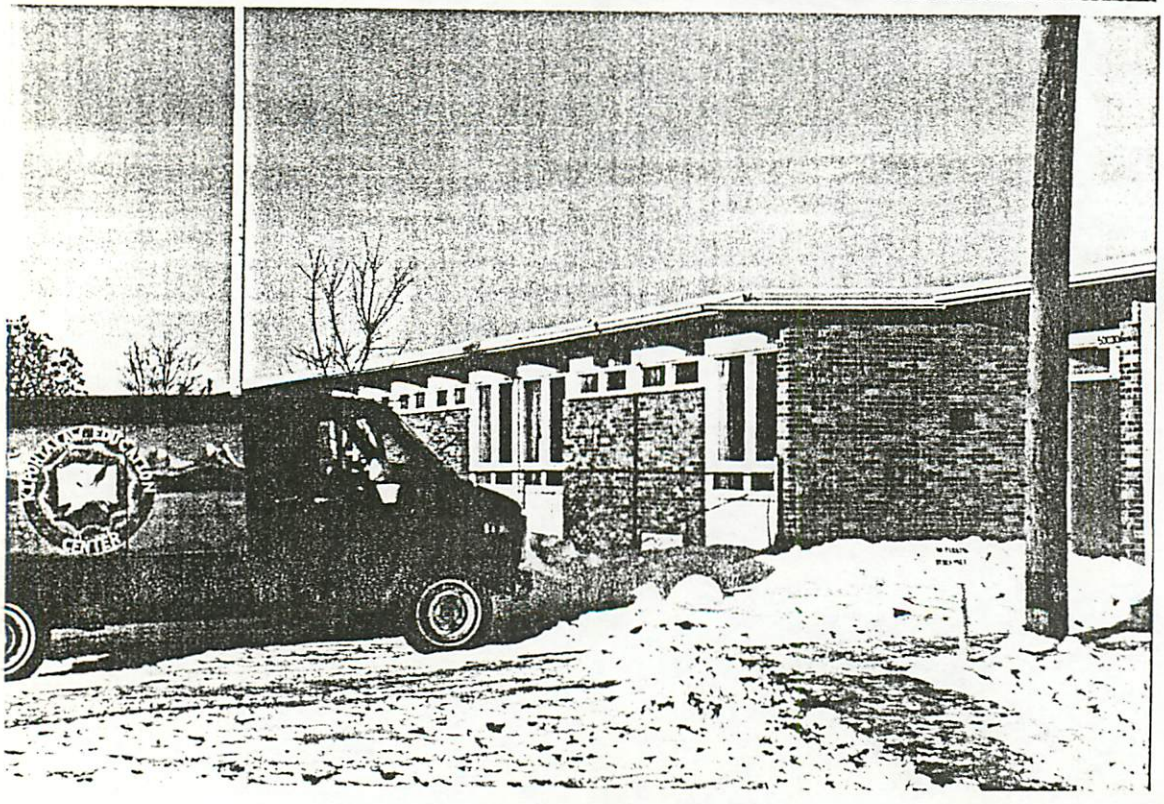
Their goal is to continue to believe in their dream; their dream is that the children will discover the strength and vision that will make it possible for them to determine their own destiny.

ALEXANDER — "Where Are We"?



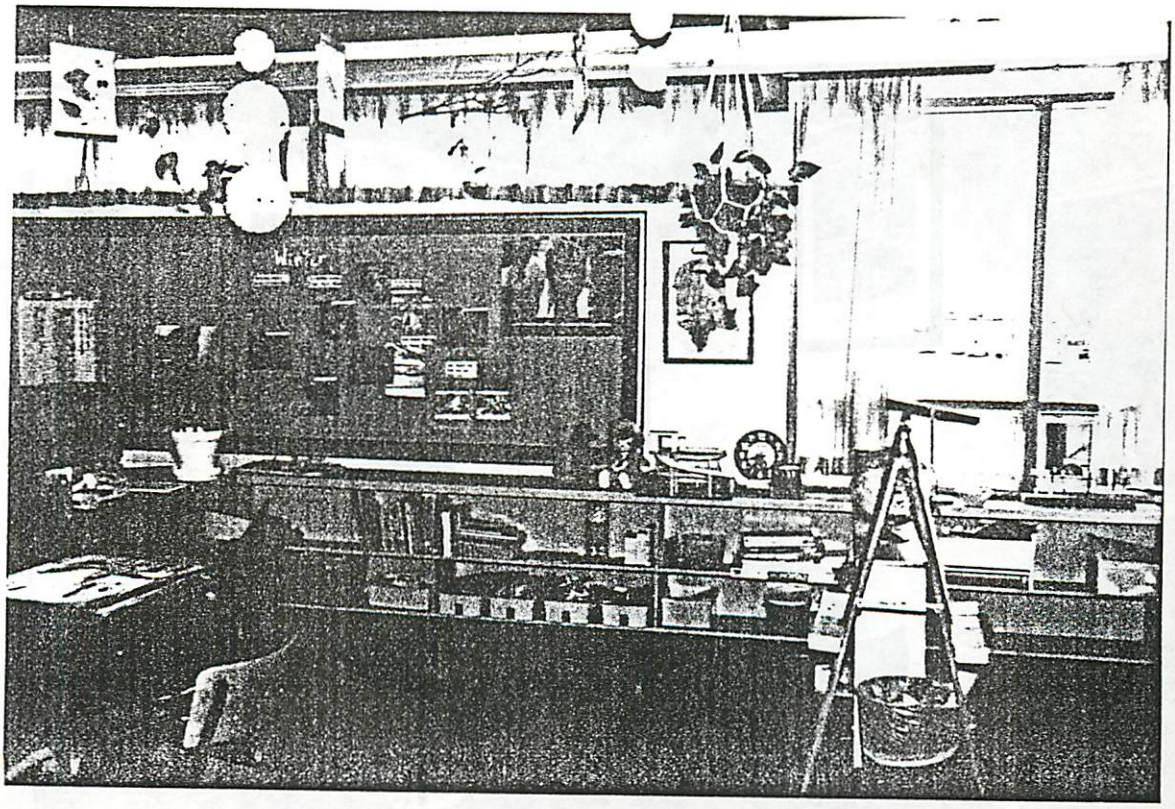


ADMINISTRATIVE CENTER

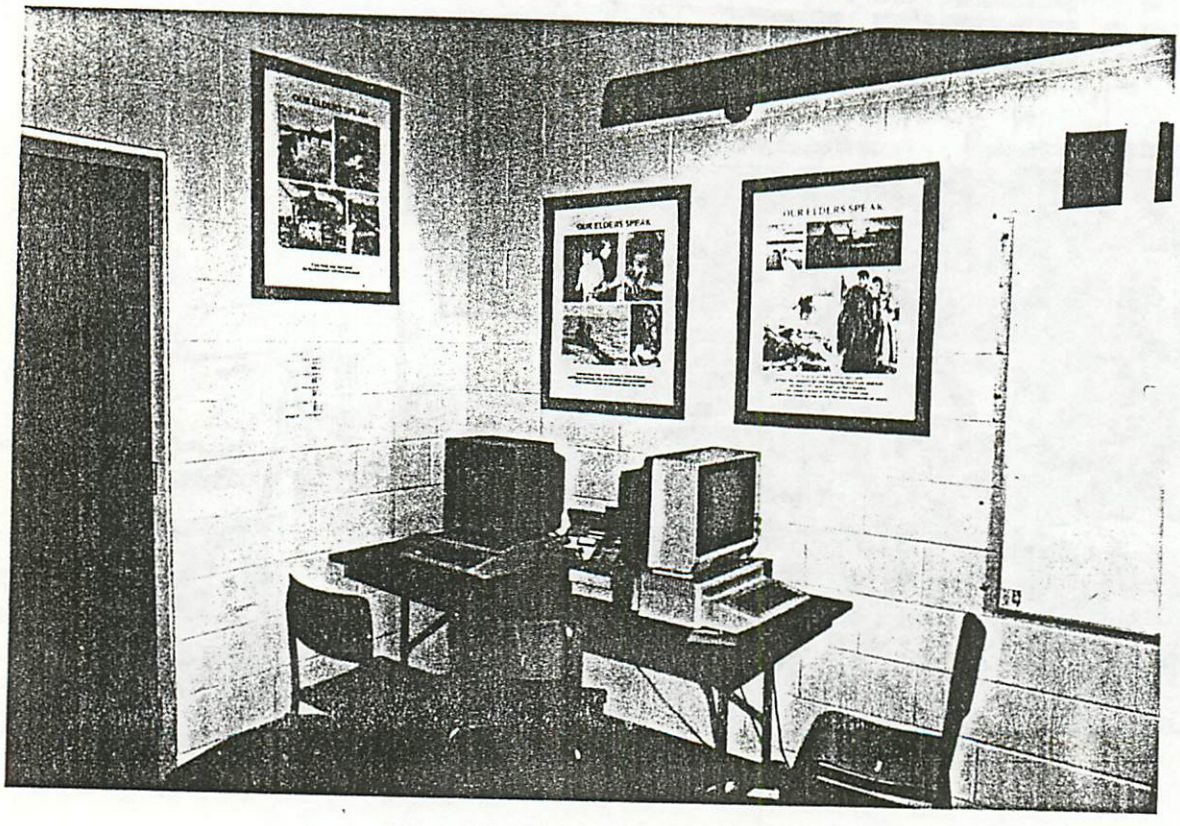


CLASSROOM COMPLEX

ARRANGING THE ENVIRONMENT: Above; Artifacts emphasizing a positive cultural heritage are displayed in the library. Below; Students developed a science activity area.



Blending the traditional heritage with the high technology of the information age: Each class is equiped with computers and cultural symbols. In the picture above; on the left wall hangs The Medicine Wheel.



5.0 PROSPECTS

5.1 Evaluations of the Center

According to its own stated purpose, the Alexander Reserves' Kipohtakaw Education Program is operating with great success. It is easy to see many outstanding examples incorporating each of their originally stated goals, some of which have been discussed in the piror section of this paper. A brief review of these goals:

1. Develop the young students' competence.
2. Develop an awareness of the environment.
3. Develop the adults' learning skills.
4. Develop an awareness of the culture.
5. Create a community based center.

The ancient principle of wholeness (that everything in the universe is connected to everything else), as exparded by Whitehead, given relevance in an educational model by the Anisa researchers, was applied at the Kipohtakaw Education Center. They strive to maintain the school as a whole entity, while recognizing that it is a part of a larger whole; the community, the Province, the country and the world. Some of the ways they try to maintain wholeness:

1. Monday morning assemblies for the whole school.
2. Staff meetings with the whole staff. Decisions are made after consultation and the administrative team try reach a unanimous decision.
3. A teaching approach which recognizes the students as a whole; not belonging to an individual teacher. Good staff communication insures continuity in curriculum and teaching.

4. Integration of various curriculums, by relating one subject to another, relating one learning process to various subjects, or integrating various processes and subjects around one theme.

5. Consideration of the child's interaction with the total environment; classroom, home, and community.

6. Promote cross-ability and cross-age interaction in multilevel classrooms.

7. Strong community involvement in school policy formation.

8. Staff retreat prior to the school opening; increases understanding of each other and promotes a more unified working relationship.

9. Development of spiritual and moral competence through the curriculum integration of the arts, religion, volition and affective processes.

10. Education of the whole person; biological development through nutrition and psychological development through learning.

Each of the many different aspects of the theory and the model are closely followed. The belief in the whole person, both biological and psychological, guides the curriculum content and process, leading towards the actualization of the individual's potentials. This is accomplished through the development of basic learning competencies, symbolic competencies and the higher order competencies, leading the individual towards taking charge of his own destiny. The teaching staff assist in this process by arranging the environment in such a way as to maximize the actualization process. Evaluation is based on the individual's ability and in the terms of the purpose of the activity being evaluated. The administrative team serves the school's staff, the students and the community, by managing the resources for today's efficient operations and developing the plans for tomorrow's growth. This entire process is a locally controlled

and community involved education process to strengthen the Reserve's cultural heritage and prepare the children for the twenty-first century.

5.2 Conclusions Regarding the Center

This successfully working model of educational reform is the focus of much attention from other Indian Reserves. As of October, 1984, only two years after starting the program, over 120 other Bands had expressed a desire to implement a similar program on their Reserve. The interest is not culturally bound. In these first two years, there have been over 600 visitors to the Center, representing seven different countries. For the International Community Development Award, the Center was one of six hundred projects nominated (based on ten different aspects of development). They remained in the first screening (which reduced odds to one out of fifty, 1:50) and the second screening (one out of ten, 1:10). Recently, they were presented with the Award, which names the Kipohtakaw Education Program the most significant developmental project across Canada.

This program could be expanded to other schools, both on and off Indian Reseverations. It would be effective with any age student. The reason being is that it first looks at the maturity level of the student and then develops a program which will fit his needs at his current maturity level. The focus of effective teachers is to raise the maturity of the student to a point that the student can take effective charge of his own process of becoming.

5.3 Evaluation of the Anisa Model

This paper is not an attempt to defend or prove the correctness of this philosophy and theory over others, (other studies have adequately accomplished this task[1]), but to examine the elements of the most practical and comprehensible approach to educational reform that my research has uncovered. The beauty of the Anisa Model is that is can expand to include newly discovered information and it give organization and unity to the understanding of the whole process of becoming - the process of translating potentiality into actuality. This orderly process of development is guided by an individual's sense of purpose; his "subjective aim".

During the course of my research, I tried to answer the question: What makes Anisa different from other educational systems? I discovered that there were many answers. To synthesize many answers into one broad generalization; The Anisa Model attempts to promote equalized educational opportunity. The practices which contribute to acheiving this aim are; first diagnosing the needs of each child, arranging the environment to provide those needed experiences and developing a program which includes individualized instruction. Through this process plus taking into account the cultural and educational background of the individual, the results insures the maximum possible progress of the student, which thus equalizes his potential for advancement.

Other important differences: a) the Anisa Model has a sound

philosophical base, recognizing both actual and non-actual forms of man's reality, b) the model promotes moral development, c) it gives a high priority to science and the arts, d) the environment generates success and avoids failure, e) the use of flexible grouping and children teaching children, f) individual evaluation methods, g) recognizing the importance of the biological integrity on the learning process, h) community involvement, and i) emphasize on applying knowledge for the betterment of mankind.

Refering back to Whitehead's four criterion of excellence in thinking: The Anisa Model is logically consistent. The statements were not found to be contradicting, on the contrary, it is a very unifying approach to the education of multi-dimensional individuals. The model is coherent; based on the first principle that the purpose of education is to assist the individual to gain mastery over it's own environment. This is accomplished through the actualization and development of the individual's biological and psychological potentials. The model is adequate. It is open enough to incorporate all aspects of the individuals needs; all ideas or experiences can be included in the scheme. It is also flexible enough to incorporate changes as new theories are introduced; ones which contain valuable resources in the understanding of the development process. This flexibility will allow the model to become more applicable. The model consists of areas that are extremely relevant to all of life.

The efficiency and practicability of the model in establishing additional working schools using the Anisa model

could benefit from additional clarification. As an example of a compatible theory for the management of human resources; Paul Hersey and Kenneth Blanchard's Situational Leadership model.[2] Further considerations of importance in assessing management techniques can be found in numerous business publications; several beneficial examples are, Lawrence Miller's, American Spirit[3], Peters & Waterman's In Search of Excellence, Hickman & Silva's Creating Excellence, Harold Green's Managing, and helpful tips in Mark McCormach's, What They Don't Teach You at the Harvard Business School.

5.4 Conclusions - Future use for the Anisa Model

There is a limited amount of publications on the Anisa Model available for further research. Besides the extremely valuable discussions with Dr. S. Pattabi Raman, a member of the original team which developed Anisa, and valuable classroom discussions at National University, my primary sources of information were several books, a collection of articles by Dr. Jordan and his associates and the private publishing of doctoral dissertations, conducted under the supervision of Dr. Jordan at University of Massachusetts, Amhurst, (1974-80).

Further research conducted with the express purpose of perfecting or implementing the Anisa model will require an operating educational institution, on an experimental basis. The first step towards achieving this goal is the development of a sound marketing plan. This marketing manual would include the philosophy and the theory of education which this new institution will offer to the students, along with complete descriptions of

operating procedures and marketing strategies.

The marketing strategy must include a plan for securing initial funding to open the institution and a plan for generating on going operating capital. With the successful opening and moderately smooth running procedures well established, the second phase of development can begin. This phase would center around research and development activities which could improve and enhance the learning activities of the student and increase the efficiency of administrative procedures. The third phase involves training. The value of training lies in increased understanding of the process of actualization of human potential; which is strengthened when shared with other teachers, all levels of school executives, and especially with the child's first and most influential educator, the parents. With properly trained individuals, these techniques could be expanded. The second or third phase could be conducted independently or in connection with a university.

Yes, there are problems in our schools today. But there are also possible solutions awaiting implementations; an ambitious but rewarding undertaking. Quality education requires hard work, faith in your purpose and courage to counteract fear and stress when facing change. The benefits of quality education has been witnessed in the use of knowledge and skills for the advancement of society. This makes the hard work worth the efforts, the faith stronger and the courage to continue, invincible.

GLOSSARY

The following definations have been extracted from the writings of Whitehead and Anisa scholars.

Administration - To serve the entire organization, minister the needs of the institution; serves through providing for staff differentiation and integration; defines the nature of management in terms of purpose consistent with the philosophy; provides the means for institutional self-renewal.

Affective Capacity - Capacity to organize emotions and channel them for effective growth.

Biological Potentiality - Development of the organism, nutrition is the primary element.

Cognitive Capacity - Ability to think, to differentiate, integrate and generalize patterns of thought; the ability to abstract, to find relationships (both quantitative or quality).

Concrescence - To grow together, the pulling together of many things into a single reality. Includes everything normally meant by the word development but includes mans ability to move beyond himself by the formulation of ideals and the organization of behavior in accordance with those ideals.

Consciousness - The ability to know that we know. The vehicle of consciousness is symbolization; language is the fundamental symbol system and is key to learning competence.

Creativity - The ultimate characteristic of all beings and the fundamental principles of the universe.

Criterion - A standard by which you can make a judgement about something by comparing it to the standard.

Curriculum - The objectives of the formal educational system, contains content and process goals; specifies the substance of the former as the information culture has accumulated organized in terms of the classification of environments, including the symbol systems used to convey that information, and the substance of the latter as formation of internal structures on which learning competence depends.

Development - The process of translating potentiality into actuality.

Differentiation - The ability to break down experience (whether internal or external) into separate contrastable elements.

Education - Is the promotion of the actualization of human potential at an optimum rate; encouraging interest in creativity and understanding.

Fairness - Justice on a personal level.

Faith - The capacity to approach an unknown such that the energy we feel is converted to another form of energy known as courage.

First Principle - Sets forth the ultimate proposition beyond which you agree that nothing is more fundamental in your system of thought.

Generalization - The ability to utilize that recombination (gained through differentiation and integration) in other similar situations. (the transfer of knowledge)

Human Development - The translation of potentiality into actuality.

Ideal - A projection of the best possible you at some time in the future.

Immanence - The individual's collective past, stored as memory.

Integration - The ability to combine those elements (the differentiated experiences) in a new way thereby generating new perceptions, new thoughts, new feelings or emotions and new intentions (which man or may not be expressed immediately in some form of new overt behavior).

Justice - To do everything possible to maximize the development of the potential for others and to expend no energy to limit others potential.

Learning - A creative advance into novelty.

Learning Competence - The ability to differentiate experience by breaking it down into contrastable elements, integrating the elements in novel ways, and generalize the novel integrations to new situations. (now or in the future) Knowing how to learn.

Optimum Disparity - The right amount of challenge in a students educational experience; if too little - boredom, if too great - failure.

Paradigm - A general way of understanding how things work: a philosophy.

Paradigm Shift - A new philosophy that explains the old philosophy and the anomalies (a new concept that cannot be explained by the existing paradigm).

Pattern - Repeated structure of form.

Perceptual Capacity - How you receive the information from the environment, through the five modes of the senses.

Philosophy - Allows for the creation of a coherent, logical, necessary, and adequate system of ideas; a structuring of beliefs. A way in which every element of our experience can be interpreted and understood.

Potentiality - An unexpressed patterned use of energy and ability. Two categories: biological and psychological.

Process - An ordered expression of a potentiality. (This tells us that every process is an expression of values.)

Psychological Potential - The key factor is learning. The five categories are psycho-motor, perceptual, cognitive, affective, volition.

Psycho-motor Capacity - Conscious ability to differentiate all the muscular movements; the capacity of the organism to organize the body parts in relation to space, orientation of directions from the internal source.

Reality - Actual is everything that is subject to the laws of gravitation and radiation. (The two forces of the Universe) Non-actual are things such as ideas, purpose, goals, potential of anything.

Subjective Aim - The part of reality that talks about an individual's purpose or intention. Relates to volitional capacity.

Teachability - Ability of the teacher to connect with the immanence and transcendence or potentiality of the child.
Do connect = teachability
Do not connect = unteachability

Teaching - The arrangement of environments and guiding students' interactions with those environments in a way that maximizes potential.

Theory - A belief, policy, or statement of procedure proposed as the basis for the action. Can openly state testable outcome, providing accountability of our beliefs. Theory is gained from a philosophy.

Transcendance - The capacity of a human being to entertain possibilities and go beyond them.

Value - A relatively enduring patterned use of energy.

Vector Quality - The quality of life resulting from an ideal. Without ideals we try to avoid pain or seek pleasure.

Volitional Capacity - The capacity of the organism to plan, to intend, to organize energy to complete the task. How to use knowledge , know the consequence of our actions.

YOUNG CHILDREN, Vol. XXVIII, NO 5, June, 1973, pp. 307

The Anisa Process and Content Curriculum
Summary Table

The Child:

actualizes these potentialities (process)	as he interacts with these environments,	assimilating these bodies of information (content),	utilizing these symbol systems,	thereby forming these values (content fused with process),	on which these higher-order competencies are based.
Psycho-motor Perceptual Cognitive Affective Volitional	Physical	Physical and biological sciences, and technology	Math	Material	Technological
	Human	Social Sciences, history, human relations, communications, law, human rights	Language (s)	Social	Moral
	Unknowns	Philosophy, religion, aesthetics, humanities, and	The Arts (as expressions of ideals or structuring of the unknown)	Religious	Spiritual
	Self	All of the above as they relate to Self (which is important for physical, psycho-social and spiritual health	All of the above applied to the Self	Personal identity or character (all of the above combined into the Self)	Personal effectance (all of the above combines into this aspect of the Self)

PSYCHO-MOTOR	PERCEPTUAL	COGNITIVE	AFFECTIVE	VOLITIONAL
EXAMPLES OF PROCESSES UNDERLYING LEARNING COMPETENCE IN EACH AREA				
Balance/ Posture	Vision	Object	Inhibiting	Attention
	figure/ground	Permanence	rage/hate	Goal Setting
laterality	color	Classification	destructive	Will
verticality	hue	Seriation	impulses	Effecting
directonality	intensity	Causality	Coping	Closure
Manipulation	brightness	Numbers	lonliness	Purpose
extension	Audition	Relations	sadness	
(reaching)	Olfaction	Deduction	rejection	
grasping	Gustation	Induction	Managing	
flexion	Vestibular		anxiety	
handling	Senses		anger	
releasing			Facilitating	
receipt/	Cutaneous		joy	
propulsion	Senses		hope	
locomotion			gladness	
			love	

COGNITIVE AREA

Specifications

Abstraction
Analogy
Analysis
Associativity
Assymmetry
Attribute
Identification
Causality
Classification
Closure
Combination
Conjunction
Correlation
Deduction
Disjunction
Equivalence
Experimenting
Extrapolation
Generalizing
Hypothesizing
Identity
Implication
Inclusion
Induction
Inference
Interpolation
Interpretation
Inversion
Metaphor
Measurement
Negation
Number Relations
Object Permanence
Prediction
Reciprocity
Reversibility
Seriation
Space/Time/Velocity Relationships
Structuring
Symmetry
Synthesis
Transitivity

Grades 5/6/7
Kipohtakaw Education Centre
P.O. Box 1440
Morinville, Alberta
T0G 1P0
November 2, 1984

Dear Sirs:

We are a grades 5/6/7 class of students at Kipohtakaw Education Centre on the Alexander Reserve in Alberta. We use the Ginn 720 series of readers in our school and find most of the stories to be interesting. However, we have a concern about your stories that deal with modern day Indian people.

In the readers that we are using, Mountains are for Climbing and Measure Me, Sky, we have found that all of the Indian children are poor and that almost all of them have only one parent or no parents. For example, in "Wild Bird", the boy lives in a one-room apartment in a polluted city with his grandfather and is extremely poor. In "Bitter is the Hawk's Path", we find that Sam Joe is another very poor Indian boy whose mother works at the local hotel. In "A Very Small Rebellion", again we see three Indian children who are poverty-stricken and living in shacks.

These days, there are more and more Indians who have good jobs, good educations and happy families. We recommend that you choose stories that give a more balanced picture of Indians today.

Thank you for your time and consideration.

Sincerely yours,

The Grades 5/6/7 Students of Kipohtakaw Education Centre

FOOTNOTES

For a complete listing of titles; see the bibliography, under the author's name.

1.0 Introduction

1. Raman, S. Pattabi, "Role of Nutrition In the Actualizationof the Potentialities of the Child: An Anisa Perspective", Center for the Study of Human Potential, University of Massachusetts, Amherst, mimeo, 1972.

2. Dewey, John, "The Need for a Philosophy of Education", The New Era, Nov. 1934. Reprinted in 1940 in Education Today, New York: Putnams & Sons, p. 289.

3. The word **ANISA** is Arabic and means "the tree of life". It represents a design for a new educational system concerned with nurturance, shelter, continuing fruition, and beauty. As an acronym, it stands for American National Institute for Social Advancement, a private organization which developed the Model. It was supported by grants to the Center for Study of Human Potential, School of Education, University of Massachusetts.

2.0 The Philosophy

1. Whitehead, (1929) Process and Reality.

2. Popper, (1963) Conjectures and Refutations: The Growth of Scientific Knowledge.

3. Concepts extracted from lecture material based on Whitehead, (1929).

4. Popper's concept of "verisimilatude". (1963)

5. Whitehead, (1929) Aims of Education, p. 4.

6. Maslow's HeiracharyTheory, a self actualized person is one who recognizes his own actualizing potential.

7. Whitehead, (1929) Aims of Education, p. 3-5.

8. Ibid.

9. Ibid. p. 2.

10. The following curriculum concepts are summerized from Whitehead, (1929), Ibid. chapers 4-6.

11. Whitehead, (1938), p. 87.

12. Whitehead, (1948), p. 294.

13. Whitehead, (1929), Aims of Education, p. 105.

14. While Hume's problem of induction is insolvable, none the less, we must in some way describe the complex process of conjecture and refutations that go into discovery. See: Poper, Lakatos, Kuhn.

15. Whitehead, (1929), Aims of Education, p. 153.

16. Ibid., p. 50-51.

17. Ibid., p. 51.

18. For further discussion of right-brain/left-brain learning, see:

19. Whitehead, (1929), Aims of Education, p. 51.

20. Popper and Ibid., Chap. 4.

21. Ibid., p. 55.

23. Ibid., p. 57-59.

24. Ibid., chap. 2.

25. Ibid., p. 27.

26. Ibid., p. 12.

27. Ibid., p. 13.

3.0 The Theory & Model

1. The following paragraphs represent material extracted from articals written by Daniel Jordan and his associates, regarding the Anisa Model of Education.

2. Raman, (1973) or Raman, (1975).

3. Jordan & Streets, (1973), "The Anisa Model: A New Basis for Educational Planning", p. 294.

4. Carney, Magdalene, (1981).

5. Streets & Jordan, (1973), "Guiding the Process of Becoming", p. 30.

6. Jordan, (1972), "Anisa: A New comprehensive Early Education Model for Developing Human Potential", p. 87.

7. Streets & Jordan, (1973), "Guiding the Process of Becoming", p. 30.

8. Ibid., p. 33.

9. Jordan, (1979), p. 34

10. Ibid., p. 39.

11. Jordan, (1972), p. 90.

12. Whitehead, (1929), Aims of Education, p. 32-33.

13. Jordan, (1972), p. 91.

14. from Streets & Jordan, (1973), p. 38-49.

15. Whitehead, (1974), p. 179-80.

16. Whitehead, (1929), Aims of Education, p. 39.

17. This analysis is based on a paper by Dr. Jordan, Anisa Project Director, "Redefinition of Leadership and Its Implications for Educational Administration", delivered to the Connecticut Council of School Executives on Nov. 19, 1973, New Haven, Conn.

18. Jordan, (1972), p. 92.

19. Walker, (1975).

4.0 The Application

1. "Determining Our Own Destiny", p. 2

2. Full spectrum lighting is fluorescent tubes, covered with lead foil to reduce radiation and change the assimilation of light which caused less eye strain. Both effects have a positive effect on learning.

3. University of Minn. and Epocot Center in Flordia have been conducting research on plants and atmosphere. It is believed that the air cleaning system creates an atmosphere similiar to after a thunder storm, when the air has a freshness and newness. An estimated 34% more learning takes place because of the relationship of learning and living things.

4. As reported in the school news paper, the Kipahtakaw News, 3 November 1984, the total offences were reported:

Jan/June, 1984	Jan/June, 1983	July/Dec, 1983
58	65	69

5.0 Prospects

1. For further study, see doctoral dissertations by Lincoln, (1978) or Bondra, (1980).

2. Blanchard & Hersey, (1972).

3. Refer to Bibliography under those names.

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