

There are formulations developed by reputable scholars that underlay the educational plan called America's Past Through the Eyes of Local History. The central formulation is one developed by Jean Piaget that deals with cognitive growth from infancy through adolescence. His formulation is called Genetic Epistemology. Two related formulations deal with growth found in representative drawings and language. Viktor Lowenfeld and Lev Vygotsky found levels of growth that match those found by Piaget.

Learning was found by Robert Gagne to consist of levels of growth conditioned by the levels of development found by Piaget, Lowenfeld and Vygotsky. Gagne found that all learning begins with experiences that accumulate in a predictable sequence emerging toward mastery, each stage or phase building upon a prior stage. The richness of each stage is dependent upon the richness developed at prior stages. The end product of a learning sequence is higher order thinking which is defined in Bloom's Taxonomy as analysis, synthesis and critical/creative evaluation. Successful completion of a learning sequence is enhanced by Gestalt concepts that considers this sequence to reflect more than just the sum of the parts. For anyone who has arrived at this level of insight, there emerges a gestalt, representing an aura of self-understanding that is intrinsically satisfying.

Processing through the stages of learning is conditioned by the developmental capabilities achieved by each learner. Until learners have acquired cognitive capabilities for logical thought, individuals will not be able to combine experiences into concepts and principles or higher order thinking that leads to insightful problem solving.

Behaviorism drives the current standardization movement claiming that if behaviors cannot be observed and measured they might as well not exist. Developmental theory recognizes the natural sequences for intellectual growth. Gestalt theory views the products of a completed learning sequence as more than the sum of its parts.

The stages in Gagne's learning theory are described as first, stimulus response learning. This is assumed to be an automatic response to experience. Repeating specific experiential stimuli leads to simple associations that are expressed by motor responses and then as verbal responses. Once this beginning language is available to express what is happening in personal thoughts and actions, it presents further opportunities for learning. Gagne called this next phase multiple discrimination that leads to concept formation. Concepts are mental images that

are retained and applied to the interpretations of the events associated with experiences. This requires an ability to think logically. Multiple discrimination produces rich concepts. Regularities found among these concepts lead to the formulation of simple rules that emerge into principles. Upon further study, these internally constructed principles become laws that enhance problem solving. As noted, for anyone who has arrived at this level of insight, there emerges a gestalt, representing an aura of self-understanding that is intrinsically satisfying.

Essential subject matter that is considered for mastery by individual learners has traditionally been organized into separate subjects composed mainly of the conclusions reached by those who are engaged in producing knowledge in their chosen disciplines. This subject matter is selected by adults for consumption by students.

In our plan, instead of defining the outcomes before engagement, it defines the processes of learning as defined in each discipline that will produce outcomes that are authentic and measurable and uniquely individualized. The creative processes of disciplines are cataloged into six realms of meaning, a schematic designed by Philip Phenix. These realms are labeled empirics that include all the science disciplines. Synoptics include history, geography, cultural anthropology, religion, and philosophy, providing a descriptive overview, that utilizes other realms to explain its views. Symbolics contain all languages including mathematics, Aesthetics include the arts and architecture. Ethics include matters of morality. Synnoetics include self-knowledge.

The study of history and geography in this plan performs an integrative function in the curriculum of the school by placing in the hands of learners the methods and materials of these two synoptic disciplines, beginning with the immediate surroundings of the learners where concrete experiences can be verified and transferred to the study of every other community worldwide.

Additional researched and validated formulations that underlay this plan include definitions of communication, group processes, especially group development and systems thinking with a focus on systems design and systems analysis. Warren Bennis, Leland Bradford and many others associated with the National Training Laboratory have defined how communication occurs or is interrupted, how learning groups are moved through stages of development from dependency to

independence to interdependence and how systems thinking offers an orientation for learning that is used extensively in many areas other than education.