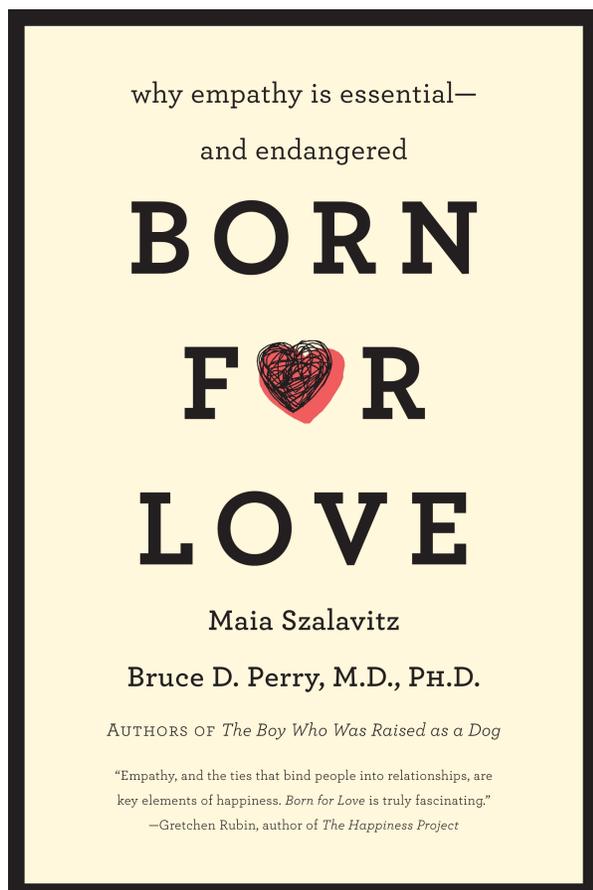


Neurosequential Model in Education[™]

Study Guide v.1.0

Born for Love: Why Empathy is Essential – and Endangered



Introduction

The human brain is a remarkable and complex organ. It mediates all of our thoughts, feelings and behaviors. It is the organ that allows us to form and maintain relationships, read, write, dance and sing. There is not a single aspect of human life that doesn't involve the brain. And, the brain is the target of our educational efforts. Whether the focus of the lesson is to learn to shape clay, skip rope, grasp long division, compose a paragraph, share, work in a team, or master the history of North Dakota, the teacher is trying to provide the patterned, repetitive experiences that will change the specific neural networks in the child's brain that mediate those functions.

The purpose of the Neurosequential Model in Education (NME) is to help educators, caregivers and students better understand some of the most important and

most easily mastered concepts related to how the brain develops and changes. Understanding and acting on these concepts will lead to more effective and pleasurable learning experiences. The core concepts that the NME introduces have broad relevance for teaching typical as well as at-risk children.

There are several ways that the ChildTrauma Academy brings the NME to educators and educational settings; some of these are didactic (e.g., a day long seminar using a lecture format), some are more consultation based (e.g., the CTA's web-based Case-based NME teaching series) and some are relational, interactive and involve an ongoing learning process. This Book Study Guide was developed to help facilitate a reflective and interactive introduction to the NME. This Guide was conceived and developed by educators for educators though it will be useful to a much larger audience. We are all hopeful that this will be a helpful introduction to the core concepts of the Neurosequential Model in Education.

The Book Study: Overview

Over the last ten years as the ChildTrauma Academy (CTA) was developing and introducing the Neurosequential Model of Therapeutics (NMT) to clinical settings there was an awareness of the relevance of these core concepts for education. The desire to formally bring the Neurosequential Model to educational settings has been present for many years. The desire started to become reality in 2010 when, after attending a seminar from Dr. Perry in Minot, ND, my teaching/curriculum writing partner Crystal Halseth and I asked for more training and for permission to teach the principles of neurosequential development and trauma informed practice to our fellow teachers at Erik Ramstad Middle School in Minot, ND.

We used Dr. Perry's first book, *The Boy Who Was Raised as a Dog*, as our background text. I developed a Book Study Guide and over the last few years this has helped introduce the core concepts to hundreds of educators, parents and others. The NME has grown over these last four years; and more program elements and training opportunities are being developed all the time. The current Study Guide for *Born for Love* is part of that growth.

This Book Study Guide can be added to the other teaching materials we are providing to teachers and to our Training cohort. We believe this will be a useful resource to help meet the ever-increasing demand for schools to learn about trauma, the brain and development. We hope that the NME can help educators better understand and teach the many students exposed to adversity and trauma.

This manual comes to you from a team of professionals from Canada, Scotland, Australia, and the U.S. It has been reviewed and edited by Dr. Perry and the ChildTrauma Academy team and will continue to be revised as we work with professionals like you.

Sincerely,

Steve Graner,
NME Project Director
Fellow, The ChildTrauma Academy

P.S. You will notice that not all chapters of the book are included in the questions and sample answers. We have chosen to focus on chapters most relevant to educators and the school setting. This is not to say the other chapters aren't important to read and consider. Each one emphasizes some facet of empathy, the core theme of the entire book. Please enjoy all of *Born for Love*.

Guided Discussion: Chapter 1

1. Define empathy (pp. 12,13). Discuss this definition in light of these related words: sympathy, compassion, and pity. Relate this to what you have experienced during times of personal trauma. How can this inform how we view and handle troubled kids in our classrooms?
2. Discuss elements of brain structure and function that you know are involved in empathy (esp. pp. 18-24). How can you begin to teach some of these elements to your students?

Guided Discussion: Chapters 2 and 3

1. Discuss some brain chemicals (neurotransmitters) involved in healthy brain function and empathy. Consider the following: norepinephrine, serotonin, dopamine, oxytocin, vasopressin, and cortisol.
2. Discuss why “dosing” is important to developing self-regulation (pp. 34 and 35). Discuss “dosing” in relation to learning and classroom discipline.
3. Compare/contrast orphan babies and prison babies as discussed on pp. 51 and 52. What brain chemistry was askew in orphan babies like Eugenia who had trouble bonding with people? (How do oxytocin and vasopressin matter here?) What should we do in our classes and schools when we encounter children raised with attachment deficiencies?

Guided Discussion: Chapters 5 and 6

1. After reading about both Danny (the compulsive liar) and Ryan (the abusive sociopath), consider the following quote from p. 104:

“The further away we are from the tight-knit, relationally enriched hunter-gatherer structure of our ancestors, the more complex our societies become, the easier it can be for certain unscrupulous predators to exploit, manipulate, trick, and dehumanize others.”

Discuss students you know or suspect may be victims of a relationally bankrupt life. What kinds of things can be done in school to provide a more enriching environment?

2. Consider Ryan's brain development. How could he be so intelligent and successful while being a sociopath at the same time? What were the masking agents in his life? What about his school precipitated his sociopathic development? Are our schools fertile ground for this type of abuse or have we established better balance and safeguards?
3. *"Altruism can survive in a population only if those who don't do their part aren't able to get away with it for long"* (p.109). Share any strategies you have in your classroom regarding the idea of fairness as it relates to things like kindness and sharing.

Guided Discussion: Chapters 8 and 9

1. Chronicle Alyson's (the "Chameleon") downward spiral to violence. Review the experiments on pp. 182-184 to see how conformity to evil can happen. What strategies can we employ in class to combat this? Do we have any traditional strategies that might be doomed to fail?
2. How does high stress contribute to high crime (pp.195-199)? What kinds of activities are possible in your class that mediate high stress? Review and consider the work of CoCo Stevenson, pp. 204-210, when you think about potential answers.

Guided Discussion: Chapters 10 and 11

1. (Ch. 10) Screen time, be it television, movies, or video games, has increased exponentially in the past twenty years. How has this affected empathy in children? What strategies can we use in our schools to bring some balance into our students' lives?
2. (Ch. 11) Review the concept of "power differential." How does the stress of feeling oppressed or lacking control affect the body? What antidote to this stress can we practice in our classrooms and in our homes?

Guided Discussion: Chapter 12

1. Discuss the differences between “bonding social capital” and “bridging social capital.” (pp. 265-267) How can individual classrooms and schools as a whole function to increase the overall social capital in students’ lives?
2. Reread the last paragraph on p. 280. What can we do in schools to temper the economic inequality that exists in our student population? How can we avoid an “us vs. them” mentality?

Guided Discussion: Chapter 13

1. What does it mean to have a society or a school that is biologically respectful?
2. There are three core relationships that exist in schools: 1) staff to staff
2) staff to student 3) student to student. What practical steps can we take to improve the overall relational quality in all three areas?
3. Reread p. 312. Detail the importance of reading in helping individual students gain a greater sense of self-control.

Sample Answers

Guided Discussion: Chapter 1

- 1. Define empathy (pp. 12,13). Discuss this definition in light of these related words: sympathy, compassion, and pity. Relate this to what you have experienced during times of personal trauma. How can this inform how we view and handle troubled kids in our classrooms?**

Empathy, much like compassion, is the ability to feel with someone, the ability to relate because of shared experience. Sympathy and pity are caring feelings as well but more distant because they do not involve shared experience.

Personal Example: “I lost my father to a heart attack when I was seven. No one I knew shared that experience. There was appreciated sympathy for sure, but no one truly understood. Later, a close neighbor family lost their father to a heart attack. My mother sent us kids over to be with the three children in that family. We had no skills, no training, yet we brought great comfort because we understood their pain and fear. That was empathy.”

Many teachers have suffered trauma and loss and have experiences to share with students who have suffered the same. Full disclosure of life’s tough experiences is not necessary, but letting students know we can relate to their pain is important. Troubled kids need to know they are not alone.

- 2. Discuss elements of brain structure and function that you know are involved in empathy (esp. pp. 18-24). How can you begin to teach some of these elements to your students?**

All four areas of the brain are involved in empathy and are interdependent. The brainstem and midbrain must be well regulated and stable so we can use our limbic system and cortex more effectively. Our limbic system is the center of our relational health. It helps control emotion and sets our level of intimacy. Our cortex is our thinking center and helps us plan and think logically, able to separate rational thought from emotions. A healthy cortex is able to effectively regulate the lower parts of the brain. These four parts of the brain influence each other, bottom to top, and top to bottom.

Mirror neurons are active in our brains and help us relate to other humans in a reflective fashion. When someone smiles at us, we are likely to smile back, due to the influence of these powerful neurons. When someone is angry, sad, or distant, it is hard not to mirror back the same emotion. Knowing this should help teachers and students realize the power of their countenance and mood, and only those with a strong cortex can work through emotional struggles that might influence them to send

out negative emotional signals. Effective empathy means sharing our mutual feelings but having those feelings under control.

Guided Discussion: Chapters 2 and 3

- 1. Discuss some brain chemicals (neurotransmitters) involved in healthy brain function and empathy. Consider the following: norepinephrine, serotonin, dopamine, oxytocin, vasopressin, and cortisol.**

Neurotransmitters are the chemicals that allow neurons to connect, making those vital pathways in the brain. Norepinephrine is usually associated with energy and action; serotonin helps us make the pathways that allow us to feel safe and secure. Dopamine is a chemical of pleasure, needed to reinforce positive behavior and learning. Oxytocin and vasopressin are chemicals that support attachment, loyalty, and protection. Cortisol is a stress chemical that warns us when we are being overwhelmed and need help. Healthy brain function means having these neurotransmitters working in concert so that we function from a foundation of safety which allows us the pleasure of learning and positive human relationships which in turn energize us to be curious and want new adventures.

- 2. Discuss why “dosing” is important to developing self-regulation (pp. 34 and 35). Discuss “dosing” in relation to learning and classroom discipline.**

Patterned repetitive behavior is what changes the brain. That change must happen slowly and steadily. There are no shortcuts for helping our struggling students improve. Patience is the key. At first, a brain used to trauma and chaos will surprisingly find order and loving care by traumatizing itself. So, a “bad normal” can only become a new and “better normal” through change given in proper doses. We cannot expect our troubled kids to just “soak up the love.” Instead we must give them proper time and space and introduce better relational practice much like we’d introduce a new medicine - in small measured amounts at regular intervals. Not only will change eventually happen, it will be a lasting change because new neural connections will have a chance to form over time. Patience is more than a virtue when dealing with traumatized students. It is an absolute necessity.

- 3. Compare/contrast orphan babies and prison babies as discussed on pp. 51 and 52. What brain chemistry was askew in orphan babies like Eugenia who had trouble bonding with people? (How do oxytocin and vasopressin matter here?)**

What should we do in our classes and schools when we encounter children raised with attachment deficiencies?

Back in 1945, an Austrian doctor named Rene Spitz studied the differences between babies raised in American orphanages with babies raised in American prisons. The orphanages had one caregiver for every eight babies while the prisons allowed babies to spend most of the day with their mothers. The outcomes were startling: 37% of orphan babies died before age 2. All prison babies survived. Prison babies grew bigger, stronger, and healthier than their orphanage counterparts, and Spitz concluded that mother-love and daily attachment were the reasons. Love saved their lives.

Schools can offer a relationally rich environment to needy children raised with attachment deficiencies. Teachers, administrators, counselors and all support staff can be trained to recognize times and ways to bring doses of loving care to these children. Secretaries, lunch personnel, and custodians become vital caregivers who add valuable positive interactions with our most needy kids because their love is not attached to classroom performance. We must begin to expand our vision of what comprises a school staff so that all adults who interact with kids realize their importance in the relational milieu.

Guided Discussion: Chapters 5 and 6

1. After reading about both Danny (the compulsive liar) and Ryan (the abusive sociopath), consider the following quote from p. 104:

“The further away we are from the tight-knit, relationally enriched hunter-gatherer structure of our ancestors, the more complex our societies become, the easier it can be for certain unscrupulous predators to exploit, manipulate, trick, and dehumanize others.”

Discuss students you know or suspect may be victims of a relationally bankrupt life. What kinds of things can be done in school to provide a more enriching environment?

School staffs must first be cognizant of the need to take care of each other through time together, encouragement, and family-like support. That sets the foundation necessary for the next step which is making sure all children go through the school day getting as many positive relational interactions as possible. This is a school climate priority. Never pass a kid walking alone in the hallway without some sort of positive engagement. Numbers do matter in this regard. Boosting these engagements

helps offset either the lack of good interactions or the preponderance of bad ones. Finally, we must carefully set up group or partner opportunities within our lesson plans so student to student interaction increases within a safe and controlled learning frame. Schools can't replace the family, but schools can be safe, positive, and adventurous places that operate like families should.

- 2. Consider Ryan's brain development. How could he be so intelligent and successful while being a sociopath at the same time? What were the masking agents in his life? What about his school precipitated his sociopathic development? Are our schools fertile ground for this type of abuse or have we established better balance and safeguards?**

Ryan had enough advantages in life to advance cognitively even though his lack of consistent attachment opportunities kept him from developing empathy. So, he could be athletic and smart without being able to really care for others. He was protected by rich and influential parents who helped him avoid the consequences he needed for change to occur. His schools knew of problems but couldn't effectively deal with them without parental support. In later years, his athletic prowess helped mask his deficiencies. Test scores and sports' scores blinded the adults in his life to the red flags in his relationships. Nobody knew how to keep score of those. Until Dr. Perry discovered the vacuum in Ryan's attachment history, nobody thought to look there. Until educators figure out how to look for gaps like this, we will continue to be fooled by kids like Ryan, and our schools will remain fertile ground for bullies and sociopaths who dominate by fear as they satisfy their narcissistic appetites.

- 3. *"Altruism can survive in a population only if those who don't do their part aren't able to get away with it for long."* (p.109) Share any strategies you have in your classroom regarding the idea of fairness as it relates to things like kindness and sharing.**

I always started my school year by having the students write an acrostic poem using the word RESPECT. It never ceased to amaze me how well they understood the word even if they had a hard time living up to its meaning. That word was our only rule. We posted the poems and were surrounded by them for at least nine weeks. I personally was the protector of that rule and held students accountable. That meant protecting anyone who could get picked on or made fun of. It also meant I had to be the best example of respect and couldn't fall prey to any inclinations to be sarcastic or critical. Respect became the foundation of kindness and sharing. It helped make my classroom safe.

Guided Discussion: Chapters 8 and 9

- 1. Chronicle Alyson's (the "Chameleon") downward spiral to violence. Review the experiments on pp. 182-184 to see how conformity to evil can happen. What strategies can we employ in class to combat this? Do we have any traditional strategies that might be doomed to fail?**

Alyson became a "chameleon" as she struggled to fit in with different groups of kids following frequent family moves. She went from provocative tease to jock to Goth to gangster girl in just a few years. She had no consistent extended family exposure to anchor her but a normal adolescent need to fit in with some group, any group that would accept her. Her cry for "safety" was only heard by those who also live with fear at their core, and together they committed a violent act, an act that shocked Alyson herself when she was able to talk about it. Her insecurity made it more likely to move along the arousal continuum and then do horrific deeds when she could no longer think with the higher parts of her brain.

Any time we lump struggling, lonely, scared kids together in the same class, we are running a high risk of them adopting gang mentality. Feeling separated from the rest of the school forces them to seek a sense of family with other stressed children who cannot be expected to offer anything more than maladaptive behaviors.

Schools must find ways to do one or both of the following: 1) keep these homogeneous classes small with strong numbers of healthy adults in place to foster learning and relational health. 2) find ways to involve these kids in heterogeneous groups of students that include kids healthy enough to share positive relationships.

Heterogeneous groups of students involved in sports, drumming, drama and music can have positive effects for all involved. These playing fields are easier to level than purely academic arenas. The focus on lower brain development leads to better relational development, which ultimately leads to better cognitive development. Now empathy can increase for all.

- 2. How does high stress contribute to high crime (pp.195-199)? What kinds of activities are possible to do in your class that mediate high stress? Review and consider the work of CoCo Stevenson, pp. 204-210, when you think about potential answers.**

The high stress of an impoverished life often leads to crime because those so affected live in a highly aroused state. This is fertile ground for drug abuse, gang involvement and violence, sexual promiscuity, and pervasive neglect of children. Hypervigilance

leads to violent acts. Depression and severe dissociation lead to drug abuse. Loneliness and the feeling of helplessness lead to gangs and sexual exploitation. Lack of resources and education means crime is the way to survive.

Dr. Perry's neurosequential lens shows us that we must mediate low in the brain first. Classes in therapeutic drumming and dance start there. Mother's nurturing heartbeat has been missing for many children, and the drum begins to provide that soothing, regular beat. That slow steady beat comes to represent community, cultural grounding, and safety. Drumming/dancing with a partner or a group begins to nurture the limbic system, the relational brain. Playing in concert with others is a powerful way to say, "I belong. My rhythm is important. We sound good together." The teaching of life skills around this activity then leads to better thinking skills, a more developed cortex. In the end, a stronger cortex helps to alleviate the high stress that causes all the problems in the first place.

Equine therapy, therapeutic massage, pet-assisted therapy, play therapy all can have similar effects starting low in the brain. Using effective groups in the classroom, being part of a music group, or playing on an athletic team adds relational strength and limbic development. These all lead to the stronger cortex all schools want to develop. Self-regulation, centered high in the brain, is the ultimate goal of any therapy, but it will never be realized until we realize we must build the foundation first.

Guided Discussion: Chapters 10 and 11

- 1. (Chpt. 10) Screen time, be it television, movies, or video games has increased exponentially in the past twenty years. How has this affected empathy in children? What strategies can we use in our schools to bring some balance into our students' lives?**

The brain is a mirroring organ, relying on positive relationships to develop empathy. It cannot grow and make strong pathways of compassion without interaction. None of this is truly possible with a television, movie or video game. "You can't learn empathy from something that can't empathize--" (p. 236).

Empathy in children is bound to decrease as screen time increases. Many repetitions of meaningless interaction dull the mirroring capacity of their brains making them less likely to develop the ability to feel as others feel. This allows negative behaviors like bullying or teasing to occur because few feelings of attachment or remorse are left to mediate that damaging action.

Schools should be places of creativity, interactive learning and relational richness. Brains crave all three. We can incorporate technology effectively only when we recognize that our students need more human to human contact than screen time. Putting two students together during group research, film projects, or some form of performance is an effective way to bring balance. As educators, we must remember that our brains are more ancient than modern. Nourishing our needs for human contact and interaction will only strengthen the overall learning foundation needed to best use the exciting technologies of this age.

2. (Ch. 11) Review the concept of “power differential.” How does the stress of feeling oppressed or lacking control affect the body? What antidote to this stress can we practice in our classrooms and in our homes?

A power differential occurs when any of us feel overwhelmed, weak, or stressed in the context of a human relationship. This can happen because of perceived differences in stature, wealth, intelligence or any marker of personal power we deem significant.

For example, a new student, who is relatively small and plainly dressed, comes to class. He senses a huge power differential with his classmates, most of who are taller, familiar with each other, and appear to have higher social status because of their brand-name clothes and shoes. He assumes they are smarter than he is because all other markers make him feel small. This difference seems exponential if he is from any minority group.

His body will react one of two ways. He may become hypervigilant with elevated heart rate, lots of nervous movements, and little or no ability to learn since he is looking only to survive in this perceived dangerous situation. Or, he will dissociate with lowered heart rate, an escapist mentality, and not attend to class because he is in a dream world that allows him to feel safe.

To overcome this power differential requires some creative adjustments and a few practical moves. Teachers in these situations need to speak calmly, reduce the height difference by kneeling or sitting next to students in one on one situations, and find ways to slowly but steadily get to know any boy or girl who seems threatened. Finding some private time is best. Then, teachers need to be creative in connecting shy students to one or two others in the class who can be trusted to foster a healthy in-class relationship. Patience is crucial. Threat can only be overcome by small doses of attention given on a regular basis.

Guided Discussion: Chapter 12

- 1. Discuss the differences between “bonding social capital” and “bridging social capital.” (pp. 265-267) How can individual classrooms and schools as a whole function to increase the overall social capital in students’ lives?**

Bonding social capital is the relational strength we have within our own families or tribes. Bridging social capital is the relational strength we have with those outside the family or tribe. Having both provides an important balance needed for overall empathy.

Schools must first recognize the importance of the family and/or tribe its kids belong to. There are traditions to be respected and beliefs to be honored. From that platform of respect comes the opportunity to bridge across cultures.

The internet and cell phone culture we live in is positive in the way it encourages us to easily reach across cultural barriers. However, it sometimes causes us to skip the first step, recognizing and respecting our family traditions and beliefs. The ancient foundations of culture can and should provide stability in behavior and a solid platform for learning. It is often true that those most confident in their own traditions and beliefs will be most tolerant of other traditions and beliefs. This is a tolerance we can foster in our classes and in the school climate at large.

- 2. Reread the last paragraph on p. 280. What can we do in schools to temper the economic inequality that exists in our student population? How can we avoid an “us vs. them” mentality?**

Economic inequality is a given that schools cannot change. However, we can attempt to make school opportunities available to all kids regardless of income. Musical performance groups and sports teams must be accessible through policies that leave no child out. Field trips, tours, and athletic events involving travel must be affordable for all.

When kids experience these kinds of opportunities together, there is a chance to bridge the economic gaps that exist. Time together trumps money. Teammates trying to win a game or band mates trying to master a song don’t think about who has money and who doesn’t. Success in such endeavors connects. Mutual experiences connect. Time together ensures some positive mirroring, and this builds relational bonds that temper our differences.

Guided Discussion: Chapter 13

1. What does it mean to have a society or a school that is biologically respectful?

Being biologically respectful means understanding the architecture of the brain and how it develops from the bottom up. It also means realizing that all levels of the brain must be nurtured during the school day. Another key to being biologically respectful is knowing how the brain responds to threat and what it takes to reduce the fear response in children so they can learn. Knowing that a wealth of positive relationships is important to the brain development of every child is another biological fact that should affect how we interact in both school and society. Other common sense needs like exercise and good nutrition must be seen as brain essential not just body essential. Viewing the school as an organism that is interdependent in every way is the foundation of being biologically respectful.

2. There are three core relationships that exist in schools: 1) staff to staff 2) staff to student 3) student to student. What practical steps can we take to improve the overall relational quality in all three areas?

1. Time, support, and fun. Staffs need to be purposeful in all three of these. Yes, we are busy people, and we don't always like all the folks we work with. However, when there is a balance of spending time together, receiving support during times of personal crisis, and having a few fun outings per year, the gain in the workplace atmosphere far outweighs the cost of the time spent achieving that. Relationships need repetitions to develop and will grow stronger when security and fun are two ingredients consistently a part of the interactions we have.
2. Purposeful, safe, and numbers matter. We need to make student interactions, especially those outside of the classroom, a high priority. Students feel a greater sense of safety when they have many non-combative interactions with the adults in their school who demonstrate sincere interest in their daily lives. Staff members of all kinds need to be trained to never pass up a positive relational opportunity. It takes so many positives to overcome the negatives. School is a great place for healthy adults to interact with needy kids and make those numbers tip in the right direction.
3. Safe, predictable, and fun. The classroom has to become a safe place for kids to interact. That means establishing strong norms of respect and fair play. We must pay close attention to how we use groups or partners in our learning process. Teaming or pairing up kids who represent a threat to one another makes group dynamics unpredictable and thus ineffective. However, teaming up kids who get

along well and can be consistent partners is vital in fostering limbic brain development. Finding ways to have fun in and out of class adds pleasure to the school atmosphere. When students make an association between pleasure and learning, the hunger for novelty and adventure begins, and new learning can take place.

3. Reread p. 312. Detail the importance of reading in helping individual students gain a greater sense of self-control.

Reading with young children is both rhythmic and relational. Sharing a story and a lap is a whole brain activity combining the sense of touch and warmth with the rhythm of voices and stimulation of new ideas. Children who are read to often become better readers because they associate loving relationships with learning. There is pleasure in picking up a book and exploring its contents.

Later, when kids become independent readers, they gain new perspectives, putting themselves into the lives of the characters in their books. This gives them a better chance to develop empathy as they cross paths with a variety of people introduced to them by the authors they enjoy.

Because reading stimulates the cortex, it helps the readers mature in the part of their brain most responsible for self-control. Greater self-control helps all students with impulsivity and reduces the likelihood of violent interactions. Many works of fiction have positive characters that model respect and self-control, and reading about them is an indirect but effective way to teach these truths without being preachy.