Developing Resilience Based Schools:

Rethinking our guiding educational paradigm

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Calls for new, innovative school practices and educational reforms have been relatively constant over the past century. However, as noted by Kliebard (1990) in his historical review of educational reform efforts, little has changed. Indeed, many educators have grown increasingly cynical and pessimistic about new ideas, instructional method or educational initiatives purported to be an innovative educational practice that will improve schools. As far back as 1922, W.W. Charters, a leading reformer in educational curriculum, referred to the history of education as "…*a chronicle of fads*". Other dismissive terms such as "fads and foibles", "frills", or "pendulum swings" have continued to be commonplace characterizations of new ideas and practices set forth as being innovative and certain to reform, or substantially improve, school and instructional effectiveness.

Why is it then that the more things change, the more they stay the same in our schools? Perhaps it is due to our failure to differentiate between innovation and transformation. Transformative change involves the adopting of a fundamentally new perspective to a problem, a paradigm shift, leading to qualitatively different solutions that move us to higher levels of functioning (Clark, 1993, King, 2005; Mezirow, 2000). Transformative Change, in other words, involves a Copernican Shift in our understanding of the educational process. It requires an awareness of, and fundamental alteration in, the tacit assumptions guiding daily practice, decisions, and methods in the classroom. Systems theory refers to transformative change with the term, Second Order change; that is, a metamorphosis, or fundamental change, in form or character. As Albert Einstein noted so simply and eloquently, "*You can't solve a problem with the same thinking that created it."*

Unfortunately, most new educational methods and reform efforts have embraced only Innovative changes. Innovation, by definition, involves initiating something new, a different method; to alter or change something that is already established. Systems theory refers to such innovative change by the term, First Order change. Such innovations, in other words, are primarily just new ways of doing the same old thing, change without change. While new, innovative instructional techniques and methods are constantly put forward, they tend to remain fundamentally consistent and stuck within the prevailing, dominant paradigm guiding educational theory and practice.

Initiating transformative thinking, and thus transformative change, is never easy. People, and institutions such as education, have a natural tendency to resist real change and maintain the status quo, homeostasis and the familiar. The larger the system, the stronger the homeostatic forces, that will emerge to resist true change. Thus, schools tend to embrace innovation but resist transformation. As noted by one of the foremost Transformative Leaders of our time, Dee W. Hock, Founder and CEO of VISA, "The *problem is never how to get new, innovative thoughts into your mind, but how to get old one's out. Every mind is a building with archaic furniture, clean out a corner of your mind and creativity will instantly fill it"*. Just as people never truly understand their own culturally encapsulated perspectives and customs until they've stepped outside their culture, experienced living in a foreign culture, and then returned with "new eyes", so too educators must step back, clean out a corner of their minds, and view traditional educational practice with "new eyes".

It is only through the adoption of a fundamentally new perspective, an alternative paradigm, that educators can be empowered to become truly transformative leaders and teachers working within transformative schools. Viewing educational practice through "new eyes" enables educators to transcend traditional practices and assumptions and thus empowers them to implement transformative change moving 'good schools' to becoming 'ever greater schools', struggling students to become increasingly successful students, and all students toward becoming increasingly more productive, responsible, and contributing citizens of a global society. Recent research on Resilience identifies the primary components of resilience as including an optimistic, growth mindset, essential social-emotional competencies, and the existence of positive social environments (family, school and community. Benard (2004) has provided an excellent review of the empirical research on resilience. This research base provides the framework for a new, transformative paradigm to guide educational professionals and transform educational practice. It provides a new lens (new eyes!) through which to view school organization and practice from a

transformative, holistic-systemic paradigm. Only through initiating Transformative change, rather than merely innovative change, in our schools will we be able to truly move toward developing more effective schools and instructional practices that will, in turn, lead to improved student outcomes academically, behaviorally and socially.

Mindsets:

The concept of mindset has become central to the study of human behavior and organizations across several disciplines including human development, psychology, education, and organizational management. The term, Mindset, refers to a set of cognitive assumptions, methods, or notations held by an individual or group of people. Such assumptions are so firmly established and embedded, that they create a predisposing bias to adopt or accept only that which is consistent with prior behaviors, methods, beliefs and techniques when seeking to achieve goals or solve problems. Other synonymous psychological terms used for the concept of mindset include: cognitive schema, super-ordinate constructs, cognitive paradigms, and individual or collective "lifestyles". An educator's mindset refers to the fundamental view, the unquestioned assumptions, he or she takes in regard to the teaching process, the role of a teacher, student learning, and what criteria constitute quality education and effective school practice. As noted by Benard (2004), Walsh (1998) and others, changing the life trajectories of youth from "at-risk" to resilience and success begins with changing the beliefs and behaviors of the significant entourage of adults surrounding the lives of children and adolescents; i.e., parents, educators and community leaders; that is, changing their mindsets.

Carol Dweck (2006), along with several other researchers, has examined the mindsets, of teachers and leaders. She differentiates between two primary types, the Fixed and the Growth mindset. An educator with a Fixed Mindset believes that certain qualities are biologically determined. Such teachers assume students possess a certain innate amount of intelligence, attending ability, motivation, academic potential and/or a given personality type or character; that is, fixed qualities or abilities contained within the individual child. Students who perform well in class, i.e., for whom learning tasks are readily met with quick success, are assumed to be "smart" or "gifted". Students of such teachers are found to become consumed with the goal of proving themselves to be smart, a winner as their means to be accepted and valued. If instant success appears doubtful, however, such students tend to protect their self-concept by avoiding being exposed as "dumb, a failure or loser", and thereby devalued. Feigning a lack of interest, procrastination and giving minimal effort are common student strategies employed for the purpose of avoiding such perceived failure. From the Fixed Mindset perspective, those students who struggle are assumed to be "less intelligent", "less capable" or suffering from some form of neurologically based deficiency or disability such as an attention deficit disorder, a learning disorder/disability, lower innate intelligence, a behavioral disorder or some moral/character deficit in regard to motivation or attitude.

Fixed Mindset

This Fixed Mindset lies at the very foundation of our current Special Education (Exceptional Student Education) paradigm. Despite the existence of a very large body of research evidence indicating most, if not all, of the diagnostic assumptions, tests, and classroom instructional methods of special education to be unsupported by scientific evidence we continue to hold onto the tacit assumptions and practices of the traditional special education paradigm (Waber 2010). It is from the Fixed Mindset perspective that past educators labeled as inept, unmotivated, or unintelligent students such as: Isaac Newton, G.K. Chesterton, Thomas Edison, Charles Darwin, Alfred Adler, Albert Einstein, Henry Ford, and James Watt, and to label other students as being "untalented" including, among others, Mario Caruso, Giaccomo Puccini and Pablo Picasso. While many of the commonly employed special education intervention strategies, teaching strategies and classroom management techniques have been demonstrated to be not only ineffective, but often counter-productive adversely impacting student achievement and motivation, schools continue to employ the same Fixed Mindset based paradigm and seek only innovative changes in classroom methods and techniques consistent with this perspective. As Waber (2010) has noted in her book, Rethinking Learning Disabilities, after five decades of the LD paradigm, experts have yet to reach consensus on what a learning disability is, how to determine if a child has one, and what to do about it. Perhaps we have reached a historical moment that will allow us to reconsider learning problems from a more informed, scientific understanding of them impact of relevant developmental processes.

Growth Mindset

The Growth Mindset educator, on the other hand, starts with the assumption that basic qualities such as intelligence, talent, motivation and creativity are things that can be cultivated and developed through effort. Though we may all differ in our initial talents, aptitudes, interests or personal temperaments, we can all change, grow and develop further through effort, training and experience within supportive, optimistic environments. Our limitations are not

known, thus we must constantly strive toward further growth and improvement. As one figure skating coach often told his students, "…*ordinary people make the Olympics*". Such is the mindset of the transformative teacher and the transformative school leader. They refuse to accept the "common wisdom" of educational psychologists and special education regarding student's limitations, abilities or disabilities and instead seek to be encouraging of all believing in the ability of all children to succeed through effort and perseverance.

Growth Mindset leaders are found to establish growth oriented goals, philosophies and strategies in their schools that gradually "infect" the staff. Such leaders never accept the status quo and constantly seek to move their school from good to great; criticism and feedback are accepted as challenges to improve their school or classrooms. Indeed, the one common theme among the list of "unintelligent, untalented" students noted above was that each encountered a transformative teacher, family member or friend who possessed a Growth Mindset and inspired them to believe in their abilities and encouraging them to succeed. As W.B. Yeates phrased it so well, "*Education is not the filling of a pail, but the lighting of a fire".*

Mindset Outcomes

Research has identified several negative consequences for both students and teachers that arise out of adopting the Fixed Mindset position. For example, students whose school performance is viewed from a "fixed mindset" typically receive feedback such as, "*you are very smart, bright, talented, the best at, gifted*". The unspoken, meta-communication to the students, is that, "*If you do well, perform better and more quickly than others then you are smart, if not, then you are dumb, inept or untalented*". Such Fixed Mindset based teacher/student communication patterns subtly values a striving for status 'over others' and thus encourages student competition to be the 'best and brightest' or, if not possible to at least to avoid being "lesser than" in relationship to one' peers. Such a school culture, research now indicates, is associated with increased incidents of bullying and social aggression (Twemlow & Sacco, 2008). Further, the Fixed Mindset school culture adversely impacts student achievement and motivation. Students with a Fixed Mindset become reluctant to engage in any learning activities that truly challenge them to grow and stretch their abilities. They are only willing to try when success is guaranteed (Dweck, 2006). Such avoidance of failure strategies such as feigning a lack of interest, boredom, low motivation, or procrastination typically increase among students.

Some teachers and school leaders can also be observed to function from the Fixed Mindset position as well. Fixed mindset oriented educators are found to be primarily concerned with protecting their professional self-esteem –i.e., as an innately "good teacher" or "good administrator"- working in a "good classroom: or "good school". Consequently, such educators will tend to neither acknowledge, nor correct, deficiencies or failures when problems arise. Rather, the fixed mindset educator will typically become defensive when criticism or problems in school performance or student progress are raised. They will seek to protect the status quo by the methods of dysfunctional organizations identified by Collins (2001) of, "circling the wagons", "shooting the messenger", or "fudging the data" when confronted with criticism or problems in school performance. In so doing, Fixed Mindset educators are striving primarily to protect their professional self-concept as a "good school, good teacher, good headmaster" by blaming the problematic student(s). This position undermines the opportunity for continuous improvement and improved educational methods. In addition, the Fixed Mindset educator will often find it more attractive to focus on labeling students as 'having or possessing' some form of learning or behavioral disorder, disability or dysfunction or to place 'blame' and scapegoat previous teachers or students' parents. Fixed Mindset educational leaders usually fail to take meaningful steps to correct problems or improve their school. Such fixed mindset leaders in the business world have been found to be ultimately responsible for the financial problems and failures of such businesses and organizations as Enron, WorldCom, Chrysler Motors, A & P, and Sunbeam-Oster and others (Dweck, 2006; Collins, 2001).

Educators operating from the Fixed Mindset perspective also tend to employ control/compliance based classroom management and motivational strategies (e.g., rewards and punishments) despite the fact that over 40 years of research has consistently identified reward-based behavior management methods to have long term negative effects on student's learning motivation and reading comprehension (Deci & Ryan, 1998). It appears that our traditional educational paradigm, and thus practices, embraces the "Fixed Mindset" position, much to the detriment of many of our students, our schools, and our communities

As noted by Collins (2001) in his research on what makes some businesses move from good to great while others stagnate, the key to transformative leadership is in the growth mindset of the leader. This leads to the subsequent

creation of a Growth Mindset in the organizational culture. Effective, growth oriented leaders, Collins (2001) found, tended to be neither charismatic nor outgoing as many people commonly presume. Rather, they tend to be self-effacing individuals who constantly strive to improve, ask questions, and face even the most brutal criticisms openly and directly. Growth Mindset leaders actively question traditional practices and assumptions seeking constantly to instill confidence that, with work and effort, their organization can, and must, continue to grow, improve and succeed at ever higher levels. School administrators and classroom teachers will need to adopt a Growth Mindset perspective and, in turn, translate this perspective into daily school and classroom practice. Educators operating from the Fixed Mindset perspective also tend to employ control/compliance based classroom management and motivational strategies (e.g., rewards and punishments for compliance and performance) despite the fact that over 40 years of research has consistently identified reward based methods to have long term negative effects on student's learning motivation and reading comprehension (Deci & Ryan, 1998). The traditional educational paradigm, and thus practice, has embraced the "Fixed Mindset" position to the detriment of many of our students and communities

Resilience

Over the course of the past half-century, both the education and mental health fields have moved increasingly toward a biomedical-neurological paradigm (i.e., a pathology-focused paradigm) for explaining student academic failure and behavioral adjustment difficulties. When classroom instruction methods fail, the explanation is sought through the labeling of students as suffering from some form of neurologically-based disorder, deficiency or disability. This paradigm has come to increasingly dominate much of educational practice despite the fact that to date, there is no broadly accepted body of scientific evidence supporting any the biomedical-neurological assumptions upon which such educational and behavioral diagnoses and interventions are based. Indeed, as Waber (2010) notes, "experts have yet to reach consensus on what a learning disability is, how to determine if a child has one, and what to do about it". Similar criticisms have been raised regarding ADD, depression, conduct disorders and so forth. However, such explanations do fit well with the educational culture's Fixed Mindset perspective. Consequently, innovative instructional techniques consistent with the dominant mindset are accepted, but transformative methods are rejected or ignored.

Counterbalancing the Fixed Mindset, pathology-focused perspective is the emerging Resilience paradigm. Over the past two decades, we've witnessed a rapid growth of research on resilience which now offers useful information for moving to a new paradigm and transformative schools. This paradigm embraces the Growth Mindset position and assumes a more comprehensive, developmental perspective on children's academic and social adjustment Variously termed the resilience, positive psychology, or strengths-based paradigm (Kumpfer, 1999), the resilience paradigm views students' academic and behavioral difficulties as being manifestations of differences and/or difficulties in their psychosocial development; difficulties which are rooted in the social environmental contexts in which children live and function. This is consistent with Deborah Waber's (2010) assertion, based in her review of the research, that the etiology of learning problems is not in some mysterious and yet undiscovered neurological disorder, but rather, a function of the developmental interaction between the child and his/her primary social environments of family, school, culture, and community.

The resilience paradigm represents, in many ways, the potential for a Copernican Shift in education. Rather than asking the question, "What is wrong with this student, what neurological disorder, deficit or dysfunction does he/she suffer from that impedes learning or causes behavioral problems?, the more useful question now being posed by the resilience paradigm is that of, "What factors are conducive to healthy student development, higher academic achievement, and which lead youth to become responsible, cooperative, productive, useful, well-adjusted and contributing members of our global society?" What occurs in the lives of those students who succeed academically and socially even when faced with adverse life situations and how can we infuse these experiences into the lives of all children? The developmental, systemic perspective of the resilience paradigm further requires us to look more closely at what occurs in consistently high functioning schools and the classrooms of highly effective teachers that is missing in low performing classrooms and schools, and to discover how can we infuse such processes into all schools and classrooms? The resiliency research appears to suggest two primary, inter-related factors which lead to children's positive social adjustment and highest academic success: 1) The development of essential social-emotional competencies in students and, 2) The presence of positive, supportive social environments in the home, school and community (Benard, 2004).

Positive, supportive social environments

The National Research Council and the Institute of Medicine (Eccles & Gootman, 2002) concluded that supportive relationships appear to serve as "critical mediums" of development providing the opportunity for the healthy physical, intellectual, psychological and social growth of youth. Further research evidence strongly indicates that the authoritative/democratic style of leadership by parents, teachers and school administrators with its focus on warmth/connection, guidance/regulation and psychological autonomy/responsibility is highly correlated with positive outcomes in youth development including higher academic achievement, greater psychological adjustment, social competence, self-reliance, creativity and responsibility (Barber & Olsen, 1997; Cohen & Rice, 1997; Dornbusch, et. al, 1987; Herman, et.al, 1997; Lahey, et.al, 1999; Paulsen, et.al, 1997). In the United States, a national longitudinal study on adolescent health found a sense of belonging or connectedness with one's family and one's school to be the two most powerful predictors of positive youth adjustment (Resnick, et. al., 1997). Several other studies have found supportive and caring relationships within schools to promote higher academic achievement, higher academic motivation and more positive social adjustment (Blum, McNeely & Rhinehart, 2000; Ryan & Patrick, 2001; McNeely & Falci, 2004; Libbey, 2004).

On a cautionary note, it should also be noted that research studies indicate that school leaders tend to grossly overestimate the quality of student-teacher relationships in their schools. One study found 86% of principals rating student-teacher relationships as being very good to excellent while 75% of their students indicated they felt relatively disconnected from their teachers and school staff. Evaluation of school and classroom climate clearly requires objective evaluation tools and not the perceptions of primary stakeholders.

Social-Emotional Competencies

Defining the relative quality of a school's performance also requires a broader measure than mere test scores. If the purpose of the school is to prepare youth for success in the college, workplace and community then more comprehensive evaluation methods are needed. For example, social-emotional competencies have been identified in the resilience research as being at least as important as academic skills for determining future life success, and perhaps even more important (Benard, 2004; Goleman, 1995, 2006). Johnson & Johnson (1989) concluded that social skills appear to be the most important set of skills influencing one's future employability, productiveness and career success. This would appear to argue strongly for the implementation of classroom programs designed to foster the development of essential social-emotional competencies in youth as well as academic competence. Social-emotional competence and academic competence are not competing curricular issues as some have argued. Rather, it appears that both are necessary if youth are to be adequately prepared to successfully assume the full complement of adult roles as responsible, productive world citizens.

It is interesting to note that the dual focus on academic competencies and social-emotional competencies is far from a new idea in education. Rather, it is more of a forgotten or abandoned idea in education that was once the very foundation of our educational systems. For example, in founding Philips Exeter Academy in 1781, one of the first schools established in the United States (and still one of the most prestigious preparatory schools), Dr. John Phillips stated, "*Above all it is expected that the attention of the instructors to the disposition of the minds and morals of the youth… will exceed every other care; … though goodness without knowledge is weak and feeble, yet knowledge without goodness is dangerous, … both united form the noblest character and lay the sweet foundation of usefulness to mankind*" (www.exeter.edu). In the mid-twentieth century this sentiment was repeated by the anthropologist Ashley Montagu (1951) who stated, " …*first and foremost and always in the order of importance as a principle reason for the existence of the school…we must train for humanity…for all the knowledge in the world is worse than useless if it is not humanely understood and humanely used. An intelligence that is not humane is the most dangerous thing in the world"* . Still more recently, Vaclav Havel of the Czech Republic in 1993 admonished educators to rethink their role stating, "*The most important thing is a new concept of education. At all levels schools must cultivate a spirit of free and independent thinking in the students…schools will have to be humanized…schools must lead young people to become self-confident, participating citizens*."

Developmental psychologists now recognize the social-emotional competencies associated with resilience as significant indicators of children's overall positive adaptation or wellness (Luthar & Burak, 2000). Social-emotional competencies such as responsiveness to others, empathy, caring, communication skills, humor, positive relationship skills, flexibility and adaptability in solving social problems are key attributes observed in successful youth. When these social competencies are present, youth are more likely to develop into healthy, competent young adults (Benard, 1991; Dweck, 2000). Conversely, adjustment problems manifested by children and adolescents have been

directly linked to the inadequate development of these same social-emotional competencies (Achenbach & Howell, 1989; Barnes & Welte, 1986; Hanson, Myers & Ginsberg, 1987; Oetting & Beauvais, 1987; Taylor, 1993).

Perhaps most importantly, recent studies have indicated that a child's long-term social-emotional adaptation, academic and cognitive development, and citizenship skills can be enhanced through exposure to opportunities for developing and strengthening these social competencies during childhood (Diekstra, 2008; Hartup & Moore,1990; Payton, et. al., 2008; Zins, et. al., 2004). Daniel Goleman, author of the books Emotional Intelligence (1995) and Social Intelligence (2006) has suggested that the educational system should take a more active role in developing students' social-emotional competencies and by so doing better prepare students for both academic success and the assumption of a useful, contributive place in the larger global society. In so doing, he echoes the words of the Viennese psychiatrist, Alfred Adler, who suggested some 90 years ago much the same idea by observing that, "*The teacher who takes time to work on students social development will find her job simultaneously amplified and simplified for it is far easier and more efficient to teach the well-adjusted, cooperative and responsible child than it is to prod and nag along the mal-adjusted, uncooperative and irresponsible student*." (Adler, 1929). Research evidence provides clear support for the infusion of social-emotional learning in classrooms with up to an 11% increase in student academic achievement reported when such programs are introduced into our classrooms (CASEL, 2010).

Applying the Resilience Paradigm in Education Practice

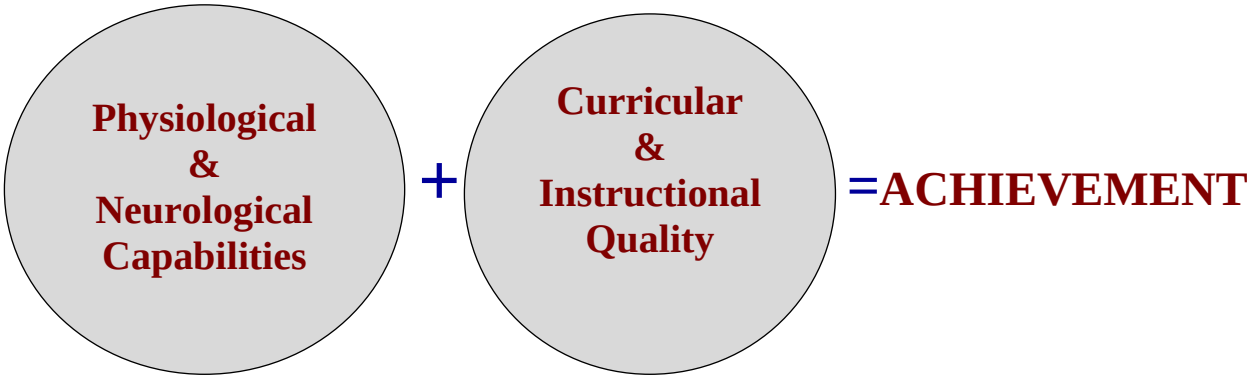
Schools are charged with the task of developing competent, responsible youth prepared to assume their occupational, social and familial roles as productive, contributing citizens in society. Unfortunately, our success rate in achieving this goal falls significantly short of that which is desired. The problem may well lie in our reliance on and overly simplistic, and linear paradigm for understanding learning and achievement. The apparent prevailing paradigm guiding school practice and search for innovative methods for improvement is represented in Figure 1 below.

This paradigm begins by assuming that student achievement requires first of all the child possessing certain necessary physiological and neurological capabilities (e.g. intelligence, attending ability, listening ability, psycholinguistic abilities, fine motor skills, etc.). With such purportedly innate capabilities intact, the introduction of appropriate curricular and instructional methods and programs will result in successful academic achievement. Conversely, if problems in achievement then arise, the logical assumption from this mechanistic-reductionist paradigm is that the "cause" of failure lies in either the neurological abilities of the child or the instruction methods of the classroom. Other developmental and psychosocial factors are essentially ignored or, at least minimized. While this model has been dominant in education for the better part of the past half-century, it has failed to lead to any significant improvement in our educational programs and student achievement levels.

[Figure 1]

The Prevailing Educational Paradigm for Student Achievement:

A Mechanistic-Reductionist Perspective



However, if we instead apply the resilience related research to the issue of student academic achievement social adjustment success a different conceptual framework, or paradigm, emerges which is much more comprehensive, developmentally based and systemic in nature. Such a resilience based paradigm moves us to a systemic-holistic and developmentally based perspective which recognizes that there are multiple factors involved in determining academic outcomes. Adopting such a systemic-holistic perspective further leads us to recognize that any one of these factors can serve to negate, enhance (in a synergic fashion both positively and negatively), or compensate for any other factor.

This is consistent with what Waber (2011) has termed, a "developmental cascade" whereby multiple factors combine to contribute to, and maintain, the child's problems in learning and/or social and behavioral adjustment. This resilience based, systemic-holistic paradigm for academic achievement is represented in Figure 2. An interdisciplinary review of the literature related to education, child development, and psychology reveals at least seven categories of variables which have been shown to significantly impact the development of academically and socially competent youth: the curriculum, bio-neurological functioning, the school environment, the family system, the classroom environment, peer and community relationships, and the child's social-emotional competence

Curricular Variables: Clearly the instructional materials, resources and methodologies employed by educators do impact children's academic success. There is ample research to support this beyond mere common sense. However, research also suggests curricular variables to be a necessary, by not sufficient, factor for determining student success; an indeed other variables have much more profound effects on student achievement.

***Bio-Neurological Variables*:** Without doubt, there are several biological/neurological factors impacting academic outcomes. Problems in visual acuity, auditory acuity, nutrition, sleep, brain damage and mental retardation have all been clearly identified as adversely impacting the child's ability to learn. However, there are also numerous pseudoscientific explanations, some widely accepted, for educational failure that lack sound, empirical research support. These include such hypothesized factors as general intelligence (IQ), learning disabilities, dyslexia, brain hemisphere dominance, Attention Deficit Disorder, and so forth. The validity of the diagnostic criteria and the validity of the research supporting the assumptions underlying these various neurological theories for student failure are highly questionable; at best, they must be considered as theoretical rather than proven factors. In other words, "Beware of educators bearing neurological theories" might be the best rule to follow; for while such educators are well intentioned, their knowledge of neurology is highly questionable. Indeed, neuroscience is an area of science still in its relative infancy.

That said, there is an emerging body of research on the adverse effects of living in high stress environments in regard to the development of mental and emotional disorders, learning difficulties and behavioral problems. Adverse Childhood Experiences (ACE's) have been found to be associated with significantly higher rates of learning difficulties, mental disorders, and personal/behavioral adjustment problems for both children and adults (Anda & Felitti, 2013) Living in high stress family and community environments appears to result over time in the dysregulation of the HPA (hypothalamic-Pituitary-Adrenal) system and result in high Allostatic Load scores McEwen, 2000). These neurological effects, in turn, negatively impact the executive functioning processes of the brain (learning, memory, problem solving, etc.), lead to hyper-vigilance and a decreased ability to attend, focus and concentrate. However, research also indicates that with the provision of safe, supportive environments and training in emotional self-regulation, (e.g. social-emotional competencies) this process can be effectively reversed.

***School Environment*:** The effective schools research of the past twenty-five years has consistently identified factors that differentiate highly effective schools from lower performing schools. Depending upon the quality of the school environment (i.e., caring relationships, high expectations and opportunity for participation) the outcomes for school success for minority culture and linguistic groups ranges from high engagement and college attendance to 75% drop out rates. The Leadership Style of the school principal or director has been found to profoundly impact the school environment and consequent effectiveness of the school. As noted by John Goodlad (1989) in summarizing his findings on effective and ineffective secondary schools, "… *the instructional and curricular matters were so consistently common to the schools that they appeared to play a neutral role in teachers', students' and parent's satisfaction with their schools… our findings reveal that schools differ in their ambiance*." The effective schools research of Rutter (1983) and others have indicated the same stating that, "…*This suggests that the cumulative effect of these various social factors may be the creation of a school ethos, or set of values, attitudes and behaviors which characterize the [effective] school"*. Or, as Hargreaves more bluntly put it,

"*…schools are still modeled on a curious mix of the factory, the asylum and the prison. We are glad to see the end of the traditional factory; why should we expect the school modeled on it to be welcome to children?"* The National Longitudinal Study on Adolescent Health (1998) concluded that of all the protective factors which contribute to preventing problems of academic failure and social maladjustment among our youth, school connectedness was identified as one of the two most powerful factors.

Family Environment: Research evidence has consistently identified the family as the single, most powerful factor impacting children's academic and social adjustment. Moreover, interventions directed at correcting child and adolescent problems have been found to be most effective when directed at the significant adult's in the child's life (parents) rather than at the child alone. More recently, research on the relationship between adverse childhood experiences and subsequent learning, behavioral, and mental disorders in both children and adults has called into question many of the neurological based hypothesis for adjustment and learning problems. Anda and Felitti (2006) found that the greater the number/type of adverse childhood experiences (ACE's) in one's life the more likely the development of both learning & behavioral disorders in children/adolescents. A study by Burke, et al (2011) indicated that of those children with no adverse childhood experiences (as measured by the ACE Questionnaire) only 3% displayed any indications of learning or behavior problems. However, 21% of those with ACE scores of 1 – 3 had been so diagnosed and of those with 4 or more adverse childhood experiences, 51% had learning or behavior problems in school. Similarly, studies have found that the greater the number/type of adverse childhood experiences (ACE's) in one's life the higher the probability of experiencing one or more mental and emotional disorders in adulthood (Lucenko, Sharkova, Mancuso & Felver, 202; Danese, et. al. 2009).

The significance of family environment factors on the variance in academic achievement among children was documented in Good and Brophy's (1986) review of the literature on school effects. They summarized the research on factors associated with student achievement, by concluding that, *"…the research to date indicates family factors account for more of the variance in student achievement than do curricular, instructional variables*". Preventive programs designed to provide support and assistance to at-risk pre-school children has been demonstrated to be highly effective in reducing school failure and preventing behavior adjustment problems in school. Research also shows that when schools actively promote parent-school collaboration the results are: higher grades, higher student achievement, improved teacher morale, better student attitudes toward school, fewer special education placements, higher graduation rates and higher post-secondary enrollments. As stated by Susan McAllister Swap, "*Given the widespread recognition that parent involvement in schools is important, that it is unequivocally related to improvements in children's achievement and that improvement in children's achievement is urgently needed, it is paradoxical that most schools do not have a comprehensive parent involvement program."*

Classroom Environment: Of all the school related variables impacting student success, none is more powerful than the effect of the classroom teacher his or herself. The Value Added Assessment model of Dr. Sanders at the University of Tennessee has dramatically illustrated teacher effects on learning. The mean effects for elementary school students of having three high performing teachers over three years versus three low performing teachers can be as high as a 52 percentile point difference in the classroom average on national standard achievement testing. The teacher's relationship style and the resultant classroom climate profoundly impacts child and adolescent school success and social adjustment. Numerous studies have identified the power of teachers to turn a child's life around from risk to resilience. Teachers viewed by students as empathic, warm, friendly and having a genuine concern for the students as individuals have been associated in the research with such student outcomes as better academic performance, higher learning motivation, more positive attitudes toward school and decreased behavior problems. Teachers high on these positive, support relationship factors and who provide quality instructional skills are now referred to as "transformative" teachers; those who enable students to succeed in spite of the various risk factors impacting their lives. Indeed, a recent study found that among pre-school and kindergarten teachers, factors such as certification in field, holding a master of education degree, or the number of years of experience had no impact on student success; however, teacher relationship skills were found to be highly correlated with positive student progress and adjustment.

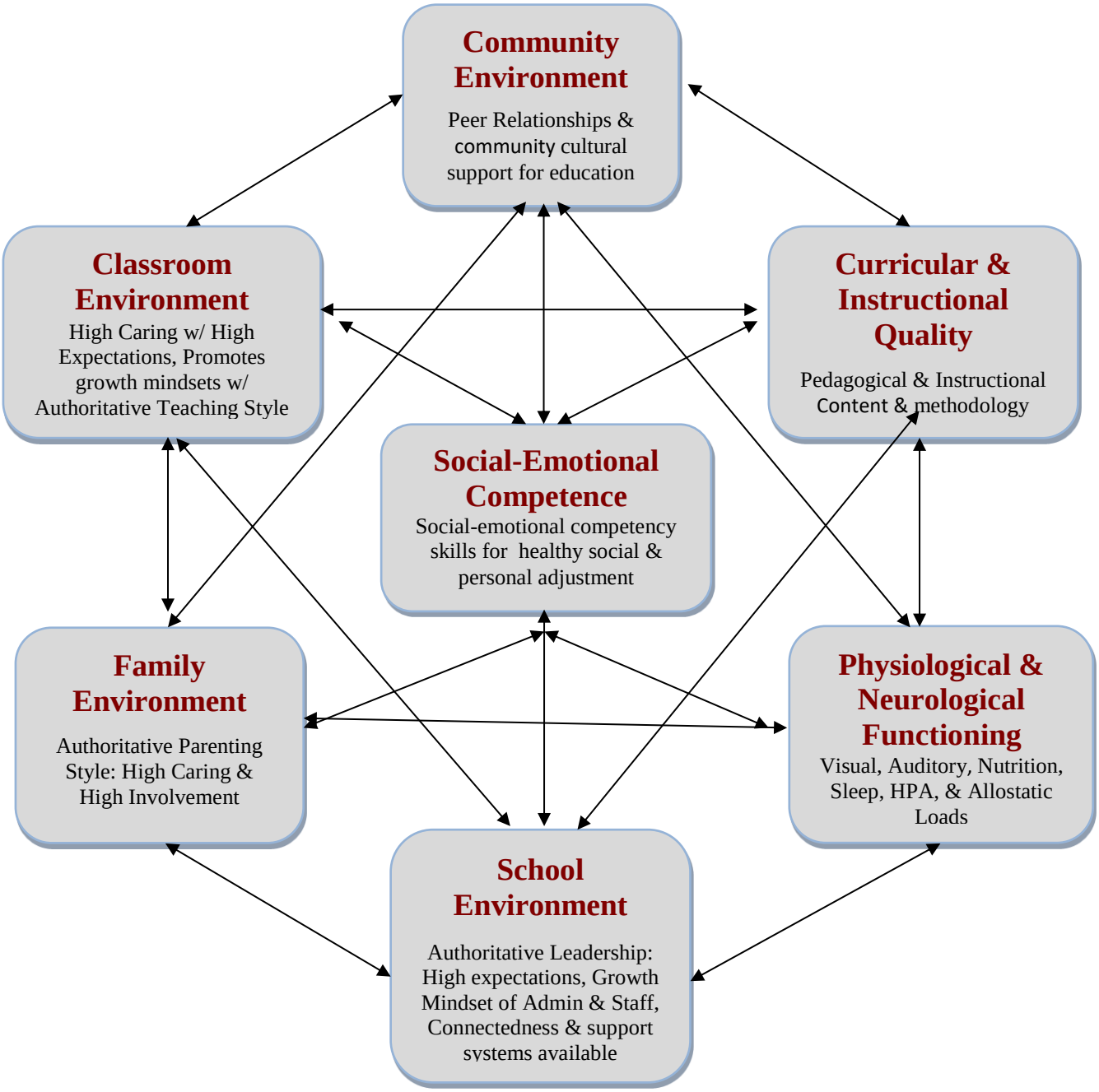
Community/Peer Environment: Community and peer environments which support school success and provide positive social supports – i.e. belonging and connectedness – dramatically impact achievement. As Samson stated, "Collective Efficacy", i.e., community residents interacting in a positive and cooperative manner with a shared concern for young people, regardless of the social-economic status, is associated with dramatically lower

crime rates and more positive social adjustment of youth. Opportunities for participation in group or cooperative activities in the home, school and community help youth fulfill their psychological needs for belonging and can connect even "at-risk" youth with groups that serve as a "surrogate family". (**Note**: this is the same role which gangs play for troubled youth when no alternative is available). Peer support for educational achievement and a sense of connectedness with one's school community has been demonstrated to contribute significantly to student's school success and achievement.

Social-Emotional Competencies: The development of essential social-emotional competencies (social skills and attitudes) has been demonstrated within the research literature to promote psychosocial health and academic success (Zins, et. al., 2004). Factors such as a strong, positive ethnic identity, positive self-esteem, a sense of purpose in life, confidence, cooperativeness, communication, empathy, caring, compassion and problem solving skills have all been identified as crucial skills leading to successful social adjustment. Youth who develop these social competencies are also found to have higher academic achievement and more positive relationships with peers and adults in their lives. Individual responsibility has also been found to be a key determinant of resilience and associated with motivation and effort to do well in school. As noted by Adler years ago, a teacher's job is simultaneously amplified and simplified when time is taken to also work on the students' social adjustment (Adler, 1929).. The resiliency research of the past two decades has clearly demonstrated that certain characteristics of families, schools and communities are associated with the development (or improper development) of these personal strengths, or social competencies, and, in turn, the healthy social development and successful learning and academic achievement of youth. Indeed, Johnson & Johnson's (1989) review of the research concluded that social competence is more important than academic competence in determining career success.

[see diagram on following page]

A Resilience Based Paradigm for Student Achievement:
A systemic-holistic perspective



Building the Resilience Based School: A resilience-based conceptual framework

Dee Hock suggested that we first clean out the "archaic furniture" in our minds in order to be able to then seek transformative changes in our classrooms and schools. Similarly, Albert Einstein suggested that one "cannot solve a problem with the same thinking that created it." This then requires that we reconsider and rethink all those long held, unquestioned, and tacit assumptions about education, the role of schools, how students learn, and how our schools are organized. In the age of high stakes testing, many schools have come to measure success merely by the achievement scores on state or national tests. If this is to be the sole, or primary, criteria for declaring a school "excellent", then we have to also accept the idea that a school which produced such academically high achieving

students such as Pol Pot, Joseph Stalin, Bernie Madoff, Slobodan Milosevic, Ken Lay (Enron), Bernard Ebbers (WorldCom) and Augusto Pinochet, could be considered a 'school of excellence'. This is a rather troubling idea as we prepare our students to live in a global, inter-dependent world. Therefore, our basic assumptions regarding what factors actually determine the relative effectiveness of a school and the nature of a quality education clearly requires rethinking and a transformative change.

Figure 3 utilizes a building construction analogy for the conceptual framework that might guide the construction of a truly transformative, resilience-focused school. To build such a transformative school, we would first need to lay down a solid foundation. This foundation would consist of the school's philosophy and mission statement which would be based in a Growth Mindset philosophy such as, "*All children are welcomed and All are capable of success!"* The Fixed mindset labeling of children as having or possessing assumed disorders, disabilities and innate capacities for learning and social adjustment would be rejected. Instead, an optimistic, growth mindset would guide all school policies and practices..

After the school's foundation is firmly set, the new school would require the erection of supporting walls if the structure is to be sound and viable. The two primary support walls would reflect the findings of the resilience research knowledge base. The first support wall would consist of creating positive, supportive social environments in the school and home. Teachers, school leaders and parents alike would need to be trained in the authoritative/democratic style of leadership be it in the home as a parent, in the classroom as a teacher, or in the school as a principal or headmaster. Effective teachers are characterized in the research as possessing the characteristics of both high caring and high expectations. Either without the other tends to be counter-productive. Traditional reward/punishment and control/compliance based classroom management strategies based in the autocratic/authoritarian leadership style would be replaced with authoritative/democratic strategies; in other worlds, an education based approach rather than a punitive, control/compliance based approach to teaching our youth..

The second support wall would then consist of infusing social-emotional learning into the overall school curriculum. The school would embrace its role of developing not only students' academic knowledge and skills, but also the social-emotional competences necessary for living successful lives. It might be suggested that five general categories of social-emotional competencies emerge from the research findings: Understanding & Respecting oneself and others, Empathy, Positive/Constructive communication, Cooperation and Responsibility. Consistent with the Growth Mindset position, we recognize that these five social-emotional competency areas are skills which can be taught and developed in all our students. Indeed, schools that actively teach social-emotional competencies find that academic achievement increases while bullying and social aggression decrease (CASEL, 2010; Twemlow & Sacco, 2008).

The roof on our Transformative School would consist of programs to assist students in exploring their goals in life. This would include not only career and academic goals but also thinking about their future home/family life, social and community responsibilities, health and recreation interests and the spiritual/ethical principles that will guide their lives as world citizens. As noted by Steven Covey in his book on the Seven Habits of Highly Effective People, "one must begin with the end in mind". Teachers in the transformative school would challenge students to envision their goals in life and encourage them to believe that with hard work, effort and determination they can, and will, reach those goals; thus fostering a life-long growth mindset in all students.

Finally, once the foundation, supporting walls and roof are in place for our Transformative School, we would be ready to bring in the furniture. The "furniture" consists of the academic curriculum, teaching methods, and instructional strategies that constitute the total academic program. Effective instruction can only occur within supportive, encouraging school environments and with students who possess the social-emotional competencies necessary for learning and living productive lives.

Viewed from a more systemic-holistic and resilience-based paradigm, current educational practices and reform efforts can be seen as focusing almost entirely on "re-arranging the furniture" in our schools; what might be termed, "innovative methods in school interior design". Comprehensive change and transformation is not possible when if we continue to ignore the foundation and structural strength of our school cultures and social environments. The transformative school model outlined here is intended to offer a conceptual framework for fostering resilience in youth and for improving schools by focusing on constructing more positive, supportive social environments (home, school and community), teaching social-emotional competencies, and adopting an optimistic, growth mindset among

staff, students and parents. The Transformative School model offers a much broader, more inclusive perspective regarding academic progress and the development of competent youth who have been appropriately prepared to fulfill their full complement of adult roles, occupational, social and familial. The Transformative School would, in essence, return us 'back to' the original goals and objectives of education from past centuries; that is, to develop not only the academic knowledge and skills in youth but their character and social-emotional competence as well.

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