

## Connecting the Dots: A Tapestry for Effective Mentoring

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### Abstract

This presentation will focus on the contrast between three award-winning programs whose focus is on using mentoring as an instructional strategy to improve the skill levels of at-risk youth and discouraged learners and our new MentorSuccess program. The three models which have received national recognition are KIPP (Knowledge is Power Program), Roots of Empathy, and the HOSTS (Help One Student to Succeed) program. Each program provides an immersive intervention into tough and troubling situations. We will also show why we believe our newly developed MentorSuccess program is a blend of the best attributes of each these three programs. MentorSuccess is a unique structured mentoring approach using customized literature, carefully selected character traits, and proven success oriented skills to mentor challenged learners. While KIPP's and HOSTS programs are K-12, and Roots of Empathy focus is K-8, our primary focus is on kindergarten through fifth grade. Our question is: Why wait so late to help students?

### Introduction

The use of technology in education is the latest in a long line of strategies to change the outcomes for students who face the most challenging circumstances and situations. Many people view it as the wave of the future. Educators and parents see smartphones, iPads, and any other type of electronic device as making learning more accessible and reachable. Others view such devices as just electronic babysitters. Their viewpoint is if technology was the answer then we would have the answer and see results. In the recently released (2015) statistics by the U.S. Department of Education's center for the National Assessment of Educational Progress (NEAP) the results of 4<sup>th</sup> grade reading scores point out that although test scores slightly improved overall, the distance in the **achievement gap** between white, Hispanic and black students in the fourth grade did not close from 2011 when the gap was 25 points (which roughly equates to roughly 1 ½ years progress), or from 2013 when the gap was 26 points. The test has a range from 0 to 500 points. The national average when you combine all races is for 2015 is 227 points with 238 considered by NEAP to be a proficient reading level, meaning the student can read at their proper grade level. The 2015 national average scores broken down by ethnicity are:

Whites 232 points   Blacks 206 points   Hispanics 208 points  
Asian/Pacific Islanders 239 points

The sad fact is the gap is not closing. The real questions to be asked should be what causes this gap and what can be done to close it?

**What causes the gap?** A big challenge is the home environment many of our student's experience. Research tells us that socio-economic-status (SES) can play a part in some of the obstacles that challenged learners face. We realize there are exceptional families in all levels of SES, but we must also face the reality that often SES level is an indicator of some serious problems because of economic stress and shortage of resources. For example, in groundbreaking research conducted in 1995 by two University of Kansas psychologists, Betty Hart and Todd R. Risley, titled: *Meaningful Differences in the Everyday Lives of Young American Children*, forty-two families were recruited and their children were studied. The families represented all three SES classes (thirteen families were high SES professional people, ten families were middle SES or working class, and nineteen were low SES). The researchers observed the verbal interactions they had with their children. They specifically looked at the number of words in each child's life by the age of three. The researchers also noted that not surprisingly each child took on the speech patterns and the vocabulary of their caregivers. The results they found were disturbing to anyone concerned with early childhood education. By the age of 3 there was a huge gap in the number of words that the children were exposed to depending on their SES level. (Hart & Risley, 1995). When they replicated the experiment again in 2011 they found the same results.

What they specifically found was that while children from higher SES settings hear on average 2,000 words an

hour from their parents or other significant adults, middle SES or working class children have heard on average 1,300 words per hour directed to them. In contrast, the average low SES or students heard less than 1,000 words an hour. Again, there were exceptions, but overall the findings were specific to SES level. By the age of three high SES children have heard over 30 million directly spoken words, while middle SES children have heard over 20 million words, and the typical low SES children in most cases have heard less than 10 million total words directed individually to them. This initial study has been replicated several times with many more subjects, and in a 2003 printing it is dramatically referred to as: *The Early Catastrophe: The 30 Million Word Gap*. (Nesbitt, 2009) Things do not get better as the children approach school age. By the time the children are four years old, the gap has grown much larger. Studies have shown approximately 45 million words for high SES, 26 million for middle SES children, and about 13 million for low SES children. (Hart & Risley, 1995, reprint 2011).

Not just the number, but the type of words that a child hears is very important to their development and future as it relates to learning and closing the achievement gap. Not only do low SES children often experience fewer words and face lower expectations, but the quality of words seems to be different. Why do we emphasize the quality of the words? We have been avid students of the work done by researchers in the field of management as to the impact types of words and experiences have on the human mind. For example, it has been discovered by researchers that the potential success and productivity of the individual can be accurately predicted by analyzing the person's ratio of encouraging words and experiences to negative words and experiences. This is referred to as a positivity ratio. The Brazilian psychologist Marcial Losada has discovered what is now called the Losada Line. He says the tipping point is 2.9013 to 1 of positives to negative. It takes approximately 3 positives to make up for one negative interaction. Losada can walk into organizations, measure the positive or negative interactions taking place, and accurately predict the productivity, turnover, and profitability of the organization. He says the magic ratio is 6-1 for maximum success. (Losada & Heaphy, 2004).

From our years of observation, we believe besides the reduced number of words in a lower (SES) environment that there is also a great disparity in the type of words lower SES children hear compared to middle and higher SES children. We believe their positivity ratio is seldom 3 to one. We believe successful children hear a ratio of 5 or 6 positive encouraging words to every one negative, middle SES children are on average somewhere around 3 to 1, which is considered break even. From our observations, we believe that lower SES children often hear 1 positive to every 2 or 3 negative words. We realize this is not true of all homes, but the observed behavior of children leads us to believe it is more often the situation than not. Psychologists have known for years that the degree of encouragement a child receives encourages intellectual exploration and confidence, while discouragement leads to frustration and lack of confidence. We believe this is an exciting area for research. What do these positive interactions look like? A positive interaction would be described as encouraging, constructive or instructive, and respectful. A negative interaction would be one that is discouraging, destructive, and full of contempt.

More evidence of the impact of positive versus negative interactions comes from John Gottman who videotaped engaged and newly married couples for 15 minutes and then counted the positive and negative interactions between them. He could predict with 94% accuracy which couples would stay together versus divorce over ten years. His magic ratio was 5-1 positive to negative to have an effective relationship. (Gottman, 1993)

As if hearing fewer words and having an inverted positivity ratio were not tough enough hurdles to overcome, it is also true that many of our lower SES students come from homes with few if any books. Even poorly funded pre-schools in low SES areas often have few if any books. (Bronstein, 2011). But the issue of not having books in the home may be taking on an even more daunting twist. Many parents today consider handing their child an electronic device a suitable way to occupy them, especially in restaurants or in idle time at home. What can be wrong with that? Screen time is good, right?

In his recent article in Scientific American, Ferris Jabr remarks that as we continue to grow and engage technology, it appears we are beginning to neglect reading books and magazines. When we use electronic devices like Notebooks and iPads our brains do not function at the same levels or in the same ways as when we read hard text from books and when we engage in the activity of writing. Part of the problem is that screens do not have the defined pages and completeness that books do, and so our brain does not make the visual connections of the size of the book if we are reading it in electronic format. In addition, other studies he describes have shown that when we use electronic devices for reading and information, it appears that instead of reading for knowledge we

tend to scan or just glance over the material in front of us. The result is that our comprehension decreases and we have trouble remembering what we are reading and the content of that reading. (Jabr, 2013)

Another challenge to closing the gap is that it appears people don't take the time to read stories to children any more. Instead screen time is growing to over 8 hours a day for American's aged 16-45 and even more for younger children. (Brown, 2014). This screen time usage has huge impact on ability to read non-verbal emotion cues that are crucial to developing relationship skills. (Uhls, et al., 2014) It used to be television, then it was video games, and now it is electronic gadgets of all sorts. We seem to be losing the importance of story sharing and telling that seems to be crucial to good social development of all children from every SES level. Jonathan Gotschall in his book *The Story Telling Animal (2012)* says this about the similarities of stories across all cultures: "Why do stories cluster around a few big themes, and why do they hew so closely to problem structure? Why are stories this way instead of all the other ways they could be? I think that problem structure reveals a major function of storytelling. It suggests that the human mind was shaped for story, so that it could be shaped by story." (Gotschall, 2012, p.56) Other people who have studied humans in diverse settings across the world also find storytelling and sharing to be not only a universal human trait, but also a key activity where it seems people go to practice the key skills of human social life. (Boyd, 2009). For example, researchers at Princeton scanned the brains of storytellers and listeners and found there was neural coupling taking place. The brains of the story teller and listener light up not just in areas controlling speech and language but also, more significantly, in areas known to be involved in processing social information crucial for successful communication, including the capacity to understand the beliefs, desires, and goals of others. (Stephens, Silbert, & Hasson, 2010) Polly Wiessner (2014), in her work on pre-literate people, found that 81% of the talk around campfires had to do with storytelling concerning values and beliefs, while talking during the day was almost all economic or gossip, with only 6% storytelling. Brain scanning on the pre-literate participants seemed to indicate that firelight caused their brains to switch to visionary functions. She called her study *The Embers of Society*, as she believes storytelling plays a key part in making us into humans. (Wiessner, 2014)

Another factor contributing to the gap can be found in the environment of children. In Paul Tough's book, *How Children Succeed* (Tough 2012) he shares research on how the stressful neighborhood environments many low SES children come from cause heightened cortisol levels, and result in lower learning retention rates. What happens to their brains under extreme stress is called DNA methylation. The process embeds early life experience in the genome. According to McGill and Yale Medical School researchers it appears that the way to ameliorate the negative effects of epigenetic DNA methylation is to provide moments of personalized attention that seem to nurture children's development on a very deep level all the way down to the essential genetic code. (Szyf & Bick, 2012)

Besides these issues, it also appears that the creativity level of children is dropping. Researchers using the Torrance Test of Creative Thinking also have noted that while IQ scores have risen gradually since 1990, creative thinking scores have significantly decreased. Of special interest to us is that the decrease was most significant for the kindergarten through third grade. They attribute the drop to several issues. It appears adults are listening less to children, standardized testing is shifting school's emphasis to drills and rote learning and away from critical thinking and creative efforts, and there is less time and resources spent on the arts. (Kim, 2011). He calls this the creativity crisis.

There also is rising concern about the decrease in empathy and the resulting rise in narcissism, especially from studies on college students starting in 2009. (Konrath, O'Brien, & Hsing, 2010). Could the decline in reading be a partial cause for this? For example, the Dutch scholar Jemeljan Hakemulder reviewed dozens of scientific studies indicating that reading fiction has positive effects on the reader's moral development and sense of empathy. (2000) Some researchers are even calling for schools to teach character traits to help reverse this decline. The noted researcher Martin Seligman has developed a list of twenty-four character traits he believes would help build better lives. he says: "the value of these twenty-four character strengths does not come from their practical benefit of what you could actually gain by possessing and expressing them. Cultivating these strengths represented a reliable path to the good life, a life that is not just happy but meaningful and fulfilling." (Seligman & Petersen, 2004, p. 4). As Tough indicates in *How Children Succeed*, character traits don't appear magically, but are rooted in brain chemistry, but can be molded in measurable and predictable ways. (Tough, 2012)

There appear to be many causes for the achievement gap. Number of words, quality of words, lack of books, lack of face-to-face time, stressful environments, lack of storytelling, and little emphasis on creative thinking or character building. So, what is being done? There have been many attempts at addressing some elements of the gap issue, three of which have had some success. None of them are comprehensive in addressing all the issues.

KIPP (Knowledge Is Power Program) is a public charter school program with more than 200 sites as of 2016 serving over 80,000 students throughout the United States. It was started in 1994 by David Levin and Michael Feinberg as a 5th grade program in South Bronx, New York. It's stated mission is to help underserved students enroll in and graduate from college. (Tough, 2012) KIPP operates from a core set of operating principles called the "Five Pillars: which include

- High Expectations for students.
- Choice & Commitment. Students who join KIPP must choose to be committed to doing well at school.
- More Time. The focus is on academics and academics only.
- Power to Lead. Students are taught leadership skills and expected to be leaders.
- Focus on Results.

KIPP places a high value on character development. This came about from following graduates long-term and seeing many of them drop-out of college. They added a focus on these seven character traits: Grit, self-control, zest, social intelligence, gratitude, optimism and curiosity. These were chosen as they reflect research on what successful people act like. (Duckworth, 2016)

What are the research results from KIPP? According to a study by Mathematica Policy Research, KIPP elementary and middle schools have positive, statistically significant, and educationally meaningful impacts on three of four measures of student's reading and math skills. The achievement impacts of KIPP high schools however are not statistically significant. (Mathematica Policy Research, 2016)

Roots of Empathy is a program that focuses on reducing the levels of aggression among school children by raising the social and emotional competence with a major emphasis on increasing empathy. The program is from Kindergarten through the eighth grade, and operates in Canada, the United States, New Zealand, the Republic of Ireland, Wales, Northern Ireland and Scotland, Germany, Switzerland, and Costa Rica.

The focus of the program is to connect the parent and the child, so that the parents can connect to the emotional needs of the children. Participating parents are required to visit a classroom every three weeks during the school year and receive instruction on child development and on labeling the baby's feelings and the feelings of others. The instructor also visits the class room after each family visit to reinforce the class room activity and teaches positive social behaviors, which the program refers to as Emotional Literacy. The empathy part of the program takes a cognitive approach in dealing with emotion. Roots of Empathy says they educate both the mind and the heart.

The curriculum is 639 pages long which is divided into nine themes and includes three class room visits supporting each theme, and includes a total of 27 visits (a pre-family visit, family visits, and post family visits).

The Roots of Empathy curriculum addresses the affective side of education and the activities of the program reinforce the classroom activities. As such, we can find no quantitative research on progress of students. However, according to Roots official's qualitative observation studies of student behavior using video have shown a significant effect in reducing levels of aggression and raising levels of pro-social behavior among school children by raising their social/emotional competence and increasing empathy. ([www.rootsofempathy.org](http://www.rootsofempathy.org))

HOSTS (Help One Student to Succeed) was an effective nationally validated program in Language Arts (K-12) Math (K- 8) and Spanish. The focus was in language arts and taught children reading, and writing skills. In 1994, the nationally award winning program was selected as the mentoring model for the nation by the United States Department of Education. Both authors of this article helped establish HOSTS.

HOSTS (Help One Student to Succeed) and was very effective in using volunteer mentors to effectively

improve the learning of at-risk children. It was validated as an effective instructional strategy by the US Department of Education. (Bryant, et al., 1995) Why did it work so well? The volunteer mentors loved the structure and seeing the students succeed. Students loved the customized approach that fit their interests, needs and learning style. Teachers loved the fact that it was organized, time-on-task well spent and that they can see their students getting the intentional one-on-one attention they need and crave. School districts loved the fact that tax paying volunteers were constructively involved in helping children succeed. But the biggest winners were the students who learned they can learn and that they are valued. Students would go to a resource room for a 45-minute block of time four days a week and work with a mentor on reading, vocabulary and other skills.

Despite the great results, HOSTS Corporation was bought out by a larger organization that switched the focus from mentoring to administrative management and state-wide results and ramped up the resources to become a software company instead of a mentoring organization. The program did not scale well and went out of business in 2008.

### **The MentorSuccess approach**

With MentorSuccess we will focus our efforts and resources on the early grades, especially K-5. We believe from our proven experience with HOSTS that a carefully trained mentor can help to close the achievement gap with structured, customized, and focused mentoring, that uses the highest quality literature to enrich the environment and learning experience. We have proven in the HOSTS model that using excellent literature, at the proper reading level, can have massive impact on teaching character traits especially when mentors engage in critical thinking questioning with the students.

We also use our mentors to teach success skills, or strategies of success. These are the skills high involvement parents pass on to their children. Now our mentors are doing this with our MentorSuccess students. There is no doubt that to succeed in the rapidly evolving information age these skills will be even more valuable in the future than they are today. However, we can find little evidence that they are being taught to any degree in most school settings today. Most of them are passed on in the 30 million words of encouragement high SES and successful children hear and observe. Now our students are also hearing them with MentorSuccess. Some examples of the 21<sup>st</sup> century success skills are: Decision-making, encouragement skills, critical thinking, conflict resolution and goal Setting.

Can these elements of success be taught? First, each resource must be at the proper reading and comprehension level for the student. Once this requirement is met, recent breakthroughs in neuroscience research on mirror neurons and brain plasticity tell us that students can learn such topics especially when observing a skilled mentor. The exciting research on mirror neurons tells us that a complex system of mirror neurons in our brain helps us learn by observing as well as doing. As our brain observes activity it rewires itself. It can have a huge impact as it relates to empathy. (Iacoboni, 2008) Children may not have the words to express the complex activity, but their brain can observe it. The impact of positive role models and mentors can be dramatic in changing behavior.

Another exciting area of research is in teaching decision-making to elementary school-age children. The more adept we can make them in decision-making the less likely they are to exhibit behavior problems in adolescence. In fact, preadolescent competence in decision-making predicts interpersonal strengths later in life. (Weller, Levine, Rose, & Bossard, 2012) It appears the sooner they are developing these skills the better they can absorb them, and practicing them strengthens their ability to make good decisions.

By providing a mentor who is trained to give encouragement and positive feedback we take the student to a higher plane of learning. The mentor is also modeling the behaviors of success which also help to reinforce the teaching of character traits and success strategies, and influences a positive learning environment.

In MentorSuccess the student chooses his/her own interest areas from over 30 possibilities (animals, sports, space, etc.) and the books are carefully calibrated by reading level so the student can confidently read the initial book with ease, and only then gradually moving up to his/her instructional level. The books are chosen to teach the student a character trait (honesty, courage, empathy, etc.) or a life skill (decision-making, problem solving, team work, etc) that will help them learn success oriented behaviors. In this carefully structured, but

student centered learning environment, both the student and the mentor have been trained on giving positive, encouraging and instructive feedback to each other. For this mentoring moment, the learning is truly student centered, based on their individual interests and needs. The student is purposely engaged.

In her book *Mindset* (2006) author Carol Dweck talks specifically about two mindsets, a fixed mindset and a growth mindset. In the fixed mindset, there is the belief that your ability to continue to learn is carved in stone. "Very little in my life will change." This creates a mindset where you believe you have only a certain amount of intelligence, a certain level of moral character, and a certain level of personality. Basically, having just one tank of gas if you will, or a limited supply of intelligence. Because of this belief that you only have a certain "limited" level of intelligence (smarts), you will continuously try to prove that you are the smartest person in the room when you are in social or other settings with other people. But instead of appearing as intelligent or knowledgeable, you will come across to other people in the room as not being very smart. This type of behavior has the opposite effect of its intention.

Those who have a growth mindset believe that their basic intelligence is something that can be cultivated through effort and that their initial aptitude, interests, and behavior can change and grow through application and experience (Dweck, 2006). We believe continuous learning and proper mentoring in the MentorSuccess program will help to create a growth mindset and expand one's knowledge base. This is what we teach in MentorSuccess.

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