

What is the CARES Model and how does it work – The Constructive Assessment, Recordkeeping and Evaluation System:

We have learned the hard lesson that a change in the way we assess and evaluate learning changes the whole system of education, for better or worse.

We shouldn't be hoodwinked into believing that standardized tests are the best and only way to assess and evaluate what students have learned; other systems can supplement and/or replace standardized tests.

The CARES System is a translation of two concepts of general systems theory, namely, systems design as a process of learning and systems analysis as a strategy for assessment and evaluation. The system contains developmentally-sensitive learning-processes inclusive of all modes of inquiry and communication, contained in all realms of meaning including all traditional disciplines – the general education program.

A beginning focus for demonstrating the system is on the development of a frame of reference through an in-depth study of the local community, its past, present and future – its natural/physical features, its social/cultural characteristics, and its economic and political structures and processes. This emphasis is designed to teach the learner HOW to learn in six realms of meaning that embrace the contents of real world process-oriented experiences rather than an outcomes-based common core. The application of systems concepts enhance performance even on standardized tests.

CARES is a systems-oriented assessment and evaluation plan that uses modern communications technology for developing and maintaining an individualized record of learning experiences, and the results achieved from those experiences. The CARES system is an integrated part of an educational program that emphasizes the processes of learning with consistent methods of assessment and evaluation of learning outcomes.

CARES (*The Constructive Assessment, Recordkeeping and Evaluation System*) focuses on the mastery of systems. A system is any set of parts that function together, forming a unitary whole. There are many thousands of systems within the universe, both physical and conceptual, each capable of being mastered at a high level of competency through active inquiry.

The parts of a system can be isolated and studied independently, but to fully understand any system, the parts must be seen as integrated and functionally related. To fully understand a system, one must be able to differentiate the parts, one from another, and create a mental image through direct experience, a concept of the relationships and interactive processes found between and among the parts. This makes possible higher level formulations - rules, principles and laws that enable intelligent problem solving

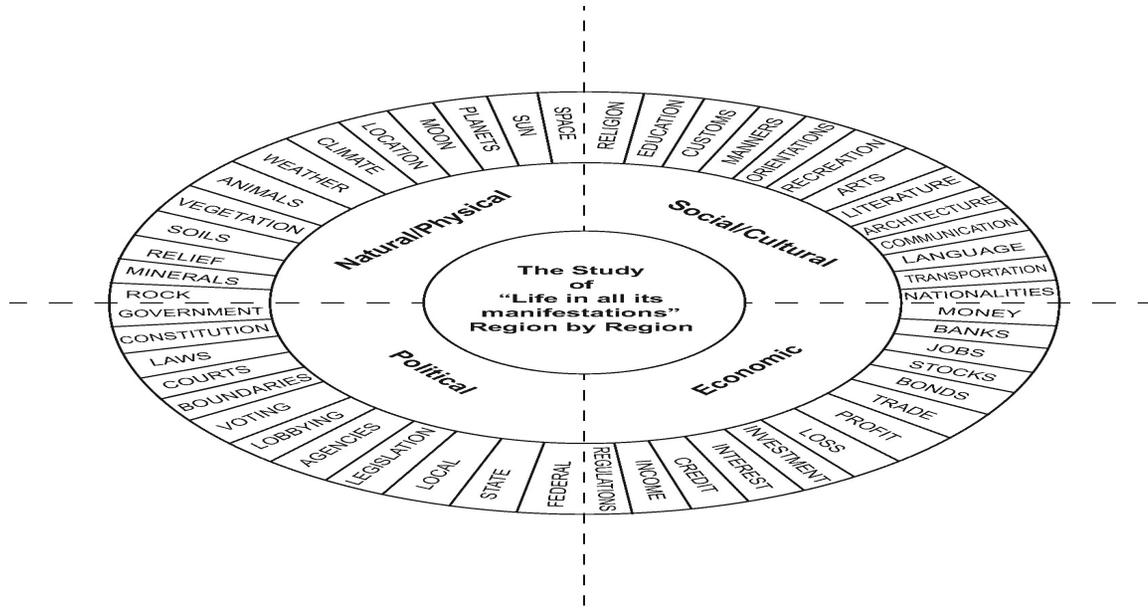
In general, there are six steps in the process of building, recording and storing the evidences of construction of a validated system. (1) Defining/re-defining an initial listing of the parts of the system to be mastered. (2) Accumulating experiences that lead to translating/conceptualizing the parts and inserting evidences of those experiences into a computerized record. (3) Model building by organizing and re-organizing the experiential findings stored in the record. (4) Synthesis and critical/creative evaluation formulated in communications representing the authentic levels of achieved mastery. (5) Verification through comparing and contrasting one's constructions with others. (6) Identification of new systems that result from prior constructions.

Step one of the CARES Model involves a redefined common core curriculum. Instead of an arbitrary listing of learning outcomes, the CARES model starts with a listing of those things we should be investigating, with a focus on building mastery of systems related to life in the real world.

The diagram that follows, along with explanations that describe a reality-based common core, will illustrate the differences in focus between the CARES Model and those of the “Common Core Curriculum.”

A study of life in all its manifestations is organized into four major classifications or categories of the world and universe: Natural Physical features, Social/Cultural factors, Economic and Political structures and procedures. Its circle format is a reminder that these four major components are interactive and through investigation they potentially interrelate as a system.

The outer ring of the circle lists the names of sub-categories generally found in many environments and communities throughout the world, identified and organized within these four universal categories. Specific sub-categories may vary somewhat with different cultures and social, economic and political systems.



Each learner will be assigned a personalized interactive software package that contains six folders, one for each of the major categories shown on the circular illustration above, a fifth folder that is labeled “Who am I” and a sixth folder that contains the integrated results of each learner’s inquiry into life in all its manifestations. A computerized record of experiences with all the parts of this system will travel with learners to be shared with teachers and parents in a continuous-progress curricular experience.

The computer software is secured for confidential use by teachers, by each learner/student and parents/guardians. The four folders that pertain to the major categories of content along with the sixth folder can be shared with official agencies to provide evidences of learning. The “Who am I?” folder is strictly reserved for the confidential use of the teacher in consultation with learners and their parents/guardians.

The “Who am I” folder will contain personal data about individuals that indicates uniqueness, such as ancestral records, and significant events that took place during early development. Included will be information about limitations or problematic functionalities that may have developed, significant events or trauma that may have happened, developmental profiles, etc. This record of confidential information would be supported with photographs and written explanations where appropriate.

A record of direct and on-going experiences for each learner begins with the local surroundings and contains an identification of experiences supported by documentation of the results gleaned from them. Over time the collection of individual statements will be interrelated or synthesized through the construction of models.

Models are defined as representations of any subject of inquiry engaged by each learner, with four important functions: 1) Organizing, 2) Heuristic, 3) Prediction, and 4) Measuring. In-depth analysis of each variable or parts of systems, and a search for the interrelationships among those parts is the central theme that organizes the curricular experiences.

Each part on the outer ring of the diagram is differentiated from other parts by exploring each utilizing the methods and materials of relevant disciplines. For instance, rock structures are investigated according to rules of inquiry from the discipline of geology. Parts are then synthesized by each learner into a unique image of their relationships. The parts may undergo changes during investigations such that more personally-useful categories and language may be discovered as inquiry progresses. These changes will be noted in the record.

The storage requirements for the processing software program will allow data to be stored of the total record of experiences. The amount of information will grow with each entry until it becomes necessary and appropriate for each learner to distill the information into models.

Some models will look like the objects or processes being represented, others will be expressed in symbols familiar to science and mathematics. When direct observation cannot occur, the use of analogies becomes a useful tool. These models can also look like what is being expressed, or they can be expressed in symbolic forms that do not look like the subject of inquiry.

Once models are constructed, any statements or descriptions of experiences used in their construction will be stored in computer files that become a permanent record organized for future reference.

Within each learner's secure random-access record are four folders that match the major categories on the circular model. Within the folders are the accumulated files of experiences engaged with the contents of the outer ring. Consultations between the teacher and each learner will determine what will be worthy of recording to be entered into each folder. The uniquely constructed folders and files are then available for view and review by the learner, by the teacher and relayed to parents as appropriate. Skills development occurs in the context of inquiry when a personal need is generated by the requirements for defining, understanding and communicating ideas that emerge during relevant, real-world inquiry.

Investigations will be informed and guided by validated theories, for example, Bloom's *Taxonomy of Educational Objectives, Cognitive Domain* and Gagne's *Cumulative Model of Learning*. The first level of objectives identified in Bloom's Taxonomy is simple awareness of phenomena, followed by translation, interpretation and extrapolation known as comprehension. Gagne described a response as motor and verbal chaining, each based on what had been experienced.

The next level that leads to concept formation is called multiple discrimination by Gagne, followed by the formulation of rules, principles and laws that enable effective problem solving. This level of intellectual processing includes identification of perceived applications, followed by analysis that leads to synthesis. Synthesis involves putting together what was revealed through analysis. Synthesizing is a unique process for each individual that yields a unique product, difficult if not impossible to assess with a "standardized" test.

The highest level of cognitive processing is problem solving that requires critical and creative thinking skills. Problem solving is dependent upon synthesis, defined as a logical recognition of the relationships between sets of ideas. Identifying in detail what is known or unknown and what is only superficially understood leads each individual to take up the task of elaborating those areas not yet fully developed. An in-depth study of one element in any system elaborates and expands the model of the whole.

Each student documents what was observed, ideas that were generated, questions that were raised etc. These documents take the form of visual/artistic representations and writings in whatever unedited language forms each learner has mastered up to that point. These documents are inserted into the software repository. This process is repeated with every investigation, lesson, trip, discussion, etc. selected for recording by the teacher and members of the group of learners.

The record is available for review so learners will be able at later times to return to their prior products and make changes that will reflect greater maturity and refinement of their ideas. They will make an assessment of which parts have been visited and what work is left to be accomplished. This is invaluable information for both the teacher and the learners in planning specific learning opportunities in a continuous-progress curriculum. Anyone with a legitimate purpose can make an assessment of where each learner is at any point in the sequence that leads to mastery. Learners can be assisted in recognizing any deficiencies.

As learners continue their inquiry, they will demonstrate through their records what they experienced, when they experienced it, and what they made of those experiences at that time. Later visitations will enable refinements, corrections and development of further insights leading to competencies seldom found resulting from often disconnected instruction.

The products of each learner's experiences will include pictures taken on site, diagrams, artistic representations, written narrative, video recordings, etc. These materials will be scanned or otherwise electronically entered into each learner's record, dated and filed in an appropriate file/folder and accumulated over time to be made available later with the click of a computer command.

Eventually, if learners are developmentally mature enough to do so, the accumulation of experiences will reveal logical relationships and each learner will be encouraged to summarize those relationships by constructing logically-based models and entering them into their record in files within folders appropriate to the specific subject matter.

Younger, less mature, pre-logical individuals will not be expected to logically organize the products of their experience; their teacher/facilitator and other significant adults will assist them in the process of recording their experiences. When individuals mature sufficiently they will take over the management of their personal record, freeing the teacher to interact with them on an authentic, transactional-basis.

Readiness to logically solve problems, having developmentally acquired the capabilities for logic, is defined by using models developed by Jean Piaget, Viktor Lowenfeld and Jerome Bruner, among other specialists in developmental theory.

These three core theories under-gird the CARES system; they have been validated many times over but are ignored by the behaviorist advocates of standardization and standardized tests. The first theory is attributed to Jean Piaget. He described the development of logical/cognitive capabilities in individuals from early childhood through adolescence.

Piaget developed a data gathering strategy that employs “conservation experiments” to determine cognitive functioning at four levels of biological development, starting with sensory motor responses to experience, leading to pre-operational/pre-logical intelligence, to concrete operations or simple logic based on concrete experiences, to formal operations characterized by the ability to deal logically with abstract and hypothetical situations.

These experiments are available for use by teachers, important in determining the level of cognitive functioning of each learner that shapes the expectations for learning. Without this information, learners are often treated as if they are the same as others at their age level when in fact age alone has nothing to do with the developmental capacities for thinking logically.

The second theory is attributed to Viktor Lowenfeld. He described the levels of cognitive development exhibited in children's drawings. When asked to draw a familiar picture of home, the first drawings depict the house as curved lines floating in the air. While adults may not recognize the drawing to depict a house, to the youngster this is indeed a house.

This is equivalent to a late motor-sensory capability and early pre-logical operations. As the child develops the next level of cognition it is exhibited in drawings as a two-dimensional house anchored to the bottom of the page. This is a level of beginning logic. It is followed by a gradual sequence of moving the house away from the baseline into a base-plane followed by showing the house taking on a beginning third-dimension where the front portion is three-dimensional and the rear view is two-dimensional, a level called dawning realism.

A picture that exhibits a realistic view with a fully dimensional house and its surroundings, proportional with overlapping, is the next level. The final level is abstract drawing which uses bits and pieces of all the prior levels to achieve a particular effect.

With information about the levels of cognition, demonstrated through the conservation exercises and observed in the drawings of each learner, the teacher has additional information about what the learner's capabilities for logic are, whether it pertains to science, grammar, mathematics or art.

The third theory is attributed to Lev Vygotsky and Jerome Bruner. It deals with the sequence of language development beginning with pre-intellectual language, to naively psychological, to external signs dominance, to the internalization/in-growth/ symbolic phase. Bruner described the sequence as first enactive, then iconic and finally symbolic.

The uses of words often do not distinguish how the language is being used, whether the words reflect a reciting of signs that have very narrow meanings, symbols that have rich and connotative meanings or words with relatively little if any meaning. They all sound the same.

Knowing the definitions of each phase will make it possible for teachers to more precisely determine the level of meaning each learner is exhibiting as reflected in the records of experience developed with the CARES system.

Because a system is made up of related parts, it matters little which variables or parts of any system are initially approached or in what order. Inquiry begins with a conceptualization of the overall structure of the system to be studied and identification of relevant disciplines appropriate to guide inquiry. This activity has been described in detail by David Ausabel and labeled “advance organizers.”

The current interests and developmental readiness of each learner can be honored since the end product is the construction and elaboration of systemic models that contain all the variables of the system; the point of departure will ultimately be linked to all the other variables. Once this is accomplished, comparing the end products with fellow learners will greatly enhance thoughtful refinements and an ultimate integration.

It is important to note that the first encounter with any of the variables (parts of systems) generates a general impression; details are usually missing. With each additional visitation more details are observed and

recorded. Learners must revisit their experiences several or more times to be able to tease out a fully developed conceptualization of the curricular content.

It is possible to revisit each variable shown on the circular illustration multiple times during the course of the years of formal education and these re-visitations are greatly enhanced if a record of past experiences has been maintained. Extended visitations will lead to the development of patterns that greatly reduce the complexities of the world; maximizes meaning, improves recall and problem solving capabilities. Learners have at least fourteen years to develop these skills and the rest of their lives to refine them.

The active pursuit of meaning on the part of each learner is the orientation of this program. The assessment, record keeping, evaluation and reporting procedures are designed to support this orientation.

The teacher's role is that of a facilitator of a transactional-process of selecting, seeking, defining, examining, organizing, storing and communicating meanings constructed by individual learners, guided by the nature and structures of the creative processes found in a full range of disciplines within all realms of meaning.

It is the learner's responsibility to engage in inquiry, with assistance when necessary, formulate reactions in their unique language forms, construct models to represent the results of their experiences, insert these evidences into their record and enter into a process of sharing these outcomes with fellow learners under the watchful eye of the teacher.

The systems-orientation of the CARES model enables learners to creatively construct models of their interpretations of the objects, events and processes they encounter - the gathered information/ experiences they accumulate about the parts of the world and the universe. Taking account of the many individual variables found in this booming buzzing system is made meaningful and manageable by using the CARES model.

Starting in the local environment and expanding into other environments/regions throughout the state, country, the world and beyond, each learner investigates first hand, and through the vast library of computer connected data sources, the parts of sub-systems, records interpretations in computer/ storage programs, and constructs integration among what otherwise would likely remain isolated, disconnected and easily forgotten information.

Since the universe is a vast network of sub-systems that make up the whole, it is necessary that it be organized into identifiable categories each learner will recognize and engage. To help keep track of the findings that each has discovered and constructed there is a need to maintain a complete record of the experiences encountered with each variable, accumulated one part at a time. The record keeps track of the results of those experiences for use in the higher level processes of learning - synthesis and critical evaluation.

Each encounter is recorded with personal interpretations, organized through an integration into models, validated with support from others (especially those who have studied and communicated about these matters in depth) and refined with the assistance of adults who have pursued similar investigations and expressions of meaning in their lives.

Having a complete record of past experiences available with the click of a computer command enables learners the opportunity to revisit their experiences, reconstruct their meanings and re-integrate the updated versions into the unique construction of ever evolving and expanding systems relating to life in all its manifestations. (Whitehead)

Record keeping prevents the loss of important information easily forgotten without a record. Valuable information is unfortunately lost in the processes where records consist primarily of letter or numerical grades; not very useful for either the learner or any other interested party. Record keeping maintains continuity in the study of all the manifestations of one's personal and community life.

There are those who have engaged in investigations into life's manifestations, who have learned how to learn in their specific fields of study. They have developed and utilized personally-constructed models of their discipline. They can provide invaluable assistance in revealing their ways of "coming to know;" what they have discovered in the practice of their disciplines that can be adopted and modified by younger learners pursuing their own insights and procedures for making sense out of life in this universe. Each of these disciplines are parts of the realms of meaning human beings are capable of constructing and using in the normal course of living in this changing world. (Phenix)

Philip Phenix identified six realms of meaning that subsume all the disciplines and modes of communication dealt with in general education and life. All sciences, including social sciences, are considered empirical. All the arts are grouped in the category, aesthetics. All languages, including mathematics, are grouped within symbolics. History, geography and cultural anthropology are identified as synoptics. Ethics, which includes morality, is grouped within the category, ethics. Synnoetics or self-knowledge is included as an integral part of the six realms of meaning.

The complete record of each learner's transactions with all parts of the universe using all realms of meaning, the products of systems design, constitutes evidence for assessment. That becomes the basis for evaluation of the quality and quantity of learning achieved by each learner. In the CARES system, the products stored in each learner's personal record are evaluated using well-established procedures for systems analysis.

There will be differences in the time it takes each learner to investigate and construct models, in the level of sophistication built into each model and the number of uses the learners can anticipate. These differences must be considered in the final evaluations.

Learners are being asked to construct systems that are composed of parts that are built into an integrated whole that contains those parts, formulated into models that illustrate the relationships understood and communicated. The nature and viability of the constructed system(s) becomes the content for evaluation.

The evaluation criteria applied to the analysis of the contents of the record are as follows:

#1. Organization: The record for concrete and formal operational youngsters (Piaget) must be logically arranged with a brief explanation of the basis for the particular organization, with definitions and explanations for each file or classification.

Teachers and other adults involved with early (pre-logical) learners will be cognizant of the importance of organization and will assist the less-mature learners with appropriate construction of a record of their experiences to be later taken over by each more-mature learner. (Note: the record will travel with each learner)

#2. Clarity: Written statements and visual representations (example – charts, graphs, models, etc.) will be relatively error-free with regard to formal language usage – spelling, grammar, sentence structure, etc. Entries in the record will reflect evolving skills of language clarity including mathematics and the arts.

#3. Comprehensiveness: Inclusion of materials must be representative of the total possible parts that fall within the scope of each system. (Early learners are expected to directly experience as many of the variables as possible and express their unique interpretations mainly in representations of art, oral representations and dramatizations.

The results of these experiences are photographically recorded and included in their record maintained under supervision of their teachers/facilitators and significant others.)

#4. Accuracy or Plausibility: Explanations, whether they come from each learner or from authors on the internet, or from texts must be verified as accurate, or at the very least, plausible as determined through logical analysis requiring appropriate developmental readiness.

#5. Support from Personal Experience: All explanations and statements of beliefs are to be supported by and/or derived from personal experiences.

#6. Support from Others' Experiences: Personal beliefs wherever possible will be supported by others, especially those of experts drawn from literature, through both fiction and non-fictional sources.

#7. Intra-File Consistency: Each file/folder will contain ideas, propositions, etc. that are found to be internally consistent (non-contradictory). Any possible inconsistencies will be identified.

#8. Inter-File Consistency: Materials contained in each file/folder should not be conflicting with the contents of other files/folders without identifying these possible conflicts that inhibit integration.

#9. Generativity: Hypotheses untested, ideas in process, and creative solutions will be identified wherever possible.

Applying these criteria encourages unique constructions by each individual:

The anticipated results of the learning processes that accompany the Constructive Assessment, Recordkeeping and Evaluation System are these:

- (1) This system will utilize the unique, cumulative learning opportunities of every individual, inside and outside of school.
- (2) Continuity in learning will occur; one episode building upon another in a continuous-progress curriculum.
- (3) A system's orientation will reduce complexities to manageable elements, enabling individuals to make sense out of and increased control over a booming, buzzing complex personal world and universe.
- (4) Integration and construction of meaningful relationships between sets of ideas and subject matter will be constructed.
- (5) Personally developed and validated frameworks for understanding elements of the universe in which they and we live will be the result.
- (6) A continuous search for meaning in life's experiences will personalize any formal schooling experiences.
- (7) The process of gaining self-direction and personal-competency, with open sharing of ideas and validation through comparisons with the lives and thoughts of others, will lead to far more productive citizens, more productive human communication and yes indeed, more sensible and productive governing processes.
- (8) The process of establishing "advance organizers" prepares learners to effectively approach an active study of any system, whether it is history or geography, or a discipline like mathematics or any of the sciences.

Younger learners with pre-logical intellects are to be engaged in explorations of as many real life situations, objects and events, as possible, so as to have something to react to with creative and imaginative responses. The evidences of those experiences and the reactions are recorded in the electronic folders for future use when logical abilities emerge, developmentally.

Analyses of the personal records of learners that reflect the status of inquiry into systems will yield judgments at four levels of performance appropriate to the developmental capabilities of each learner: (1) mastered, (2) competent, (3) needs work, and (4) inadequate. Judgments are based on the analysis of each system that is contained in the record.

Mastery at the levels of concrete and formal operations is defined as the ability to differentiate/conceptualize the parts of a system, create an integration or synthesis of the parts, illustrate the synthesis by constructing models – iconic that look like the subject of inquiry, symbolic that represent the subject but do not look like it or analogies that can either be iconic or symbolic, anticipate the consequences of change within the system, freely compare and contrast the system with formulations created by others and modify and utilize the system to effectively interpret and solve problems.

Mastery at the pre-operational or pre-logical levels is judged with deference to the uniqueness of the responses to experience and the existence of biologically-based restrictions that limit full actualization of intellectual potential.

Assuming availability of on-line primary source data for local communities, and considering the developmental stages of development, middle school students are suggested as a place to initiate the system in the study of local history and geography. Most middle school students have matured to a level of concrete logical thinking required for meaningful inquiry. Subsequent plans would include both the levels prior to middle school to determine what experiences will enhance the development of historical and geographical knowledge, and subsequent to the middle school to determine what experiences will broaden and build on this knowledge and insight.

Students formed into groups up to twenty with a teacher/facilitator who has been schooled in the dynamics of group/team development is ideal. Inquiry will be facilitated with subject matter specialists available when needed for consultation from inside and outside of school. Extended time periods assigned to a stable location for inquiry are necessary to ensure in-depth explorations. Collapsing scheduled classes into blocks of time, connected to on-line sources, assigned to a permanent location, are required.

What equipment and supporting technologies, materials and services are required for implementation of the CARES Model?

- 1) Individual access to a cell phone and/or digital camera.
- 2) Individual access to computer recording and display capabilities.
- 3) Individually assigned Google Doc software or equivalent with internet capabilities
- 4) Network to master computer with large storage capacity.
- 5) Individual access to scanning and duplicating equipment.
- 6) Basic art supplies and scientific equipment.
- 7) Access to primary and secondary sources of information for local and more distant communities.
- 8) Field trip budget for facilitating hands-on experiences necessary to the process of gathering data and personal verification of findings.

1a) Access to Cell phones or digital cameras is needed to input data from experiences each learner encounters with topics contained within the four universal categories, natural/physical features, social/cultural factors, economic and political structures and processes.

2a) Storing and displaying input data enhanced with a variety of existing electronic devices such as tablets, laptops, cell phones etc.

3a) The Google Doc software or its equivalent would be assigned to individual accounts with connections to a master computer for storing the record of experiences enhanced as inquiry proceeds consistent with the CARES protocols.

4a) Access to ample art supplies and basic scientific equipment are required that supports inquiry into the manifestations of life.

5a) On-demand access to primary information, especially pertaining to the learner's immediate environment, and quality secondary sources including fiction and non-fiction are required.

6a) As learners record their experiences the evidences are scanned or otherwise inputted into the record requiring access to scanning, word processing and duplication equipment.

7a) Hands-on experiences are necessary for meaningful inquiry; there is a need for getting learners out into the world, frequently.

How will this process affect the lives of students and teachers?

Teachers will be able to interact authentically with developing youngsters under their care with realistic expectations that are shaped by the developmental characteristics of individuals. Students will assume responsibility for personal inquiry and record keeping.

Teachers, having experienced life during more years than their charges and having studied the foundations of education, are in a position to become fellow learners with their students making inquiry the centerpiece of their shared activities. The results of learning will be made available through the extensive record that is maintained by each learner with the help of teacher/facilitators. Continuity will be maintained as learning experiences are recorded and added to the record.

Learners will be personally involved in helping to shape learning activities with a freedom to arrive at unique interpretations. Through a cooperative group setting, learners will have ample time to develop unique thoughts, express them in their own language and seek input from others that will lead to refinements and elaborations. Intrinsic rewards will result from meaningful experiences that stimulate a lasting motivation to learn.

In Summary!

Simple ideas are often the best ideas and the CARES Model, an individualized assessment and evaluation strategy, is just such an idea that has undergone extensive development over many years, by educators.

Systems design and systems analysis are two simple ideas that can enhance the results of learning. (Bela Banathy)

Through instruction, we all have heard of and studied parts of systems but often know or can recall little substantively about them, whether it's the solar system, the digestive system, the braking system on our cars or the public school system. Learning about systems but failing to construct the systems leads to facts easily forgotten. According to Webster, a system is a set of parts that form a unitary whole; each set of interrelated parts is recognized as having a boundary that separates one set or system from another. Each system can be viewed as related to other systems or as sub-systems of larger systems.

Systems thinking consolidates the complexities of life into manageable units by bringing together isolated bits of information into unitary wholes that make effective problem solving possible. Systems thinking leads to the development of maturity and wisdom, building upon the uniqueness of individuals, developing sensitivity to the need for compassion and shared understandings.

When we think about systems we take note of the parts and their relationships that make sense to us. We understand the parts and their relationships are needed to solve problems. When we design systems we select some parts and form them into a unit. When the system doesn't work we analyze which parts are not functioning well within the set of parts that form the system.

A systems-oriented learning process is enhanced with a diary constructed during the school day that can be added-to during other times when thoughts and activities occur that are important to be remembered; a record maintained as part of a process of mastering the skills and abilities needed in life.

Picture an authentic, detailed record that provides the basis for assessing and evaluating learning, maintained by learners under the patient eye of adult facilitators. This is the essence of the CARES Model: *The Constructive Assessment, Recordkeeping and Evaluation System*.

A process-oriented learning strategy and a compatible system of assessment and evaluation of learning-outcomes begins by collecting the evidences of learning as they occur, starting in early childhood - the art work, the dramatizations, the interactions, movements, explorations, joys and challenges, and continues to build upon that foundation as each learner develops maturity in the capabilities for logic and logical construction of meanings about life that are gleaned from personal experiences and from those of others.

The CARES record is organized, stored and maintained in computer systems with instant availability. It offers the opportunity to re-examine at any time the experiences, thoughts and actions that occurred in the past, organized as systems vital to self-understanding and made available for reference whenever the need arises; a record that travels with the learner to be shared with others.

Think of a system of assessment and evaluation that is consistent with the processes of systems design, the putting together of parts into unitary wholes in any and all fields of inquiry. Each discipline whether mathematics or chemistry or history or geography, (among six realms of meaning – Philip Phenix) are considered systems containing processes of inquiry with strategies for the communication of results from inquiry, each providing guidance for achieving mastery. Think of a system of assessment and evaluation called systems analysis that renders an authentic evaluation of each system that's designed, reflected in a personal record of learning.

Providing guidance for developing competency is based on a process of language development that occurs in an invariant sequence starting with automatic reactions to experiences, then matures to iconic or graphic visual representations of the after images of those experiences and finally arrives at representations that convey meaning through symbols including words, sentences, paragraphs and poetry etc. (Bruner)

A record managed by the learner with assistance from adults is much more than a random collection of information, it's an organized and computerized record that contains descriptions of all the important events that occurred in the course of learning about life in all its manifestations, and what was done with those experiences, displayed as systems that maximize their value as a primary source of information important for developing self-understanding. The record displays the integration of information each learner has conceptualized, instantly available through the uses of modern technology.

Implementation of the CARES Model is a practical and scholarly response to the problems created by the recent flurry of standardized testing. Here is an opportunity for regionally-based public schools to lead the way in securing local control of their educational systems, with innovations that can make a profitable difference in the lives of all students and ultimately in the preservation of our democracy.

Waivers and financial assistance for implementation can be obtained if there are sufficient commitments. Local professionals with the necessary background and interest to provide guidance are available. Discussions and planning can be facilitated with a minimum of expense. Workshops can be arranged for educators, parents and politicians.

Maximizing the benefits of the CARES System can begin with a minimum of expense at the earliest levels of schooling and gradually refined throughout the elementary and middle school levels. Subjects of the secondary levels likely will initially enter the implementation phase one subject at a time. Eventually, as learners emerge from their early experiences with a record of past experiences and a facility for organizing their learning, the secondary curriculum will undergo changes that more consistently reflect the needs of students who display

exceptional emerging competencies. Eventually, a continuous-progress curriculum will be established throughout each school from the earliest levels to graduation.

The offerings at the college levels will need to recognize and reflect more sophisticated intellectual readiness for learning that will be the product of implementation of the CARES System, established at the public school levels. Changes in teacher education must likewise reflect a more sophisticated theory-based orientation.