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ACTG Mission Statement
To promote the maximum development of the whole child and adult through innovative, individualized and comprehensive brain-centered programs and services.

Profile
A Chance To Grow (ACTG) is a nonprofit agency committed to the natural development of the whole child through innovative, individualized and comprehensive brain-centered programs and services. It offers interventions that are educational, rehabilitative, and therapeutic in nature. Originally established to support children with learning disabilities and brain injuries, ACTG has evolved into a professionally staffed educational and health care organization that seeks to help all children, including those from disadvantaged backgrounds, prepare to learn and reach their highest potential.

We operate an array of innovative programs that help children achieve their full potential. Our main offices are in northeast Minneapolis and we provide services throughout the Twin Cities metropolitan area, work in partnership with schools and programs across Minnesota and provide teacher-training workshops to public school teachers in thirteen states. These services are educational, therapeutic and rehabilitative in nature. Our unique strength is that we provide a complete array of brain enhancing interventions all “under one roof.” A Chance To Grow demonstrates its contribution to “return on investment” in early childhood and serving children at large through the following set of programs:

For children with special needs:

1) Vision Services, which offers everything from vision screening and glasses to one-on-one Vision Therapy
2) Auditory Services, which serves individuals with issues on how sound is interpreted by the brain, including Auditory Processing Disorders
3) Neurotechnology Services, which offers EEG Biofeedback and Audio Visual Entrainment (AVE) to address a variety of issues, including those related to hyperactivity, inattentiveness, sleeplessness and depression
4) Outpatient Rehabilitation Services, providing Speech and Occupational Therapy
5) In-Home Services, which offers Personal Care Attendant (PCA) services, PCA Choice and In-Home Support services. Assistance is given to meet health and safety needs of children with autism, traumatic brain injuries, learning disabilities, emotional and behavioral disorders and other developmental delays.

For children in the early stages of development:
Turnquist Childcare Center, serving children six weeks to 12 years old

**For training teachers Pre-K to third grade in S.M.A.R.T. (Stimulating Maturity through Accelerated Readiness Training):**

Minnesota Learning Resource Center (MLRC), A Chance To Grow’s training institute.

**For children in early childhood centers and elementary schools throughout Minnesota:**

The S.M.A.R.T. Pre-K program, which has been established in 20 + Head Start centers in Northwest Minnesota and Anoka-Washington counties. Graduates are “ready” for kindergarten and students followed through second grade maintained those reading gains.

### History

- Bob and Kathy DeBoer founded A Chance To Grow in 1982 after creating an intense therapy designed to enhance the physiological and neurological development of Jesse, their brain-damaged daughter. The project was led by Art Sandler and Sandy Brown, both physical therapists, and later, Lyelle Palmer, PhD.

### Minnesota Learning Resource Center

- The Minnesota Learning Resource Center, established in 1999 through state legislative funding, is the teacher-training institute of ACTG that hosts workshops of three of the agency’s interventions and provides on-site mentoring across the state and nation
  - 4700 teachers nationwide have been trained in the S.M.A.R.T. curriculum
  - 60,000+ children have benefited from S.M.A.R.T.
  - 110 Minnesota schools, and 153 national schools (across 12 other states), are Designated Learning Sites—meaning they have at least four trained teachers
  - Data collected over the years indicate that, on average, 2/3 of S.M.A.R.T. kindergartners score above the national mean for reading readiness (according to the national Metropolitan Readiness Test 6, Level 2)
Programs & Services

A Chance To Grow
(612) 789-1236
actg@actg.org

Turnquist Childcare Center
(612) 706-5590
childcare@actg.org

Outpatient Services
(612) 706-5538
rehabclinic@actg.org

Neurotechnology Services
(612) 706-5551
neuro@actg.org

S.M.A.R.T. Boost Up Plus
(612) 706-5532
boostup@actg.org

Home Based Services
(612) 706-5531
homehealth@actg.org

Vision Services
(612) 706-5540
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Minnesota Learning
Resource Center (MLRC)
(612) 706-5549
mlrc@actg.org

Auditory Services
(612) 789-1236
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Contracted School Based Services
(612) 706-5538
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A Chance To Grow (ACTG) consists of multiple programs and services: Auditory, Home Based, Neurotechnology, Outpatient, Vision and Contracted School Based Services, the Minnesota Learning Resource Center, S.M.A.R.T. Boost Up Plus, Turnquist Childcare Center.

- **Auditory Services (Johansen Individualized Auditory Stimulation):** The Auditory program provides six different auditory services that help with hearing loss or auditory processing problems: Puretone Audiometry, Speech Audiometry, Impedence Measurements, Visual Reinforcement Audiometry, Conditioned Play Audiometry and Auditory Processing Evaluation.

- **Home Based Services:** We aim to offer the highest quality Home Based Services to families throughout the eleven counties of Minneapolis, St. Paul and the Twin Cities metro area. Our agency provides services to both children and adults with autism, traumatic brain injuries, learning disabilities, emotional and behavioral disorders, mental retardation and other developmental delays. Assistance is given to meet health and safety needs and families can choose PCA Traditional Services or PCA Choice Services.

- **Neurotechnology Services:** ACTG’s Neurotechnology clinic consists of two drug-free, non-invasive techniques used to improve brain function in children and adults:
  1) **EEG Biofeedback:** a biofeedback process, which uses computer technology to turn brainwave signals into meaningful information.
  2) **Audio Visual Entrainment (AVE):** Audio Visual Entrainment, also called AVE or Light and Sound, exposes the visual channel to pulsating lights and auditory channel to rhythmic beats or tones. Through the light and sound experience, AVE exposes the brain to useful patterns for enhancement and allows the brain to be more accessible to accept and process information.

- **Outpatient Services:** ACTG offers Speech and Occupational Therapy and emphasizes a holistic, integrated approach that involves children and families in both evaluation and treatment. The clinic staff is trained in neurophysiology.
and works as a team to target and treat multiple areas of disability. This holistic, integrated approach involves clients and their families in evaluation and treatment. Certified and licensed physical therapists, occupational therapists, speech/language pathologists and registered nurses staff the clinic.

- **Vision Services**: Vision Services provides procedures and exercises designed to improve an individual's visual function. These programs are designed to meet each individual's needs as determined by a developmental optometrist.

  1) **Vision Therapy**: Vision Therapy is a combination of eye exercises that improve control of ocular muscles and visual processing skills. Our developmental optometrists tailor the exercises to the individual's needs and provide personal supervision.

  2) **Mobile Vision Services**: This service provides eye exams to children ages six months to five years old who attend local childcare and Pre-K centers. Our developmental optometrists travel to the site and complete full vision exams for students, examining eye health, eye movements, eye teaming, eye focusing and refractive status. Families tend to take advantage of such services when they are combined with other programs, such as child care.

- **Contracted School Based Services**: Contracted School Based Services offers Speech and Occupational Therapies on an IEP (Individualized Education Plan) basis for charter schools, traditional schools, online/virtual schools and early childhood facilities in the Twin Cities metro area.

- **Minnesota Learning Resource Center (MLRC)**: The Minnesota Learning Resource Center is the nationally recognized training institute of A Chance To Grow. The MLRC offers S.M.A.R.T., S.M.A.R.T. Pre-K, JIAS and Neurotechnology to educators, parents and other professionals who work with children. These programs help children with learning problems and increase their school readiness skills. We also offer FRAP and Specific Reading Disability vs Dyslexia Workshops with the assistance of outside experts.

  **S.M.A.R.T. (Stimulating Maturity through Accelerated Readiness Training)**: multi-sensory activities that stimulate the brain and enhance its ability and capacity to learn. S.M.A.R.T. is compatible with any existing classroom curriculum. It is a learning readiness program designed for primary grade students, Kindergarten to Second Grade. **S.M.A.R.T. Pre-K**: like S.M.A.R.T, the Pre-K version involves multi-sensory activities that stimulate the brain and enhance its ability and capacity to learn. S.M.A.R.T. Pre-K is compatible with any existing Pre-K
classroom curriculum. Its goal is to prepare the three to five year old set to learn.

**JIAS (Johansen Individualized Auditory Stimulation):** Individually formatted CDs that improve children’s auditory processing skills

**Neurotechnology:** Audio Visual Entrainment (AVE) and EEG Neurofeedback

- **S.M.A.R.T. Boost Up Plus:** S.M.A.R.T. Boost Up Plus is an innovative program that offers all the benefits that S.M.A.R.T. has become known for in classrooms across the country. This three-week intensive program is offered for children ages six-13. S.M.A.R.T. Boost Up Plus also incorporates other interventions into the daily boost up (S.M.A.R.T.) activities such as EEG Biofeedback, Audio Visual Entrainment and yoga activities.

- **Turnquist Childcare Center:** Turnquist Childcare Center is one of only 12 Hennepin County “Strong Beginnings” childcare centers, meaning it supports the belief that learning begins at birth. Children between the ages of six weeks and twelve years old are eligible for enrollment in Turnquist Childcare Center. The center is licensed by the Department of Human Services to serve 66 children.

**Honorary Spaces**

- **Kretsch Family Brain Resource Library:** The Kretsch Family Brain Resource Library gives families the opportunity to explore and learn more about topics ranging from developmental delays to significant brain injury. Established by a family who faced major, frightening decisions only days after their loved one experienced a brain injury, the library is designed to provide the average person with the information needed to make informed decisions or explore new options.

  The library’s more than 1,000 volumes can be rented free of charge and cover everything from autism to adult head injury. Materials for the Library are selected based on their ability to explain problems and solutions in ways anyone can understand and on the author’s approach and willingness to look at a full range of options rather than just one or two.

- **Marlene Myers Nature Gardens:** With just 33 trees, the Marlene Myers Nature Gardens make up the smallest school forest in the state of Minnesota. The City
of Minneapolis donated this forest area to A Chance To Grow and certified it for children’s education. The space may be small, but it allows the children at Turnquist Childcare Center to learn about a variety of eco systems. The Marlene Myers Nature Gardens feature an outdoor classroom with granite pillars and limestone seats, a rain garden surrounding a deck, fruit trees, native prairie grass, a perennial flower garden, a berry patch and a vegetable garden. Children enter the magical space through a vine-covered trellis. We want to thank Marlene and Jerry Myers for their gift and the individuals, companies, foundations and the City of Minneapolis who helped make this possible for A Chance To Grow and all of the children we serve.

Inspiration

Bob and Kathy DeBoer are the proud co-founders and co-directors of A Chance To Grow, a nonprofit agency that offers educational, therapeutic and rehabilitative services to disadvantaged children in northeast Minneapolis.

The day of Jesse DeBoer’s birth was filled with joy, but also sadness. Elation quickly turned to sorrow when it was learned that she had suffered brain damage during birth. Oxygen deprivation had caused complications and her parents were told that they could only give their beautiful newborn daughter “tender loving care.”

Frustrated by the diagnosis, Bob refused to accept that his daughter could not live a normal life, “When I looked into her eyes, I knew there was something there.” He immediately started to search for help. Traveling across the United States, Bob, a teacher with a master’s degree in human development, met with a number of different physicians, therapists, and vision and auditory specialists. He also studied the most successful interventions in Europe. Finally, after Jesse spent months in and out of therapies, Bob found the answer. Art Sandler and Sandy Brown, physical therapists from Philadelphia, created an intense training program based on the theory that healthy brain cells can learn to compensate for damaged ones. It involved many challenging physical and mental exercises that were designed to improve visual, auditory, and tactile functions.

For three grueling years, Bob and Kathy, along with a group of 60 volunteers, helped Jesse perform the purposeful activities for up to twelve hours a day. As expected, her progress was slow: “At times,” recalls Bob, “the regimen was tedious and draining, and it was hard to watch Jesse struggle, but when she started to walk on her own…it made up for a lot of sacrifice.”

Today, Jesse is a happy, mature young woman who is finishing her training as a certified nurse’s assistant. Always known for her big heart, Jesse has shown significant empathy for others by volunteering at the agency’s Turnquist Childcare Center, two senior homes, a humane society, and teamed with her mother, Kathy, to start the country’s first rescue program for Saint Bernard dogs. Jesse has lived the normal life that her father always knew was possible.
Inspired by Jesse’s miraculous spirit, Bob and Kathy established A Chance To Grow (ACTG) to share their effective therapies with other children who face extraordinary challenges.

So What?
Why ACTG is Significant and Newsworthy

During the first three years of school, children learn to read; in later years, they read to learn. Unlike spoken language, reading is a skill that cannot be learned through simple observation and imitation—it is a complex neurological operation that involves multiple areas of the brain, and the mastery of five challenging components: phonics, phonemic awareness, fluency, vocabulary, and comprehension. Thus, when a young student fails to learn proper reading skills, it is highly probable that he or she will fall behind in school and struggle later in life. In fact, the National Research Council conducted a comprehensive study and determined that a student’s reading ability at the end of third grade strongly correlates with future academic success. In addition, the National Assessment of Educational Progress, published by the National Center for Education Statistics, reported in 2009 that 68% of the country’s fourth graders do not read at a level of proficiency. This strongly suggests that a life of pain and frustration is awaiting two-thirds of our nation’s children.

In an increasingly technological world, no longer can an illiterate individual find employment. Computers and machinery have taken over the positions that, in years past, were available to those who could not read. This cultural shift demands an increase in resources and quality instruction; however, before children learn to read, they must be physiologically and neurologically prepared. Over the past decade, the public has become more greatly concerned with this issue of “school readiness.” The Minnesota Department of Education responded, in 2002, with its first statewide evaluation of early education entitled, “Minnesota School Readiness Study: Developmental Assessment at Kindergarten Entrance.” It repeated the study recently by randomly selecting ten percent (96) of Minnesota schools with entering kindergartners for the 2009-10 school year—a total of 6,310 children. The results show that more than half of the kindergartners are “not proficient” in the following categories: personal and social development, mathematical thinking, the arts, and language and literacy.

There also continues to be a major achievement gap, often times based on racial differences. For example, in high poverty sections of the urban core of Minneapolis, such as the near north side of the city, only 22 percent of children are considered ready to learn by kindergarten. In surrounding suburbs, the rate exceeds 80 percent.

No longer can it be assumed that children are fully prepared to learn when they enter kindergarten. When such high rates of the young students starting school do not possess the physiological and neurological maturity for an academic environment,
teachers need the tools to adapt. They must rethink their current methods and adjust to the students’ needs. The traditional lecture mode, which revolves around time schedules and standardized tests, requires young, energetic children to sit still in desks and listen for most of the day. Research shows that this is not the most effective means of instruction.

A Chance To Grow (ACTG) promotes individual skill development and learning through movement—it refuses to believe that repeating the same instructional practices will produce different results. ACTG recognizes that young students struggle in school for many reasons and it is a painfully distressing situation for the child and his or her family. The programs and services offered by the agency are brain-centered and activity-based. From its inception in 1982, ACTG has given hope to families with brain-injured children through interventions specially designed to teach healthy brain cells to compensate for damaged ones. Today, the agency is a professionally staffed educational, therapeutic, and rehabilitative organization that has expanded its efforts to help all children, including those in poverty, who suffer from learning disorders and developmental delays.

Research continues to show that children who enter school with strong readiness skills and achieve early academic success are more likely to enjoy school and make steady progress. Unfortunately, in a world dominated by television, computers, and video games, more children are entering school with poor readiness skills. They have not been exposed to natural elements outdoors, nor received the multi-sensory brain stimulation that is necessary for healthy neurological development. Even the heightened restrictions on car seats, rising popularity of stationary swings, and declining use of playground equipment are recent changes designed to improve children’s safety, but actually inhibit movement and contribute to the growing number of young students who have trouble learning in the classroom.

A Chance To Grow’s interventions were developed by professional therapists to stimulate the brain and establish physiological and neurological maturity. Its educational, therapeutic, and rehabilitative services help prepare today’s students, who are expected to learn more information at a younger age.

**Frequently Asked Questions**

**What is A Chance To Grow?**

A Chance To Grow (ACTG) is a nonprofit organization committed to the natural development of the whole child through innovative, individualized, and comprehensive brain-centered programs and services. Founded by Bob and Kathy DeBoer in 1982, ACTG was originally established as a parent self-help group for families who refused to accept the limitations of their brain-injured children. It found that simple interventions designed to stimulate the brain through movement make an extraordinary improvement in learning. Today, ACTG is a professionally staffed health care and educational agency that has expanded its programs and services to help all children, including those raised in poverty—where the highest risk factors that affect learning exist. The agency’s programs are educational, rehabilitative, and therapeutic
in nature. Unlike any other organization, ACTG offers a great variety of high-quality services and resources that maximize the development of disadvantaged young people and allow them to achieve their highest potential.

**Where is ACTG and whom does it serve?**

A Chance To Grow is located in northeast Minneapolis and its interventions can be seen at schools throughout the country. ACTG serves all children, across the state and nation, who wish to succeed and reach their full potential. While most of the agency’s programs are primarily recognized for making a difference with disadvantaged children aged pre-kindergarten through third grade, these services are available to every child and are proven to benefit all students—from those who struggle, to those already at, or beyond, grade level. ACTG also serves adults in helping them reach their maximum development through our brain-centered programs and services.

**Why do children need ACTG?**

For decades, it has been falsely assumed that all children are physiologically and neurologically prepared for education the moment they step foot into a kindergarten classroom. Often no thoughtful consideration has been given to each child’s unique individual development, which is determined by genetic makeup, quality of life, and exposure to stimuli—not necessarily chronological age. This is a fundamental problem with our early educational philosophy. The future of too many young students is jeopardized because they are expected to learn prior to being physiologically and neurologically ready; not all young minds and bodies are prepared for the stress of school at age five. Sadly, more often than not, these struggling students become frustrated and develop behavioral or motivational issues. Many get labeled a “bad kid” for reasons they cannot control.

**How does ACTG develop the “whole” child?**

While the main focus of the agency is brain development and learning growth, ACTG recognizes the multi-faceted nature of learning achievement gaps and the interconnectedness of problems. These “outside” factors that contribute to the overall well being of a child include family stability, history of illness, allergies, visual and auditory deficits, and many more. ACTG allows young students to progress at their own rate. It stresses the importance of prevention and natural development. Unlike prescription medication, ACTG’s interventions are inexpensive and do not leave the body; they provide neurological and physiological stimulation that allow the child to learn automatic functions that are vital to success in the classroom. The programs and services were developed by ACTG’s professional therapists to treat the whole child and strengthen the many dimensions of learning.
How does ACTG close the racial achievement gap?

ACTG understands that the problems children of color and from disadvantaged backgrounds face are complex and interconnected. They consistently score lower on reading, and other academic assessments, than their white and middle-class peers for reasons that are tied to low income. Many of them lack adequate health care, parental guidance and supervision, reliable transportation, and suffer from malnutrition, which slows development of the brain and limits its capacity to learn. This is a troubling reality that places unimaginable stress on children and forces them to live in a mode of survival.

The best way to help disadvantaged children is to give them tools to be successful. Upon entering school, most disadvantaged students lack the readiness skills that allow them to focus on learning in the classroom, which causes feelings of frustration and anger that ultimately lead to apathy. ACTG’s programs and services are specifically designed to help children in this situation. In addition, the agency understands that, of all academic skills, reading is paramount. Illiterate individuals can no longer find employment in today’s world. Experienced ACTG professionals know how to identify readiness issues in young children and correct them before the brain reaches maturity.

Why do some children learn more slowly than others?

We believe that one of the primary reasons some children learn more slowly than others is a lack of brain stimulation. Proper physiological and neurological development depends on visual, auditory, and tactile exposures. Much of the work at ACTG focuses on stimulation of the brain stem, where all automatic function and motor activity is controlled. This part of the brain relates to learning and academics in that it is responsible for such skills as the eyes moving back and forth across the page while reading, or when the child looks from the desk to the board and back to the desk, without visual interruption. When the brain stem is not fully stimulated and working efficiently, the brain cortex is able to take over and perform some of that work. However, the cortex is then unable to do its higher thinking, such as reading comprehension and analysis. A child or individual learns best when both the brain stem and cortex are able to perform their designated functions.

Most often when a curriculum is developed for a school setting, there is an assumption that both the brain stem and cortex are performing as expected. ACTG understands the problems associated when that’s not the case. With that in mind, the agency has established an array of programs designed specifically to determine the cause of a child’s struggles and train his or her brain stem to perform its normal tasks without involving the cortex, thus allowing both parts of the brain to function at peak performance.
**Why is brain stimulation important and how does it work?**

Today's increasingly strict child safety and liability laws have resulted in less brain stimulation and more academic struggles for young students. Heightened restrictions on car seats, the rising popularity of stationary swings, and the declining use of playground equipment are all current trends that inhibit movement and contribute to the growing number of infants and toddlers who do not receive enough exposure to stimuli that activate the brain’s neurons—the messengers of the mind. Concerns of injury to young children may actually cause more harm than good. Minds are suffering from a lack of exercise and students enter school out of shape and unprepared. Research has demonstrated that children who receive less brain stimulation, many of whom come from disadvantaged backgrounds, experience more academic struggles than their peers.

Brain stimulation works to increase neurological activity and train the brain stem to perform automatic tasks. In the stimulation process, the brain produces a sheath of myelin around the axon of neurons to strengthen electrical impulses and speed up the transmission of messages to other neurons. Increased stimulation results in additional layers of myelin and an improved ability to process information quickly. Heightened neurological activity allows a young student's mind to be more deeply engaged in academic material and learn with greater ease.

**Why do parents and teachers need to understand development and the importance of multi-sensory brain stimulation in young children?**

Parents and teachers need to understand brain development in order to prevent learning disabilities in young children and raise them to their highest potential. In a world dominated by television, computers, and video games, infants and toddlers are receiving less brain stimulation and developing more learning disorders. During these passive activities, children are indoors, sitting down, and staring at a stationary object; they are not outside being exposed to natural elements and receiving the multi-sensory brain stimulation that they need for healthy development. A renewed emphasis must be placed on physical movement. While visual, auditory, and tactile exercises are crucial, activities that stimulate the vestibular and proprioceptive systems, which control balance and movement, like creeping, crawling, and spinning, are equally important.

Repetition of movement exercises is healthy for the brain because it increases the production of myelin, which enhances brain activity, and allows the mind to learn and establish automatic functions. For instance, when reading, the brain stem must have the ability to perform unconscious tasks, such as eye movement and word recognition, so that the brain cortex may comprehend the material. If a child’s mind has not been trained to perform these foundational skills, he or she has a significantly higher risk of developing a learning disability. ACTG understands the significance of purposeful physical movement to brain stimulation and incorporates multi-sensory activities into all of its programs and services.
How is ACTG funded?

ACTG receives funding through fee-for-service, regional and local foundations, and private individuals.

What do ACTG programs and services cost?

For more information regarding cost, please call (612) 789-1236, email actg@actg.org, or visit http://www.actg.org/

To see more answers to Frequently Asked Questions for specific ACTG programs, please visit www.actg.org/frequently-asked-questions

Research

Education:

- The National Assessment of Educational Progress, conducted in 2009 by the National Center for Education Statistics, reported that 68% of the nation’s fourth graders do not read at a level of proficiency.

- In Preventing Reading Difficulties in Young Children, published in 1998, the National Research Council concludes that a student’s reading ability at the end of third grade strongly correlates with their future academic success.

- In Early Warning! Why Reading by the End of Third Grade Matters, the Annie E. Casey Foundation, in 2010, argued, “It’s crucial that children master grade-level reading by 3rd grade because that’s when instruction moves from a focus on learning to read to reading to learn.”

- The National Institute for Literacy reports, “Early childhood through third grade is a critical time for beginning readers…children are taught the skills that together enable them to understand and find meaning in what they read and take advantage of the learning opportunities in fourth grade and beyond. These skills include phonemic awareness, phonics, fluency, vocabulary, and text comprehension.”

- The Minnesota Department of Education’s annual Minnesota School Readiness Study: Developmental Assessment at Kindergarten Entrance, 2008, noted that over half of the state’s kindergartners are “not proficient” in personal and social development, mathematical thinking, the arts, and language and literacy.

- The National Assessment of Educational Progress, conducted in 2009 by the National Center for Education Statistics, reported that Minnesota’s fourth grade reading gap is the second largest in the country. From 2002-09, the average fourth grade
reading score for white Minnesota students increased by one point while black students decreased by seven points and Hispanic students dropped by eight points.

• In the *Early Childhood Longitudinal Study, 2004*, the National Center for Education Statistics concludes that the number of family risk factors (low income, limited English proficiency, single parents, low education, etc.) is negatively associated with a child’s achievement gains in reading and mathematics. As the number of family risk factors increase, the smaller gains a child will make from the start of kindergarten through the end of 3rd grade in both subject areas.”

• The Annie E. Casey Foundation’s *Early Childhood and School Readiness* initiative focuses on third grade reading achievement because research shows, “Many poor children today enter school already behind, and once behind, few catch up. By third grade, poor children have vocabularies of about 4,000 words compared to 12,000 by middle class kids, and half the math and reading gap for high school seniors can be attributed to gaps at school entry.”

• The National Reading Panel’s studies show that reading is highly complex and requires a combination of skills. Its instruction must be taught through multiple strategies because children arrive in school with different levels of readiness and not all of them learn in the same way.

• The National Institute of Child Health and Human Development believes that teaching and learning in today’s schools are not only a critical educational and social issue, but a significant public health one as well.

• G. Reid Lyon, PhD, former Chief of the Child Development and Behavior Branch of the National Institute of Child Health and Human Development, said, in his 2001 speech to the U.S. House of Representatives’ Subcommittee on Education Reform, “the development of reading skills serves as the major foundational academic ability for all school-based learning…and difficulty in learning to read crushes the excitement and love for learning, which most children have when they enter school.”

**Economics:**

• McKinsey & Company’s *The Economic Impact of the Achievement Gap in America’s Schools, 2009*, demonstrates that the declining quality of American schools hurts the economy and if achievement gaps were closed, the yearly gross domestic product would be trillions of dollars higher.

• In *The Social Savings from Reducing Crime through Education, 2006*, authors Lochner and Moretti report that one economist estimates the United States “could reduce the number of crimes committed by 100,000 each year and save $1.4 billion annually, if 1% more males graduated from high school each year.”
• In *The Cost Burden to Minnesota K-12 when Children are Unprepared for Kindergarten*, a 2008 study by the Amherst H. Wilder Foundation, it states, “the estimated cost burden to the Minnesota K-12 system due to children entering kindergarten unprepared for school success is about $113 million annually.”

• The Amherst H. Wilder Foundation’s *Minnesota Family Literacy and School Readiness Study, 2010*, claims that delays in school readiness often result in achievement gaps that continue throughout a child’s academic career. This is a national problem that threatens the future of poor, minority, and non-native English-speaking children, and harms the economic vitality of the United States.

**Brain:**

• Scientists at the University of California-Berkeley’s Helen Wills Institute and the School of Public Health reported, in 2008, that kids from lower socio-economic levels show brain psychology patterns similar to stroke victims.

• Researchers from Cornell University have reported that chronic stress from growing up poor directly impacts the brain and impairs working memory.

• In *Brain Facts*, the Society of Neuroscience says, in 2008, that enriched environments can bolster brain development through increased neuron branching and connections.

**Vision:**

• In *Cognitive Neuroscience: The Biology of the Mind, 2008*, psychologists Gazzaniga, Ivry, and Mangun stress that 80% of learning comes through the visual pathways.

• In *Vision Screening of Preschool Children: Evaluating the Past, Looking Toward the Future*, published in Optometry & Vision Science, 2008, optometrists say that vision disorders are the fourth most common disability in the United States, and one of the most prevalent handicapping conditions in childhood.

• In *Promoting Healthy Vision in Students: Progress and Challenges in Policy, Programs, and Research*, published in the Journal of School Health, 2008, researchers Ethan and Basch say, “Children from poor urban areas, many of whom are ethnic minorities, experience more than twice the normal rate of vision problems.”

• The National Parent Teacher Association reports that more than 10 million children suffer from vision problems that may contribute to poor academic performance.

• The American Optometric Association reports “60 percent of children identified as ‘problem learners’ actually suffer from undetected vision problems, and in some cases, have been inaccurately diagnosed with attention-deficit disorder or attention-deficit hyperactivity disorder.”
Dr. Stanley Kaseno, an optometrist and pioneer in incorporating visual testing and training into juvenile delinquent treatment programs, says research shows that 90% of juvenile delinquents have some kind of visual problem: “If a child's primary information-gathering system (eyes) is not functioning adequately, then problem solving abilities cannot develop properly. Task time is extended, frustration is increased, and behavior problems become routine as early as kindergarten and first grade.

References


• Sanders, R. (2008, December 2). *EEGs show brain differences between poor and rich kids*. Retrieved from the University of California, Berkeley, Helen Wills Neuroscience Institute and School of Public Health: http://berkeley.edu/news/media/releases/2008/12/02_cortex.shtml


