

## **The Impact Of The Shifting Knowledge Base, From Development To Achievement, On Early Childhood Education Programs**

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### **Abstract**

Interest in child development as a knowledge base for early childhood education programs flourished in the 1970s as a result of the theories and philosophies of Jean Piaget and other cognitive developmentalists. During subsequent decades in America, reform movements emphasizing accountability and achievement became a political and social imperative, resulting in the 2002 U.S. Law No Child Left Behind (NCLB). The mandate of the NCLB emphasized “consequential accountability,” now permeating American schooling and curriculum development. The law’s impact on early childhood education is discussed with selected professional judgments and data outlined particularly in federally designated Poor Black Belt Alabama counties. Finally, suggestions are offered regarding clarification of cognitive developmental theory with evidence of misunderstanding of Piaget’s theory that may have weakened applicability to early childhood programs and curriculum. Political and professional discussions are included regarding modifications of the NCLB law allowing for regeneration of emphasis on child growth and development as a knowledge base for early childhood education.

### **Introduction**

During the 1970s and 1980s, schools for young children flourished as a result of emphasis on theories and philosophies of cognitive developmentalists. Jean Piaget’s genetic epistemology was followed by theorists, educational philosophers, and researchers, including Jerome Bruner, Lev Vigotky, Lawrence Kohlberg, and more recently Robert Sternberg and Constance Kamii.

A brief review of Piaget’s (1957, 1952, 1964) theory of Intellectual Development is appropriate to review how cognitive development emerged as a part of the overall educational knowledge base. Educational programs and samples of research are reviewed as well as teacher preparation, with an emphasis on curriculum development undergirded by a definitive cognitive developmental knowledge base.

As a reform of educational practice, Accountability of student achievement based on mandatory testing emerged as the sole measure of student and school success. With the passage of the No Child Left Behind Act in 2002, Former President George W. Bush formulated a plan for “consequential accountability” for every aspect of school achievement. Federal standards became a mandate that required that all schools allocated federal funds to teach prescribed educational programs, specifically reading and math, be accountable for achievement by states, school districts, schools, teachers, and students.

Questions regarding the impact of shifting the knowledge base from development to achievement measured by specific tests are noted with a brief discussion of that shift in Alabama Black Belt Counties.

Finally, political and professional judgments are included regarding possible modifications of the No Child Left Behind Law. These judgments may allow a regeneration of emphasis on children’s growth and development with achievement based on a range of indicators as a knowledge base for early childhood education.

## **Developmental Knowledge Base—Piaget’s Theory of Intellectual Development**

Piaget’s theory has accumulated the greatest library of theory and research data on the subject of cognitive growth that has ever existed.

John Flavell (1982) presented the first translation of Piaget’s works from French to English explaining Piaget’s specific theory of how intelligence develops in each individual. As a genetic epistemologist, Piaget changed the way we observe children and childhood. Developmentalists no longer view the child as an incomplete adult. Piaget’s view was that children at any age reflect a unique way of interpreting the world. Development was described as more than the simple acquisition of skills and knowledge. In addition to the quantitative differences in children’s knowledge and skills, qualitative differences also exist regarding how they know the world. Flavell (1982) contends, “Piaget’s primary interest was in theoretical and experimental investigation of qualitative developmental intellectual structures. (Piaget 1964) ” This approach may account for current misunderstandings, two of which follow:

- 1) Piaget’s theory does not recognize the need for educators, instructors, or teachers, as he contends that the individual constructs knowledge for him or herself.
- 2) Piaget is an age-stage theorist who has created an outline to indicate for specific ages at which children may progress through the stages of development.

Both misunderstandings are addressed with reiteration of Piaget’s thesis, Piagetian professional judgments and research, and assumptions affecting each misunderstanding. Piaget’s theory assumes two aspects, the invariant and the variant.

### **In-Variant Aspects of Intellectual Development—Misunderstanding #1**

Piaget’s (1966) central theoretical view is that each learner (child) is intrinsically active and does not wait for the activities that surround him or her to occur before they behave. Learners select which activities they are prepared to construct into knowledge. Learners are initiators and seekers of stimulation; however, they do not provide the scope or content of the experiences in which they choose to interact. Neither did Piaget propose that the learner could be motivated or enticed to select specific experiences or seek specific data through a system of rewards. He posited that the motivation for development was within the child. Piaget’s (Flavell 1996) cultural and educational milieu included schooling that instructed and transmitted knowledge and methods that he rejected; contending that, “children should be able to ask their own questions and complete their own research.” Teachers, of course, can guide to the extent that the intellectual teacher leads learners by guiding, by discussing, by questioning, and by examining, in which schooling, is able to render service. Currently, educators describe this methodology as constructivism.

Construction of mental activity presumes some kind of intellectual structure, some sort of organization within which it proceeds. However, mental activity is considered a process of adaptation to the environment. Adaptation, therefore, consists of two opposed but inseparable processes—assimilation and accommodation. These two processes are, according to Flavell (1982), “an act of intelligence in which assimilation and accommodation are in equilibration constituting an intellectual adaptation.”(Piaget 1964) Is it possible for the growing infant child or learner to determine her present structure of knowledge or provide for new information, data, or experiences to enter the structuring brain? Only an adult, mentor, facilitator, teacher, or guide can assess what may be needed and determine appropriate data experiences and information to allow for construction of cognitive structures. The following illustrates how teachers are essential to each child’s construction of knowledge. The data in Table 1 suggest and illustrate how

teachers’ strategies promote the construction of children’s knowledge, emphasizing Piaget’s (1966) assertion that “Life is a continuous creation of increasingly complex forms and progressive balancing of these forms that must develop within the interactive environment.” (Piaget 1969)

<b>Teacher Strategies</b>	<b>Description</b>
Provide sufficient space and manipulative play materials	Generous amount of space and materials for options for varying thinking for learners
1. Facilitate, supervise, and support child and group to bring about control.	1. Respond to, guide, question, elaborate on child activity and play themes, responding to need for assistance. Excessive teacher direction or control detracts from creative process and acquisition of discovery learning.
2. Ensure learner has rich real-world experiences to inspire positive thinking and creative experiences.	2. Opt to participate in real activities with adults and observe adult roles in school and home knowledge; provide creative interaction; be able to integrate into collected experiences. Restricting television viewing, violent content media limits the degree to which learners already have a violent theme.
3. Provide opportunities for learner to resolve conflicts socially and intellectually.	3. Cooperation and collaboration are essential processes in growing data. Access to computer on line. Literary filled experience, adult mentors, guides the learner toward resolving cognitive questions and social conflicts. Search examples maybe spell data base, a particular resource, what could you do if you want a turn?
4. Provide strategies for project words and language through skills and research, reflectively.	4. Teachers suggest adoption of a class pet. (goldfish, rabbit) and teach how to care for them. Physically constructing books for classroom library. Designing and building a city to comply with local laws, etc.

*Table 1*

Piaget explains, “fifty years of experience have taught us that knowledge does not result from a mere recording of observations without a structuring interaction (with human and physical environment) on the part of the subject who creates structures only through an organization of successive actions, performed with objects and humans”(Piaget 1969).

Educators and teachers are therefore essential to each learner’s construction of knowledge. Although Piaget was never willing to address education specifically, Robert Sternberg and Constance Kamii (Kamii 1996) have described Piaget’s writing as a “science” for education. Both were theorists and researchers, as was Bruner, who adopted Piaget’s theory to his own developmental work asserting, “my scientific and intellectual debt to Piaget”(Bruner 1966). Piaget also described types of knowledge, including physical knowledge, logico-mathematical knowledge, and social knowledge, as relevant to the educational process.

<b>Physical Knowledge</b>	<b>Description</b>
1. Properties of objects and laws of nature	Children explore size, color, shape, weight texture, capacity, taste consistency, flexibility, smell, and rigidity of objects, and how they function in the world. Whether they fall or ascend (gravity) and whether they maintain shape or take varying forms depending on conditions.
2. Logico-mathematical knowledge. Member concepts and operations	Children explore number concepts and operations through attention to prerequisites for the concept of number. Classification, seriation, reversibility of thought, transitivity one-to-one correspondence, and conservation.
3. Social knowledge—conventional knowledge, feelings, beliefs, traditions, and stories	Children learn history and customs, social expectations, rules, names for objects, actions, symbols, and facts.
<b>Present Developmentalists</b>	<b>Additional Groups Of Knowledge</b>
Meta cognitive knowledge	Children communicate internal thought process to self and others and consciously plan tasks, monitor and evaluate perceptual progress by iteration.
Representational knowledge—tangible expressions of symbolic thought	Children recognize and use actions, gestures, pictures, numerals, written and spoken words, or other symbols to represent ideas, thoughts, feelings, and events.

*Table II*

### **Variant Aspects of Intellectual Development – Misunderstanding #2**

Piaget has also provided a description of intellectual growth from birth to maturity through a sequence of developmental steps referred to as stages, which he believed to be the same for every individual. Adler (Adler 1966) explained that although the order in which a child progresses through the sequence may be fixed, his rate of progress is not. Piaget (Flavell 1982) contended that, “the maturation of the nervous system can do no more than determine the totality of possibilities and impossibilities at the given stage.” A particular social environment remains indispensable for the realization of these possibilities. It follows that their realization can be accelerated or retarded as a function of cultural and educational conditions. The developmental periods are divided into various numbers of states, subperiods, and stages. Those most familiar are the following:

<b>STAGES</b>	<b>CHARACTERISTICS</b>
Sensory Motor Stage Approximate Ages Infant–2	<ol style="list-style-type: none"> <li>1. Reflexive actions, beginning of symbolic thought,</li> <li>2. Functioning of object permanence and beginning rudiments of language.</li> <li>3. Gains control of reaching, grasping, holding behavior.</li> <li>4. Behavior Develops an understanding of gravity</li> <li>5. Reads adults’ faces for emotion</li> </ol>
Pre-Operational Stages Approximate Ages 2–7	<ol style="list-style-type: none"> <li>1. Intelligence becoming symbolic</li> <li>2. Beginning to master native language</li> <li>3. Symbolic imagery, mentally compares and represents objects</li> <li>4. Thinks perceptually</li> <li>5. Egocentrism of thought, considering and solving problems internally</li> </ol>
Concrete Operational Stage Approximate ages 7–11	<ol style="list-style-type: none"> <li>1. Intellect may be symbolic and logical</li> <li>2. Beginning rational thought, beginning to understand transitivity</li> <li>3. Beginning to understand conservation                             <ol style="list-style-type: none"> <li>a) Understands reversibility of thought</li> <li>b) Thinking may still be limited to concrete phenomena over past and present experience</li> </ol> </li> <li>4. Piaget noted the ages of each subject interviewed as a representation of thinking at each stage of development</li> <li>5. Thinking not totally abstract</li> </ol>
Formal Operational Approximate ages 11–16	<ol style="list-style-type: none"> <li>1. Abstract thinking develops</li> <li>2. Can introspect and reflect about own thinking</li> <li>3. Have their own thought processes</li> <li>4. Meta cognition, can think about hypotheses and propositions without concrete objects</li> <li>5. Can master more complex scientific and mathematical operations</li> <li>6. Can use reversibility and reciprocity</li> <li>7. Can use language in problem solving, discussion, and decision making</li> </ol>

**Table III**

Research conducted over the past forty to fifty years has generally addressed the ages at which Piaget noted that each child’s thinking proceeds through each stage of development. Piaget has explained his notations as recordings of the ages of the children ages who were subjects of interviews as he developed and replicated his theory.

The brief characteristics of children’s thinking during the stages are provided in Table III. Piaget (1964) insisted that progress through the stages may be continuous, but stages cannot be skipped. Piaget describes an “anlage” in developing the concept of conservation. Assuming “anlage” was a French word, I was puzzled in my own study for some time until I learned from a professor of German that the usage of the word was not French but German and could be interpreted as the coupling and uncoupling of biological cells as with cars of a train temporarily rerouted to other destinations. Understanding Piaget’s use of words should have been predictable because he was Swiss, and in Switzerland, many people are fluent in both French and German. After translating and applying this understanding, it may be assumed that a child who understood one example of the conservation principle, for example, liquid amount, may halt and shift thinking when focused on an attempt to understand conservation of length, which may not be understood until a later time. Therefore, the continuity and discontinuity through the stages is demonstrable. Rate of growth is far more individualized, and as Kamii (1996) explains, an eight- or ten-year-old may master concepts in analytic geometry after acquiring these skills by proceeding through the same stage sequence as her adolescent peer. Rate, therefore, is not the same for each individual because varying environmental factors cause it to be dynamic.

### **The Four Factors**

Piaget (Flavell 1966), who stated that four major factors contributed to progressive development, outlined each factor that influences growth through the stages. He referred to them as *The Four Factors*. They are the following:

- I. *Maturation*: Piaget described both physical and neural growth
- II. *Social Transmission*: the knowledge learned from interaction with all people in the environment, both adults and other children of all ages
- III. *Experience*: knowledge from the environment including the child's action on objects and social experience
- IV. *Equilibration*: knowledge structured as a result of the twin processes of assimilation and accommodation that must achieve equilibration prior to knowledge construction

The importance of the four factors to education is considerable. In the case of maturation, all elements of physical and neural need must be provided. This factor may be realized in healthy school lunches, and physical activity that nurtures healthy mental growth. Social transmission is emphasized as schools open doors to the community and allows the community and home to become active partners in education. This experience includes a variety of developmentally appropriate activities within the classroom and school with interaction among peers in the development of projects.

Piaget (Flavell 1966) maintained that the first three factors alone are not sufficient to explain development through the stages and can only be understood when integrated through the concept of equilibration.

### **Misunderstandings that Piaget is an Age-Stage Theorist**

Bruner (1966) asserted that connecting age to stage has prompted thousands of research studies in psychology and education primarily to test whether Piaget's stages of development match the notation of performance in individual subjects tested. Even after attempting studies on acquisition of conservation of children at various ages, Bruner, at the Harvard center of cognitive studies, reported little if any evidence that training of conservation could exist outside of a laboratory setting or be transferred to other cognitive structures. Bruner (1973) in addressing the proliferation of Age-State research in the U.S. stressed, "give an American the idea that anything can be accomplished in a specified time and he will surely try to surpass it". Most research studies attempted to note quantitative results that held little interest to Piaget, who was more interested in qualitative results, noting how children acquired cognitive structures and their progress through the stages of development. Piaget was, therefore, more concerned with how the child thinks rather than with what the child thinks and how quickly his or her thinking will progress.

Piaget's theory has had a major impact on education, particularly during early childhood. Is Piaget an age-stage theorist? Not in light of the present evidence.

## **Early Childhood Education Programs and the Shifting Knowledge Base**

The clear implication for education and teaching is that a reflective analysis of Piaget and other cognitive developmental theorists' function when application of that translation to education in general and early childhood education in particular, is required. During the 70s and 80s, early childhood programs, both private and public, flourished as a result of, and were undergirded by, cognitive developmental theory. In the United States, the federal program Project Head Start reflected the unity of this knowledge base, emphasizing all aspects of development and forces such as health and culture that affect young children's growth.

Public school prekindergarten and kindergarten programs were established in the United States as were university early childhood education teacher preparation programs. Research institutions established centers, and schools focused upon the growing concern for the development of young children. The purpose of these centers was to affect factors furthering child growth and development and subsequent school achievement.

Representative of this emphasis was the Harvard Center for cognitive studies, Florida Pre-School Project, High Scope Foundation, the Perry pre-school project, and more recently, Reggio Emilia. During the 1970s, the British Infant schools had a great influence on the development of programs in the United States. When I was a doctoral student at Auburn University in the 1970s, headmasters and teachers from Oxfordshire were invited to conduct workshops in early childhood education practice in England. The desire for knowledge about their practices came at a fast and intense rate from American educators. British headmasters calmed us by commenting that British educators did not bring answers to American educational problems, posing to us the question about one of the most celebrated and well known American Educational Philosophers, "Are you familiar with John Dewey?" A near extinction of early childhood education programs with a cognitive developmental knowledge base is a reality and may be partly due to misunderstanding Piaget's theory. Simultaneously, a shift toward the demand for educational intervention with a guarantee of achievement based on standardized test scores has occurred. Focus on developing an early childhood education knowledge base is therefore relevant.

## **Knowledge Base**

Developing a knowledge base is essential for every educator. Educators, as professionals, need to develop general and specialized knowledge applicable to their practice.

Without a knowledge base, physicians would have no basis for practicing medicine. Within the fold of medicine, after generalized knowledge, physicians who treat children and adults must acquire specialized knowledge whether in mental health, orthopedics, ophthalmology, allergies, etc. Adult health also depends upon knowledge that is both essential and different in a variety of ways. Other professions such as law specialized into constitutional, criminal, juvenile, etc. and each requires a specific knowledge base. Many other professional areas account for preparation of participants to acquire specialized knowledge, e.g., clergy, cosmetology, architecture, accounting, technology, engineering, and public administration.

Early childhood education realizes the usefulness of developing a knowledge base that provides a foundation for practice that can ultimately lead to successful teachers and achieving learners. The early childhood education knowledge base begins with philosophy and theory. Educators must determine both a personal and educational philosophical knowledge base and acquire a theoretical framework that guides practice. Kohlberg's (1972) paradigm identifying three main streams of thought across educational disciplines may be applied to present practice. They are the following:

- i. Psychoanalytical
- ii. Behavioral
- iii. Cognitive Developmental

In developing their philosophy, educators are guided to consider the “essential inner nature of man” and whether that nature is good, bad, or neutral, linking that idea to one central stream of thought. The seeking and identification of philosophers, theorists, and researchers associated with the chosen stream of thought is connected, leading students to a conceptual framework for interpreting and developing philosophy and theory into present professional practice.

The emerging pedagogy has identified a dynamic process influencing each individual’s ability to learn and to acquire knowledge. This acquisition according to Sternberg (1985) has the “weight of evidence” that intelligence is multi-dimensional, and the full range of dimensions is **not** captured by a single ability.

Early childhood educators have historically reflected upon the thought represented and supported by cognitive developmental theory and philosophy. An accountability system beginning in the 1990s culminated in the 2002 passage by the U.S. Congress of the No Child Left Behind Law (NCLB) based on a program that first existed in Texas under Gov. George W. Bush. The knowledge base shifted dramatically and emphatically from development beyond behaviorism to “consequential accountability,” which specified mandated standards for all children. Achievement, measured by prescribed standardized tests, demanded compliance from states, school districts, local schools, families, teachers, and children. A lack of compliance with achievement elicited the harshest judgments. Achievement itself changed from a desirable human endeavor to a feared doom.

### **No Child Left Behind Law**

Discussion regarding the No Child Left Behind Law since its passage twelve years ago has been widespread throughout professional literature, accompanied by opinions in popular journals, reports in research, and critiques by television, radio, and newspaper commentators. While these opinions abound, they also reflect dissatisfaction among citizens in general and professionals and parents in particular. George W. Bush’s promise was to bring all children and schools to a point of success through a system of strict accountability. President Bush stated, “People shouldn’t fear accountability; they ought to welcome an accountability system as a useful tool to make sure No Child Left Behind makes constructive improvements in their school districts and in schools.” (Bush 2001) The goal has been stymied or at least its demands unsuccessfully achieved. Consequential accountability became defined as any educational accountability mechanism that has the following three elements; 1) explicit publicized standards, 2) regular testing of the standards, and 3) consequences linked to performance. The shift from development to achievement to consequential accountability may be illustrated thusly: if we link accountability to specific achievement, then standards for achievement of accountability must be established, *further* defining success or failure measured only on standardized test scores, mandating consequences for achievement in all areas of schooling, *leading to*: consequential accountability.

President Bush’s accomplishment according to many critics has now become a symbol of domestic over reach. The question now may be posed whether congress has been unable to change or amend the law that is defined by many as clearly flawed. The law forced schools to confront the reality that many children were not passing standardized tests resulting in hundreds of schools, as well as their students, being labeled as “failures.”

The impact of No Child Left Behind initiative from the federal perspective and subsequent accountability goals on States, local schools, teachers, families, and children are discussed:

### **Federal**

After the No Child Left Behind law passed, federal implementation became stagnated with the task of disaggregating test scores to support decision making. Further, Congress underfunded mandate has provided inadequate test development and administration nor school reform or research initiatives. Support for No Child Left Behind is so waning in Congress that one Senator reports that less than a dozen in Congress now support the law.

### **State:**

Each state is now responsible for ensuring that all U.S. children be proficient in reading and math by 2014 as measured by universal standardized tests. Diane Ravitch (2010) explains that while states create their own standards, they are also obliged to meet federal test standards. State results often differ from federal testing results, in which children are expected to make adequate annual progress (annual yearly progress (AYP)). Schools in each state face strict sanctions when test scores do not meet expected standards.

While No Child Left Behind allowed states some autonomy in setting standards, Kress, (Kress et.al. 2012) reports that wide variation of standards across states has been cited as a major weakness in the law. All states were required to participate in the National Assessment of Educational Progress (NAEP) assessment. Evaluators began giving the NAEP standardized tests every two years to allow for comparisons between states. This requirement drove movement toward common standards. The No Child Left Behind Law is rigid in requiring that states design an accountability system such that all subgroups will achieve proficiency by 2014 or face the following dire consequences.

The following school improvement is required in year one for each school in county systems:

1. County Systems must allow students in “failing” schools to transfer to other schools.
2. Provision of technical assistance to each failing school
3. Each school (county) must develop an improvement plan.

School Improvement Year Two:

1. Provision of supplemental services to low-income students
2. Continuation of technical assistance

School Improvement Year four:

1. Replacing relevant school staff
2. Implementing new curricula
3. Decreasing management authority
4. Appointing outside experts as advisers to schools
5. Extending school year or school day
6. Restructuring the school by
  - a. closing the school and reopening as a charter
  - b. replacing school staff
  - c. turning over management of a school to the state
  - d. engaging a private management company to operate the school or
  - e. any other major restructuring of school’s governance designed to produce major reform

The design of NCLB allows for use of somewhat severe sanctions relatively quickly, which includes loss of all federal funds.

Districts (counties) and local schools are racing toward the 2014 proficiency deadline limits. Counties' (districts') flexibility to design their own accountability system around any alternative goal or deadline is restricted. The progress that each school can and should make from year to year depends upon whether the county or school chose to increase proficiency scores over time rather than yearly. Therefore, states are required to inform county school districts and schools that set goals of each major sub-group within each school must be met to make Average Yearly Progress (AYP). A key feature of consequential accountability is the focus on sanctions for poor performance rather than incentives for exemplary performance.

Consequential accountability under No Child Left Behind cannot be over emphasized. Escalating interventions for each year any school that does not continue to make Average Yearly Progress (AYP) is pronounced a "failure" with sanctions to follow.

### **Teachers:**

No group may be more negatively affected by NCLB than are teachers. Bob Schaffer, with Fair Test, the national center for fair and open tests, warns, "We believe that NCLB is not helping education nor does it lead to fully fulfilling its stated goals." Teachers are most endangered and affected by imposed consequences, including changes of responsibilities to other jobs within a system or loss of their profession and teaching positions. Teachers' voices angrily decry that their focus has moved from children to test scores. As Schaffer alerts, "We believe that the NCLB obsession with over testing has narrowed the curriculum that dumbs-down teaching to little more than test-coaching and actually drives children it is supposed to help out of schools." (Schaeffer 2012)

Many pre-kindergarten and kindergarten to grade three early childhood education program teachers report the strong influence that NCLB has had on their teaching content and teaching methods. Early childhood education teachers feel the pressure for academic accountability and increased skill instruction. Even if a teacher has an exemplary preparation in early childhood education and child development and education, academic expectations may preclude freedom to provide a program with a knowledge base underlining how young children learn and develop. Indeed, the knowledge base has shifted to focusing on the content of tests and on how to pass them.

### **Families:**

Because accountability does not allow teachers to focus on enriched and expansive educational programs, parents have grown to be a vociferous force demanding change in schooling. John Rogers (2011) of the University of California reports that parental involvement is mentioned more than one hundred times in the NCLB act. Rogers (2011) argues that President George Bush and former Secretary of Education Rod Paige promoted policy narratives of test achievement accountability, choice, and parental involvement that describe how poor parents can spur educators to have higher expectations and to work more diligently in increasing school test scores. What is missing from these policy narratives, Rogers argues, is the fundamental understanding of the problems facing poor communities: a lack of both resources and tools for collective action.

### **Children:**

Marian Wright Edelman, founder of The Children's Defense Fund, charges that "Children who cannot read or compete are sentenced to economic and social death in the U.S. Yet, only 39% of the nation's white, 15% Latino, and 12% of black fourth graders can read at a proficient level. Only 50% of white, 19% of Latino, and 13% of black eighth graders can accomplish math at a proficient level." (Edelman 2007)

This truth is unsettling because the No Child Left Behind educational act promised America's children that American education would ensure that every child would be able to achieve at high levels and could leave high school prepared for work, college, and adulthood. President Bush's law turned this promise on its head, having consistently cut K-12 education funding and having cut spending on No Child Left Behind. The result has been the harshest judgment on children who do not achieve Average Yearly Progress. Children having difficulty with these standardized tests are labeled "struggling," "non-achievers," and "failures." Children are told that if they do not pass tests beginning at four years old in public and private kindergartens and three year olds in Head Start schools they are "failures." When visiting with teachers in schools, I listen as teachers admonish children to learn the test so that their families, their schools, and their teachers will not fail with them. Although No Child Left Behind was meant to reform schools, Marian Edelman (2007) challenges citizens to realize that "a promise made to children and families has been reduced to attempts to prepare children for questions on tests rather than real learning and is not what we want for our children."

Does schooling now offer an opportunity to transform children into meaningful adults with life-long skills that includes meaningful and enriching content and thinking that allows deeper engagement with the world? If the early childhood education, knowledge base does not shift to include educating the "whole child," many children in the United States will be left behind without the knowledge, skills, and abilities they need to succeed.

### **Impact of Shifting Knowledge Base on Children in Alabama Black Belt Counties**

The Black Belt region of Alabama is typically characterized by a rural, U.S. government-designated poverty geographic area and with a predominately African American population. Dr. Walter Hill, Tuskegee University (Hill 2008), has reported that four Black Belt Counties, Green, Wilcox, Dallas, and Macon Counties, respectively have 100%, 100%, 48%, and 58% rural populations versus Alabama and U.S. rural populations of 40% and 20%, respectively. In the 1960s, sixteen Black Belt Counties were designated as being below the U.S. poverty level, with most inhabitants subsisting on small farming in the rich black soil of the region, thus named Black Belt Counties.

My experience in the Black Belt region was with research projects and teaching Head Start teachers in ten of the sixteen counties. In addition, many public school teachers attend Alabama State University to renew their state credentials toward seeking state certification. Teachers and children have experienced isolation in public schools intensified by the No Child Left Behind Law due to lack of expected achievement with success only measured by standardized tests.

The poverty status declared by the federal government extended to establishing the term, Black Belt, for the sixteen counties in Alabama as the test results are persistently poor due to the persistent high poverty rate. In my own experience, the realization, supported by the public health reports that at least 30% of families had no indoor plumbing and 25% no electricity, was readily observable. Families lived together, from grandparents to young children, all with responsibilities for farming aimed at their own

subsistence. In two-thirds of all counties with persistently high poverty, the high incidence of African American poverty reflects adverse conditions on the white minority population.

Teachers constantly complain that without their individual assistance with testing, children would not be able to mark papers or complete tests. The necessity for children to achieve mandated scores on tests is a constant burden for teachers who also realize that their own jobs are threatened unless children meet the Average Yearly Progress standards.

The population, and particularly children, remain racially segregated and poor and struggle in every area of testing. Students in the region who took the SAT spring of 2010 scored 36.2%, which is sixteen percentage points lower than did students elsewhere in the state. In SAT science, the disparity was similar; Black Belt students scored 40.4% compared with 57% outside the region but within Alabama.

The common denominator according to the Alabama Education Association and State Department of Education is poverty. County education departments also report that nearly 100% of all children and students qualify for free or reduced price lunches, and in some schools eligibility for free breakfast, compared with 44% in the rest of the state.

According to the superintendent of Bullock County (State of Alabama 2007), generations of undereducated adults lead to an entire region devoid of opportunity. The superintendent reports that chronic obstacles faced by poor parents are the single greatest factor affecting the struggles of students. In three of the Black Belt Counties, only 58% of the population has a high school diploma, and 5% has a college degree. Political, Educational Leaders and superintendents in Black Belt Counties report that they are pushing diligently to break the cycle of poverty, but for the past ten years, the struggle with accountability for No Child Left Behind has exacerbated the problems, making it more difficult to promote success for children. One school reported, “We are attempting to teach early childhood education children to communicate with language and middle school children to read, yet we are forced to substantiate Annual Yearly Progress for No Child Left Behind.”

### **Future Modification of the Knowledge Base**

Shifting knowledge base issues are a focus of professional early child education organizations including the National Association for Education of Young Children (NAEYC) and the Association of Childhood Education International (ACEI) as well as the southern regional accrediting agencies, the National Council for Accreditation of Teacher Education (NCATE), and the Southern Association of Colleges and Schools (SACS). A shifting knowledge base has also been influenced by the federal U.S. Department of Education and ultimately by the No Child Left Behind Law (NCLB). The following are relevant representations of current thought regarding the knowledge base among professional educators, politicians, teachers, and family members.

Several teachers in Alabama State University classes have expressed concern regarding the lack of research projects available offering developmental philosophy and theory confirming its affirmation of development as an effective knowledge base for early childhood education. Teachers in Alabama report they are overburdened with the testing requirements generated by NCLB. On January 8<sup>th</sup>, No Child Left Behind was one decade old. Maureen Downey (2012) reported, “Despite federal K-12 spending rising from \$27 billion in 2001 to \$28 billion in 2011, reading and math scores on a national assessment of educational progress—the so-called, “Nation’s Report Card”—have either been stagnant or grown at a slower rate than in periods before NCLB.” Nancy Badertscher, (2011) education editor of the *Atlanta Constitution*, has observed that having teachers and administrators under much pressure to deliver adequate test scores has led to widespread and decade-long cheating in Atlanta schools, resulting in

sanctions and fines of over \$350,000. Is Atlanta the only system in which professionals succumbed to cheating to comply, or have others in other states just not yet been caught?

As the 2014 deadline draws closer, more schools are failing to meet federal standards, with nearly one half not doing so last year according to the Center on Educational Policy. Center officials explained that some states today have more difficult tests or have a higher number of minority, immigrant, and low-income children. The center contends, however, that it is also because the law requires states to raise the bar each year. One of this year's former Republican candidates for president of the United States, former Senator Rick Santorum (2012), declared his vote for NCLB was a mistake made under pressure by the Bush administration. He now favors overhauling the entire law. Jennifer Ochoa, (2012) an eighth-grade literacy teacher in New York said, "We've started talking about kids in statistical ways instead of human being terms." In New York, protesting the increasing and pervasive role of testing, John King (2011), New York State Commissioner of Education, is said to have spurred what is believed to be the first principals' revolt in history. In January 2012, nearly 700 principals around the state signed a letter of protest, with nearly 500 from Long Island, New York. Principal Bernard Kaplan (2012), of Great Neck High School, said they are protesting the use of students' test scores to evaluate teachers' and principals' performance. Mr. Kaplan said, "It's education by humiliation and I've never seen teachers and principals so degraded and disrespected." Mr. Kaplan is not opposed to teacher and principal accountability, only to the methods being demanded. Another recent furor was created in Illinois when Christopher Koch declared the "unrealistic and punitive aspects of No Child Left Behind make it counterproductive." Concurrently, in Chicago, more than fifteen schools were closed for failure in achievement, affecting more than 800 employees.

In January 2012, U.S. Representative Joe Kline of Minnesota (2012) of the House Committee on Education said that No Child Left Behind must be reformed, contending, "Our Children deserve better." Virginia's Public School Superintendent Edgar Hatrick claims the No Child Left Behind law and system has resulted in "resources being diverted from the mission of teaching and learning"(Kline 2012). On February 9, 2012, President Obama announced he is freeing ten states from the central requirements of No Child Left Behind. Behind the changes in the education law is the promise of the states to adopt higher standards and reform the way they evaluate. President Obama said he was "giving these ten states the green light to continue making reforms" (Feller et.al. 2012). Obama asserted, "States must stay focused in a way that does not force teachers to teach the test or encourage schools to lower standards to avoid being labeled as failures."

What are the possibilities of bringing together this cacophony of thought, both positive and negative, to establishing an early childhood education knowledge base? Developmental psychologies and theories can bear reexamination, reflection, and rebirth. Laws were initiated and passed by men and women and can be changed by them. "One of the things we ought to be able to do is fix No Child Left Behind," said Senator Lamar Alexander (2011), former Department of Education Secretary, now Republican U.S. senator from Tennessee. "What we ought to do is set new realistic goals for education and No Child Left Behind law and so that schools can have those kinds of goals and most importantly we need to move out of Washington and back to states and local communities' decisions about whether schools and teachers are succeeding or failing." Proponents of the No Child Left Behind Law point to its focus on the poor minority students who are underserved and mostly attend public schooling.

Led by careful professionals, each of those concerned with education can modify the future knowledge base by linking the following:

*Development*—Curriculum that is developmentally appropriate to both groups and individual children

*Opportunity*—All children given opportunity regardless of socio-economic status by providing for particular support of those children and families scoured by poverty. To provide for participation by teachers and parents to elaborate on school goals, emphasizing success rather than failure.

*Individualization*—to provide programs realizing individuals will influence their own continued success through adulthood and citizenship. To recognize that each state and region in the vast United States though whole in intent has an individual personality influencing each family in schooling as does each child, whether residing in a city or village

*Assessment*—to provide a greater role for developing assessment measures that are success oriented. To formulate assessment measures that can provide information for policy, for decisions, for teachers, for school districts, for families, and for children themselves. To ensure assessments that can determine how well and to what extent programs and services are adequate, appropriate, and successful.

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