

**The Impact of Early Childhood Education on Society**

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The intent of this paper is to show that the most opportune time for education to impact not only an individual's potential for future success but also the wellness of society as a whole is not the American K-12 traditional focus. It is from birth through age 5. Waiting until a child is 3 or 4 years old to begin education cripples the child. Waiting until that child is 8 years of age to begin remediation cripples the society. Until about 18-24 months of age, every child--barring some physical and mental handicaps-- has the capacity to invent Google. Between 3 and 5 years of age, the gap in how much the child might possibly accomplish grows wider between socio-economic classes. That gap never closes. At age 8, the age typically when a learner's reading skills allow him/her to read to learn rather than learn to read, those who are not ready begin a cycle of re-learning and remediation that lasts a lifetime.

To Questers, the idea of listening to a paper on the benefits of early childhood education sounds about as interesting and worthy as watching paint dry. After all, it's preaching to the choir. So what can this paper possibly be about to make an impact on you? It will not be a diatribe on the legislature, the governor, state board of education, or the President's Race to the Top initiative. It will not be about standardized testing or the state's grading system for schools and teachers. It will not be about the core curriculum, charter schools, or vouchers.

It will be neither defensive nor argumentative. The intent of this paper is to show that the early years (birth to five) are the most critical and important predictors of a child's future achievement, and that the return on investment of programs dealing with early childhood education to society as a whole far outweigh the costs of remediation. Simply put, the purpose of this paper is to show that society benefits when all children enter kindergarten ready to learn.

And that readiness doesn't mean being able to recite the ABCs or count to 10 or know the colors. It means feeling safe, nurtured, and socially and emotionally ready to interact with others, having some sense of self. It means knowing and using a lot of words to gain information and to express needs/wants.

The Words are critical. N. Scott Momaday, a Kiowa Indian and Pulitzer Prize author of *House Made of Dawn*, shared with me in a phone interview many years ago now that his love of language came from his grandmother. "She told me: Love the words. Love the words." So this paper today is mostly about words, teaching our youngest learners to love the words, and seeing how that pays off to society.

### **The State of Early Education**

Preschool has captured the public's attention. This past fall (2014), New York implemented a universal Pre-kindergarten program with \$300 million in state money<sup>1</sup> Within the past year, The Clinton Foundation unrolled *Too Small to Fail*, an initiative that aims to close the word gap which exists in young learners, to improve health and well-being of children ages birth to five, to promote research on children's brain development, and to help parents, businesses and communities identify specific actions, consistent with the new research, to improve the lives of young children.<sup>2</sup>

That sounds like a kitchen-sink approach, packaged for a political campaign, but as of June 2014, the initiative included the American Academy of Pediatrics (AAP), Scholastic (a venerable publishing company of children's books), and the Reach Out and Read program (ROR), an early literacy focus promoted by pediatricians.

Where is Indiana in this mix of activity? Sadly, we are one of 10 states without any state-funded preschool program for our four-year-old students. Other states without state-funded preschools include: Idaho, Montana, Wyoming, North Dakota, South Dakota, Utah, Mississippi, New Hampshire, and Hawaii.<sup>3</sup>

There are myriad studies showing how the United States compares with other nations in education. According to a report by the British education firm Pearson, covered this week in the *Huffington Post*, the U.S ranks 17th.<sup>4</sup> Finland and South Korea rank first and second of the 40 developed countries included. Hong Kong, Japan and Singapore follow. The rankings are calculated on measures, including international test scores in reading, math, science, graduation rates, and the prevalence of higher education seekers. Pearson's chief education adviser Sir Michael Barber reported to the BBC (British Broadcasting Company) that the high ranking countries tend to give teachers higher status in society and that the highest ranking countries have a culture that supports the importance of education. What is significant about results of all the various surveys is not who placed first or second but the fact that the United States was not a top contender in any of them.

### **Readiness: A Review of How We Learn**

Abraham Maslow, humanistic psychologist most recognized in the 1950s for his theory of human motivation, identified a number of stages or levels that impact an individual's readiness to achieve/learn. Maslow's Hierarchy of Needs includes the following stages:

- Biological/Physiological needs - air, food, drink, warmth
- Safety needs - security, stability, freedom from fear
- Social/societal needs - friendship, affection and love

- Esteem needs - achievement, self-respect, and respect from others.
- Self-Actualization needs - realizing personal potential, self-fulfillment.<sup>5</sup>

In essence, a hungry child cannot focus on learning or master the multiplication tables so long as he/she is hungry.

Then, there's Bloom's Taxonomy. Benjamin Bloom, an educational psychologist, developed a different kind of hierarchy, one that focuses on levels of depth of learning. Bloom identified six levels that proceed from simple recognition of a thing or concept to a complex understanding of it.<sup>6</sup> These levels include:

- knowledge: ability to recognize and name the thing/concept
- comprehension: ability to define by attributes
- analysis: ability to classify
- application: ability to put in order, rearrange
- synthesis: ability to rank
- evaluation: ability to combine/create

In essence, simply recognizing a thing is five levels away from being able to create something new from it.

Like Maslow, Bloom valued the importance of learner attitudes and the need to "do" (psychomotor). For him, learning involved a think/feel/touch approach.

### **The Chable Interactive Experience in Readiness to Learn**

In order to focus on what human beings deal with as they go through a new learning experience, readers are encouraged to participate in the following activity with one or two other people (not necessarily your own age level). You will need a working surface, play dough (make

your own using table salt and flour or corn starch and food coloring by checking the Internet for "play dough recipes), paper, and pencil.

Begin by asking if anyone in the group knows what a Chable is. There may be conjectures, perhaps a guess, and/or someone might try to look it up. Then, read silently and without any comment to other group members, the following definition.

Chable: (Chah' ble)

The word *chable* is a portmanteau (combination of the words *Chair* and *Table*).

The chable is an object or construction that can function as either a table or a chair. As a table, it must have a flat surface for holding other objects. As a chair, it must be able to support the weight of the person sitting. If the design is good, it will be relatively easy and quick to transform the chable from its "chair" configuration to its "table" configuration

The advantage of a chable is that saves space. It can be utilized in homes, school, offices, and public environments such as libraries and airports.

Next: Tell the one or two others in your group the definition of a chable, without looking at the definition you just read. Then switch roles. The new speaker should review what the first speaker said and add other information to the definition, if there is any.

Next: The members of the group should work with the play dough to create a chable of their own design (using only the play dough). There will be conversation, questions, suggestions, and perhaps a disagreement or two on what needs to be done to create a chable that satisfies the definition. As a group, they should write out their questions, including what else they need to know in order to proceed with the design.

At this stage, the group needs to be reminded of the following about their participation in their new-learning experience:

- Group participants were not hungry and were in a safe place, a place where they were warm (or cool, depending on location) and free from physical harm or personal threat.
- Group participants were with family members or friends--others with whom they were comfortable--as they went through the various steps in the learning simulation.

This is Maslow. The Hierarchy of Needs establishes fact that learners need to have their basic needs for personal safety and social acceptance met before optimal learning takes place. Hungry children do not learn at their optimum ability level. Threatened children do not learn at their optimum ability level.

Beyond Maslow, group members went through a number of levels of sophistication as they worked through the simulation. First, they heard the word Chable, followed by reading a definition. Next, they defined Chable to their partner/s by listing the criteria included in the printed definition. Then, the partners reviewed what they had just heard and added other criteria that they had all omitted and discussed their perceptions, in incidental conversation.

Finally, encouraged to talk as they worked, group members worked together to create a Chable model from the play dough. There were trial and errors, replication, new beginnings entirely. As they worked, members wrote down what else they needed to know, what they "wondered" and what they felt about the choices they had made.

This is Bloom's Taxonomy, a hierarchy of levels of learning, proceeding from the simple to the complex. Group members realize they progressed from a knowledge level (hearing the term, reading about the term) to comprehension (listing, defining, explaining the term), to analysis and application (creating their own model or maquette by working with the components

of the definition, by discussing), and finally to synthesis/evaluation (figuring out what else they needed to know to make progress).

Both Maslow and Bloom have put in place a framework not for how to go about learning but for how learning happens. Of course, in that framework, teachers and students learn to identify where they are in a new-learning process and are able to make adjustments as they gain experience. Whether it's a toddler learning to put on shoes or Steven Hawking looking for the edge of the universe, the hierarchies as outlined by Maslow and Bloom are at work.

And throughout it all, vocabulary--ability to know and use words--is the tool that allows human beings to know, recall, understand, interpret, contradict, and re-tool. Vocabulary is THE tool for learning and especially in the formative years of birth through five years of age.

### **The Significance of Words: Birth to Three Years**

There is nothing quite so disheartening to a Quester who has waded through regression olds as to leaf blithely through a new issue of *The New Yorker* magazine, looking for cartoons, and find a 10-page essay entitled "The Talking Cure" about a study of 42 families from three different socio-economic sectors concerning the vocabulary growth of birth to three year olds.<sup>7</sup> And yet, there it was in *The New Yorker*.

*Meaningful Differences (1995)* is the title of a book of polemic research on vocabulary development of young learners from three different social classes. Dr. Betty Hart, Professor Emeritus of Human Development at the University of Kansas, and Dr. Todd R. Risley, professor Emeritus of Psychology at University of Alaska, recorded the talk of parents with their babies for over two years. The 42 families they chose included 13 from what they named the "Professional" socioeconomic status, 23 from the "Working-class," and 6 from the "Welfare" rank.



Each family was observed in its home for one hour each week over the 2.5 year period. Observers were trained to record (by hand) every utterance, every word the adult spoke. There was no 'right or wrong' for grammar or syntax. Sounds becoming words, words becoming phrases, and phrases becoming complete communications were all recorded. Data were disaggregated to allow for analysis for syntax (question/statement/imperative) and for parts of speech. This corpus of information took six years to complete.

The authors determined that parents in all three classes were similarly engaged--though by different means--in the fundamental tasks of raising a child: nurturing, playing, toilet training and disciplining. However, results show that socioeconomic status reflected a statistically significant difference in the amount of talking and richness of expression heard between the various classes.

In an average 14 hour waking day, a child spoken to 50 times per hour will hear 700 utterances; a child spoken to 800 times per hour will hear over 11,000 utterances. By age 3, children in professional families of the Hart/Risley study had heard more than 30 million words; the children in working class families, 20 million; and the children in welfare families, 10 million. The low "Welfare" children lost the equivalent of a year's worth of words heard by a child in a "Working class" family and two years worth of words for one from a "Professional" family.<sup>8</sup>

The Hart/Risley study validates that:

- The amount of talking in the family increases the size of the child's vocabulary (words child knows and uses).

- Interaction with the parent/caregiver is non-negotiable. Without a focus between the parent and child, no words are gained. Background talk and incidental sounds from a TV or other conversations have no impact on child's developing understanding.
- Exchanges between parent/child that are close-ended (demands, for example) do not stretch or extend learning. It is a *Serve* (initial statement/utterance), followed by the child's *Response*, followed by the parent's *extension of the Response* that leads to richness.
- Comments that are positive, more open-ended, and less punitive extend the talking session.

The Hart/Risley data is so compelling that Providence, Rhode Island, is currently participating in a program it calls *Providence Talks*, the result of a challenge proffered by Bloomberg Philanthropies for a plan to improve urban life. Providence major Angel Taveras, himself a HeadStart alum and Harvard graduate, was intrigued with the Hart/Risley data, applied for the grant and got it. It is this project that the *New Yorker* describes in detail. True to the Hart/Risley study, *Providence Talks* depends on involvement of the parent/caregiver, working with and learning from an assigned case manager who makes a home visit every two weeks. For each visit, the caseworker takes a book for the child and models to the parent how to read it to the child.

Vocabulary is recorded and monitored as it was in Hart/Risley. However, technology has simplified the accounting. LENA (Language Environment Analysis) firm has developed a small digital device that can record, recognize adult words, child vocalizations, and turns in conversation. It's like a FitBit for words.

It will be interesting to see what data *Providence Talks* gives us. For those who feel that the Hart/ Risley numbers were not robust enough to be statistically significant, the Providence data promises to be enlightening.

### **The Return on Investment: Three and Four Year Olds**

It is an assumption that early childhood education will pay for itself; that is, we assume it is less costly to build minds than it is to build prisons. Research supports that assumption and yet we continue to build prisons and defeat early education legislation.

Although results from many research projects show positive returns on investment for society at large, one particular study from the mid 1960s is especially noteworthy. The High/Scope Perry Preschool program in Ypsilanti, Michigan, was developed to help young children avoid school failure. The sample included 123 low income African-American children who were assessed to be at high risk of failure. Fifty-eight of those children attended five 2.5 hour sessions each week during school year with a teacher who also made a 90 minute visit to each child's home each week to engage mothers in the social development of their child. The remaining children in the sample of 123 were the control group. Founded on principle of active/participatory learning, the children, teachers, and mothers were all treated as partners. Children were taught to plan, carry out, and evaluate tasks with a emphasis on such social skills as cooperation with others and the nonviolent resolution of interpersonal conflict.<sup>9</sup>

Project staff collected data annually on both groups from ages 3 through 11 and again at ages 14, 15, 19, 27, and 40. Areas of evaluation included education, economic performance, crime prevention, family relationships, and health. In all areas and at all ages of evaluation, the

High/Scope youth outperformed the control group in terms of employment, earned income, level of educational achievement, and personal health and well-being (fewer arrests/jail).

Project evaluator Professor James J. Heckman, the Henry Schultz Distinguished Service professor of Economics at University of Chicago, a Nobel Laureate in Economics, and an expert in the economics of human development, determined the return on investment to society. In constant 2000 dollars discounted at 3%, the economic return to society of the Perry Preschool program was \$195,621 per participant on an investment of \$15,166 per participant. The return per dollar invested was \$12.90.<sup>10</sup>

He wrote:

The highest rate of return in early childhood development comes from investing as early as possible, from birth through age five, in disadvantages families. Starting at age three or four is too little too late, as it fails to recognize that skills beget skills in a complementary and dynamic way. Efforts should focus on the first years for the greatest efficiency and effectiveness.<sup>11</sup>

### **What Fort Wayne Preschool Advocates Say**

**Katie Burrows**, Managet of the Lower School for Canterbury School and a former reading specialist, says, "Parents need to cultivate a love of learning." She adds, they need to expose their children to lots of experiences, to art, and to physical activity. The most important thing parents can do to prepare their preschoolers for school success is read and talk to them.

**John Peirce**, consultant to the United Way who is spearheading its focus on getting all children ready for kindergarten, says, "We need to teach effective parenting. Bad parenting is not a moral choice." Peirce, who has an excused absence from today's presentation, is with the Governor in a planning session on the Big Goal Collaborative. He commented that *Paths to Quality* is a system developed locally that labels preschool providers on the basis of national

standards for facilities and curriculum. Allen County now has a higher percentage of Level 3 and 4 providers than any other county in the state.

**Marilyn Moran Townsend** is spearheading *Follow the Reader*, a program to recruit 10,000 volunteers to read with Grade 3 children not reading at grade level. Her work is part of The Big Goal Collaborative which is a cradle to career initiative that aims to build an infrastructure so all children are ready for success in kindergarten and life.

**Ginny Clark**, community volunteer and activist, says, "High quality board books that reflect diversity and loving family relationships in a one-on-one environment make the difference in teaching a child to love reading." BookStart is a year-old program Clark initiated that puts board books in the hands of trained staff of Healthier Moms & Babies, the Urban League's *Read and Rise* program, and *Healthy Families* at SCAN. Staff members from these agencies take books along on their home visits and model for the parents how to get the most out of the reading experience. Everybody wins because the children keep the books, and the presence of books in the house makes a statement about the importance of reading.

**Cheryl Ferveda**, the ACPL community and development manager, says, "The greatest need in early childhood is to educate the caregivers/parents. We need to wash the children with words." The library sponsors a variety of reading programs for youth. The one for toddlers requires that the parent participate and not use the time as baby-sitting. She repeated, "The greatest need is to educate the parents."

**Pamela Martin-Diaz**, manager of the Shawnee Branch of ACPL, a former FWCS member of the Board of School Trustees, and a passionate advocate for reading and readiness, says, "We will have difficulty with early childhood education until we look at early learning in

context of the influence of adults and the terrible cost of poverty." Outcomes for children, she points out are directly related to the situation of the family.

PNC Financial Services Group has its own early education program, as do many corporations. Named *Grow Up Great*, the PNC program emphasizes vocabulary--words. **Doug Wood**, PNC regional president for northern Indiana, wrote in a Journal Gazette editorial recently:

Central to a child's keeping pace in vocabulary development is the parents' active role in his or her education, so that learning takes place in the home long before schooling begins....To help advance this issue [importance of early childhood education] more public entities and private enterprises will need to step up their advocacy.<sup>12</sup>

### Next Steps

In *The Graduate*, Dustin Hoffman was encouraged to go into "Plastics." Today, he might be led into nanotechnology. But for an infant today, the magic word-- whether the baby is the child of a baker, a candlestick maker, a statesman, a beggar man or president--is "Vocabulary." It is THE key to a toddler's future socioeconomic status. And the money we spend on educating that toddler promises us a good return on investment.

After hearing about the state of preschool education in the nation and in Indiana, after reviewing/participating in how learning happens; after hearing about two studies (the Hart/Risley research and the High/Scope Preschool Project) that give direction on what to do for the birth to 5 set; and after hearing from some of the local leaders involved in preschool work, what are you going to do?

The goal of this presentation has been to influence you to make a difference by acting in whatever ways you can--in your jobs (in the office, the classroom, the courts, hospitals, the

assembly line, the corporation, the kitchen), in your community activities, with your pens, with your passion, with whatever tools you have to make a difference in future lives of our preschool children. If we are to get all children ready for school by kindergarten, it will take All of us, All of the time. So, what are you gonna do?

## Endnotes

<sup>1</sup> Finn, Daniel K. "Smart Money The Economic Case for Funding Pre-K" in *Commonweal*, a Review of Religion, Politics, and Culture, September 26, p. 8.

<sup>2</sup> [www.clintonfoundation.org/our-work](http://www.clintonfoundation.org/our-work). Go to: "Too Small to Fail" for PDF document on program description.

<sup>3</sup> "Taking baby steps," editorial in *The Journal Gazette*, Wednesday, May 21, 2014, p. 6A. Reference is to data from "State of Preschool 2013," a survey by National Institute for Early Education Research.

<sup>4</sup> [www.huffingtonpost.com](http://www.huffingtonpost.com). Go to: "Best Education in the World: Finland, S. Korea Top Country Rankings, January 20, 2015.

<sup>5</sup> [www.learning-theories.com/maslows-hierarchy-of-needs.html](http://www.learning-theories.com/maslows-hierarchy-of-needs.html).

<sup>6</sup> <http://teaching.uncc.edu/learning-resources/articles-books/best-practice/goals-objectives/writing-objectives> Go to: Writing Objectives Using Bloom's Taxonomy.

<sup>7</sup> Margaret Talbot, "The Talking Cure," in *New Yorker*, Jan. 12, 2015, p 38.

<sup>8</sup> Betty Hart and Todd R. Risley, *Meaningful Differences in the Everyday Experience of Young American Children* (Baltimore, Paul H Brookes Publishing Co. 1995), p.132.

<sup>9</sup> [www.highscope.org/file/Research/PerryProject/specialsummary\\_rev2011\\_02\\_2.pdf](http://www.highscope.org/file/Research/PerryProject/specialsummary_rev2011_02_2.pdf), p.1. (The eighth monograph of the Perry Preschool study, *Lifetime Effects: The High/Scope Perry Preschool Study Through Age 40* by L.J. Schweinhart et al (2005) is also available from High/Scope Press, 600 N. River St., Ypsilanti, MI 48198.

<sup>10</sup> [www.highscope.org/file/Research/PerryProject/specialsummary\\_rev2011\\_02\\_2.pdf](http://www.highscope.org/file/Research/PerryProject/specialsummary_rev2011_02_2.pdf). page 3-4.

<sup>11</sup> James J. Heckman, *Invest in early childhood development: Reduce deficits, strengthen the economy*. A pamphlet by The Heckman Equation, at [www.heckmanequation.org](http://www.heckmanequation.org).

<sup>12</sup> Wood, Doug, "Word to the wise: Build vocabulary early" lead editorial in *Journal Gazette*, November 16, 2014, p. 12 A.



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- <https://www.americanprogress.org/issues/education/report/2013/05/0262054>.
- <http://www.ed.gov/early-learning> (for Indiana).