

**LEARNING IN SMALL MOMENTS – THE EFFECTS OF THE PRACTICE OF
KUNDALINI YOGA ON MIDDLE YEARS STUDENTS IN AN URBAN SCHOOL**

by

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Abstract

This study investigates the relationship between the practice of Kundalini yoga and the development of interpersonal and intrapersonal awareness in Middle Years students. Secondary aims were to provide reflection time for students in their school day and to find out whether the participants were better able to cope with stress. A qualitative method was applied. Two consent forms were sent to the participants' parents. One granted permission to participate in the yoga sessions, the other requested permission to use the students' journals as data. There were 16 yoga sessions over three weeks. After each session, the participants and the instructor/researcher wrote reflective journal entries. Twenty-nine students participated in the yoga sessions, but only 15 student journals were used for data collection. Results included growth in interpersonal and intrapersonal awareness, growth in physical flexibility and awareness, and a desire to have relaxation during the regular school day. Results revealed student appreciation for a greater number of physical opportunities throughout the school day.

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Learning in small moments – the effects of the practice of Kundalini Yoga on Middle Years students in an urban school**Chapter 1 - Introduction****Background to the Study**

Yoga has been part of my life for over fifteen years. I first sought out yoga to help decrease my own stress and to gain control over my epileptic triggers. I tried Hatha yoga but found that I was too energetic for the class. I was the person in the back with bouncy legs, waiting for the instructor to introduce the next movement. My patience and the patience of the instructor was tested. Hatha yoga is an excellent introduction to the art because students are taught how to combine breathing with moving and how to be “present in the moment”. This symbiotic relationship is achievable for most people but I had been introduced to yoga briefly as a child and already understood the need for that relationship. What I didn’t have was an emotional connection to what I was doing. I later did some private study into the philosophy of yoga and sought for that union between body, mind and soul. I next tried Ashtanga yoga, which consists of doing a series of movements repetitively at a fast pace and which can be physically demanding. Ashtanga yoga was predictable and I became bored. My heart rate was up and my flexibility was increasing, but my heart and mind were not present. I knew that part of my struggle was to find a good balance between physical activity and calm internal reflection. I needed to find some form where I could tire out my body in order to give my mind a chance to “declutter” without the body interrupting out of boredom. During my first year of teaching, I took a Kundalini yoga class and found what I was seeking. The emphasis of Kundalini yoga was to exercise the body, to expand its potential and reduce its limitations, and then afterwards to experience some “quiet time” where a person could go inwards and release what wasn't needed. After that class, I continued to take small group sessions with the teacher for two years. This resulted in a confirmation that this was the style of yoga for me.

I became fully committed to the yogic lifestyle, which includes vegetarianism, using natural products, abstaining from alcohol and non-medicinal drugs, taking cold showers in the morning to boost the immune system and completing a daily practice of Kundalini yoga. I pursued the discipline, taking master classes and leadership training until, in August 2006, I received my Level One teacher training in Kundalini yoga, which provided me with the qualifications to teach other seekers.

My experience with Kundalini yoga has given me a greater understanding of my physical, emotional, and spiritual self. It has provided me with the tools to deal with stressful situations, including the death of a beloved grandmother, the upheaval of home renovations and, most importantly, the birth of my daughter. Because my own experiences with yoga have been so positive, I started teaching an extra-curricular yoga class to 12 to 14 year olds. For seven years I taught boys and girls who attended one hour of yoga instruction two times a week. These classes were successful but there were still students who needed some guidance with their emotional responses. I decided to teach some basic breathing techniques to the students in my Grade 6 class so they could learn some “de-stressing” tools. I was most interested in how the most emotional or anxious students could be helped through regular instruction in meditative breathing.

Students who had been the most difficult to deal with mentioned that, following their exposure to yoga, they discovered methods of decreasing their stress and frustration levels. I noticed that students were able to communicate their own thoughts and feelings with one another more effectively. More importantly, parents told me how pleased they were to see their children “taking a break” and pausing when emotions were high.

The success of this experiment, coupled with my own experience of yoga, sparked an interest in probing just how and why yoga affects children in this way. Does learning the basics of Kundalini yoga effect a change in how the individual interacts within and outside of the

classroom? As I taught the students, we learned together how yoga helped us discover who we are, how to “let go” of the overly-busy world around us, and how to improve interpersonal communication. It seemed that yoga helped in all three areas, which in turn seemed more than enough reason to include yoga in classroom practice.

As a teacher of both middle years and Kundalini Yoga, I found myself questioning whether there was a connection between students' personal learning and their experience of yoga. I wondered if I could relate this to Gardner's theory of Multiple Intelligences, which focuses on the different human intelligences and their influence on human potential. I was intrigued by what I heard other teachers say about my yoga students. They shared that, in other classrooms students would utilize the yoga techniques we practiced to calm themselves. My students would share a technique with another student if they felt that student needed some help. Realizing the effect that yoga practice has on my own life, I began to wonder about its effect on the middle years student's cognitive processes. This is where my journey of inquiry began.

I received my Bachelor of Education degree in 2001. At that time I was not absolutely certain of my role within the public education system. I have taught for 5 years in various different provinces and schools, and have had a number of different teaching assignments. As my career progressed I found myself questioning the role of the public education system. Is it to prepare the students for the work force, to provide skills necessary to be active learners, to create working members in our communities? How did what I taught the yoga students fit into their education both within the school and their lives? What was my purpose as a teacher of yoga and in a school? Was there a correlation between my role as a classroom teacher and a yoga instructor?

The Purpose of this Study

The purpose of this study was to explore whether there might be a link between the practice of Kundalini yoga and the development of Gardner's interpersonal and intrapersonal intelligences in students. Specifically, does regular practice of Kundalini yoga affect the development of a student's interpersonal and/or intrapersonal intelligences? If students can learn the principles of Kundalini yoga, will they begin to understand themselves and others in a different way? Will the student be able to cope with stresses more effectively?

This study provided an opportunity for students to engage in Kundalini yoga and for me to listen to the students as they reflected upon their experiences through the yoga sessions. Another intention of this study was to provide students with the opportunity to break from academic expectations, and focus inward on themselves and their personal experiences. Furthermore, the students had an opportunity to be active outside of physical education class.

Chapter 2 - Review of Literature

While there is some research available on the beneficial effects of yoga in general, less research is available on the effects of yoga on children. That said, it is useful to review the research on the individual components related to the practice of yoga – societal influences, the physiology of the brain, yogic practice - as well as Gardner’s Theory of Multiple Intelligences as it relates to children understanding themselves and their place within society

The primary purpose of public education is to develop the knowledge, skills, abilities and attitudes of an individual so that s/he can participate fully in society. Another less explicit purpose is to provide citizenship training. This need of citizenship training arose from the period of high immigration to Canada, during the late 1800s and early 1900s. McKenzie (1993) states that citizenship education in Canada includes the acquisition of Canadian history, geography and social studies, the development of literacy skills “and desirable social attitudes ... and an understanding of one's place in the world and the inter-relationship of nations” (p.3). Over the years, the definition of a contributing citizen has shifted, which in turn has brought adjustments to what and how schools teach. No longer are schools simply institutions where one gains factual information and/or learns skills prior to entering the workforce. Society expects schools to shape a citizenry that will be viable, contributing, and productive in an ever more complex global society. Schools are thought to be communities that build on what is known by today’s generation in order to educate the next generation. Schools are to develop the knowledge, skills, abilities and attitudes of an individual so that s/he can participate fully in society. Symons (as cited in Young and Levin, 2002) states that one of the main purposes of education is to better understand one's self. Symons argues that “to be educated means to know ourselves: who we are, where we are in time and space, where we have been and where we are going, and what our

responsibilities are to ourselves and others” (p.6–7). Citizens need to be well informed and have the educational abilities to examine the world we live in (Greene, 2000).

Today’s hectic pace, with pressures coming from every direction, causes students to feel the stress of life at an earlier age than in previous generations. Stress, anxiety and negative self-image are constant challenges for children. Canon (1932) declared that regardless of the stressor involved, the “fight or flight” response is activated in the child (Zaichkowsky and Zaichkowsky, 1984). Current research shows that women and men handle stress differently. Taylor, Klein, Lewis, Gruenewalk, Gurung and Updegraff (2000) discovered that women respond to stress with a pattern known as “tend and befriend”. In contrast to men, women will focus on their family and seek out others for support and communication. This difference in stress response may provide insight to people’s actions when under stress. If adult men and women display these differences, what would be the pattern of response used by children who have not developed the coping mechanisms displayed by adults? Before addressing this question, it is useful to consider some fundamental realities regarding the functions of the human brain.

The brain is primarily divided into three sections: the reptilian brain, the limbic brain, and the cerebral cortex. The reptilian brain commands the skills necessary for survival, such as increased heart rate, blood circulation, increase in temperature and pace of respiration (Murphy, 2008). When the sympathetic nervous system is activated, it corresponds with the brain function shifting down into the reptilian brain, located near the brain stem.

The limbic brain's role is to coordinate one's emotions and memory, and is located in-between the cerebral cortex and the reptilian brain (Murphy, 2008). The limbic brain contains the hypothalamus, whose main function is to receive information from the cerebral cortex, the cells and senses, and then to use this information to send chemical messages to the rest of one's body, including emotional messages (Bhajan, 2003).

The cerebral cortex, commonly known as the “gray matter”, is responsible for the thinking, planning and organizing done by the brain. When the body is calm and under the command of the parasympathetic nervous system, the cerebral cortex is in control and the body's sensory system is more aware of its surroundings, thus providing greater information to the brain (Murphy, 2008). When a person engages in yogic exercises the cerebral cortex is in command, and is better attuned to one's surroundings as situations evolve. The automatic nervous system can be divided into two specific systems. The parasympathetic nervous system is responsible for all bodily functions that occur when at rest, such as salivation, digestion and tears. The role of the sympathetic nervous system is to react to stress, mobilizing the body in response to a flight or fight sensation. The upwards centering in brain function when focused in the cerebral cortex, in combination with the heightened usage of the parasympathetic nervous system, can result in a person being more reflective and aware of the present situation, converging into the phrase often used in yoga: “being present in the moment.”

Zaichkowsky and Zaichkowsky (1984) and Wenig (1999) have linked yoga to reducing stress and strengthening various systems in the body. Yoga studios are increasing in popularity. One has only to look through the Yellow Pages for any urban centre to find numerous listings. In most modern media, yoga is highlighted as a means of exercise and overall wellness. Research has reported benefits of yoga in several areas: reduction of anxiety, chronic pain, substance abuse, and use of medical care and hospitalization, lowered levels of cortisol and blood pressure, and an increase in cognitive function (Sharma, Das, Mondal, Goswami, and Gandhi 2005, Bijlani 2004, Khalsa & Stauth 2001, Bernet 1997). Through the regular practice of asanas (yogic postures) a repeated sensory experience is created where meditation develops the cortex, thickening it over time (Bijlani, 2004). The thickening cortex, along with the heightened sensory awareness, directly affects the limbic system's activity, affecting the hypothalamus (Sharma et al.,

2005). The hypothalamus, acting as the intermediary between the brain, cells and senses and the rest of the body, controls the “flight or fight” response of the body. Using magnetic resonance imaging (MRI) studies, Lazar, Bush, Gollub, Fricchione, Khalsa and Benson (2000) found that during meditation there was an increase in the activity of the prefrontal and parietal cortices, hippocampus, and temporal lobe, resulting in an activation of the neural structure that controls the nervous system (Baker, 2000).

People of all ages, including children, are sporting Lululemon clothing, purchasing yoga books, and learning that their favourite film stars do yoga, for yoga has become fashionably “cool”. The literature is definite on what adults gain from yoga but what, if anything, are children deriving from this kind of activity?

Anecdotal reports published by Stroebel, Stroebel, & Holland (1980) state that children can learn to control tension, and this stress management is transferable to all areas of the child’s life, including home, school and social environments. If students could learn which techniques to use during stressful moments, such as the relaxation techniques used during yoga, would students gain a greater ability to handle the task at hand without undue influence from the stressor? Would they, as Symons (cited in Young and Levin, 2002) suggested, begin to know themselves as well as what role they play in their own education as well as in the education of others?

Recent studies (Peck et al., 2005; Harrison et al., 2004; Jenson & Kenny, 2004; Zipkin, 1985) indicate that the breathing techniques and meditation techniques taught in yoga classes to students who have attention deficit disorder helped them relax. These techniques help decrease the level of impulsivity and hyperactivity, and help students to concentrate their energy. Stukin (2001) highlighted that yoga was an important source of movement for students with behavioural problems. In the light of those findings, I wanted the yoga study and the yoga sessions to include the examination of how critical a factor “relaxation time” was for the students in the context of

their regular school day, whether they looked forward to it, and whether it affected student involvement in any subsequent classroom activity. In fact, I wondered if the yoga study might even provide insights around the need for relaxation time in the regular school day for all students.

As both a teacher and yoga instructor, I became curious as to how yoga might affect middle years students. I believed it would be interesting to analyze whether students became more aware of themselves and of situations in their life. I queried whether students became more aware of others in the classes, of their behaviours, of what motivates them, and of how they cope with challenges. As the yoga study progressed, I analyzed the scope of activity among the students both as individuals and as a group.

By encouraging the parasympathetic nervous system to be engaged through the yoga sessions, I hoped to provide an opportunity for students to shift their brain function into the cerebral cortex and away from the “flight or fight” mode of thinking. As the brain moves away from situations where it perceives threats, such as embarrassment or physical harm, it then heads into a different function, one in which the emotional side of the brain no longer dominates the rational and cognitive side (Crawford, 2007).

What is it exactly in yoga that facilitates a relaxation of the body and mind? We already know that the sequence of movements and the coordination established with deep breathing effects an improvement on the circulation of the body. An improved blood and oxygen circulation correlates with a release of tension (Brosnan, 1982; Lalvani, 1999).

The autonomic nervous system's primary task is to regulate our capacity to breathe and to gain a constant heartbeat. In fact, this system consists of two individual systems. The first is the sympathetic system, whose purpose is to use stored energy to speed up the breath, increase the heart rate and raise one's blood pressure and blood sugar levels, all necessary responses in a

“fight or flight” mode (Bhajan, 2003; Seamon & Kendrick, 1994).

Complementing the sympathetic system that “revs up” the individual is the parasympathetic system. The purpose of this system is to calm the breath, to relax an individual's digestion, the heart rate, nerves and circulation (Bhajan, 2003). The parasympathetic system comprises the “brakes” of the body's energy system, while the sympathetic system can be pictured as the gas pedal. In essence, therefore, yoga focuses on increasing the parasympathetic system while decreasing the sympathetic system, through the coordination of breathing, movement and meditation.

I began to understand that my own interests lay in understanding the students' development of how children learn – their personal interpretation of the world around them. In particular, I questioned whether a yogic experience affects how a student perceives him/herself (intrapersonal) and others (interpersonal). Do students begin to acknowledge the reality that they play a role in what happens around them (interpersonal)? Does the ongoing reflection about this reality cause them to evaluate, adjust and improve their own self being within that reality? In other words, does this yogic experience result in an interpersonal and intrapersonal development?

Gardner's Theory of Multiple Intelligences

Howard Gardner (1983) introduced the Theory of Multiple Intelligences. This theory explores the concept that intelligence is not knowledge acquired through scholarship; rather it is the ability to solve problems that benefit one's environment or culture. Gardner (1983) initially described seven intelligences in detail, with the understanding that each intelligence has its own strengths and constraints. The seven intelligences were: linguistic intelligence (word based), logical-mathematical intelligence, musical intelligence (tone, rhythm), bodily-kinesthetic intelligence (body awareness), spatial intelligence (patterns of space), interpersonal intelligence and intrapersonal intelligence. In 1997, the Multiple Intelligence theory incorporated an eighth

intelligence, Naturalistic Intelligence, (Gardner, 1999). Gardner stresses that it is rare that any intelligence operates independently but that they tend to complement each other. Therefore, humans do not possess a single intelligence, instead they often hold a number of different intelligences that work collaboratively to solve problems or help develop skills.

As a young student I didn't fit into the three primary styles of learning, known as verbal, visual or tactile, and I felt frustrated by the limitations placed upon my learning because I wasn't "smart" in the traditional manner. Through experience with Gardner's theory during my undergraduate degree, I became curious as to how a variety of definitions of "smart" may affect students' self images and therefore their self-esteem. Further exploration on this topic helped me gain a greater appreciation for the multitude of skills and "smarts" we depend upon, in order to contribute to and benefit from our society. For example, without someone who has a strong bodily-kinesthetic intelligence, many of the appliances within my house or the general labour upkeep required in a household would not be done as swiftly or as competently.

The personal intelligences are often seen as a single piece due to their complementary function, although Gardner states that they are distinctive intelligences. Intrapersonal intelligence refers to a person's understanding of one's own thinking processes, moods and desires (Gardner & Hatch, 1989). A person, after critical self-observation, may become more aware of the reasons behind a particular behaviour. Strengths of intrapersonal intelligence might include:

- an awareness of how to express one's feelings and thoughts
- motivation to identify and pursue self-initiated goals
- enjoyment of philosophical conversations

Individuals with strong intrapersonal intelligence often:

- have strong ethical values
- tend to strive for self awareness
- work well independently
- may empower others

- have a good self-concept
- have the ability to accurately predict responses to situations and identify strengths and areas to develop.

Interpersonal intelligence focuses on the exterior, not the interior. It is the “capacity to understand others’ intentions, motivations and desires” (Gardner & Hatch, 1989, p.6). This intelligence enables people to work effectively with one another. Much like a chameleon, a person with a strong interpersonal intelligence is able to adapt his/her behaviour to different environments, based on the overt and covert feedback received from others. Social relationships are very important to this individual, and s/he will use a variety of ways to relate to others, perceiving others’ feelings, thoughts, motivations, and behaviour. Knowing how to read others allows this individual to influence the audience’s opinions or actions, and to communicate effectively in verbal and nonverbal manners. Most often, the person with great interpersonal intelligence can be found at the center of any gathering.

Both interpersonal and intrapersonal intelligences are strengths necessary for engaging with our society. The skills associated with the personal intelligences are ones that employers seek in their prospective employees. As the global market increases, these skills are in high demand. However, they are generally not the skills stressed in school curricula. Some experts (Ness and Ness 2003, Greene 2000, Getz, LaBahn, & Regan, 1999) in the field of pedagogy claim that students today do not have the social skills to communicate effectively with one another. Programs such as Restitution© and Roots of Empathy© have been integrated into the school system to help foster social skills in the student population. During a Roots of Empathy© class, the students in the class study and interact with an infant for ten months, thus helping to develop a student’s empathy towards his/her fellow classmates. This process also sheds light on the person’s unique personality. The Roots of Empathy© program (ROE) has been a focus in our school division over the last two years at the middle school level, fostering character education.

ROE has “shown dramatic effect in reducing levels of aggression and violence among school children while raising social/emotional competence and increasing empathy”

(<http://www.rootsofempathy.org/ProgDesc.html>). Along with these results, students gain understanding about human growth and the stages of cognitive development. Yet, I am left wondering what learned techniques the students incorporate into their daily lives after the program has ended.

In the schools, I have seen an ever-increasing number of students who do not seem to have the skills to express their emotions appropriately. Rather, they lash out at others or at themselves. The students that I teach are often lacking in personal intelligence skills and, throughout the student population at our school, I find that these skills that society demands seem to be inadequately developed. A student generally reacts before surveying the situation. Furthermore, the student frequently doesn't consider the source of the aggravation. In my observations, miscommunication is the number one reason for many conflicts between students in the classroom. After reflection and after reassessment of the situation, students comment that they didn't realize all the pieces to the problem. The students who have skills in the personal intelligences, even though they may be below average in academics, might well be able to succeed in the school environment because they are able to work cooperatively, read the visual body cues of teachers and students, and realize where their strengths lie and where they may require help from others.

Several “explanations” are offered for the spill-over of outside tension in schools. Some researchers suggest that a lack of discipline in the policy and practices of the educational system, combined with a curriculum that is too broad in scope, dictate the inner chaos in the lives of students (Ness and Ness 2003). Other experts contend that the rapid societal demographic changes, with their concomitant cultural and religious influences, have carried the seeds of

confusion and division for far too long (Toby, 1983, Buvinic & Morrison, 2000). As society continues to evolve, common questions emerge around self-knowledge and how it develops, and around inter-personal communication skills. At the same time, individuals and groups alike seek to become better equipped to communicate effectively with one another.

Classrooms today are multi-dimensional, reflecting the demographics of race, religion, sexuality, languages, life experience, social standing and gender. Student populations today are not the homogeneous community groupings of the past. Children of immigrants, refugee students, exchange students, and cross-boundary students have altered the face of the classroom learning community. No longer is a student able to assimilate as quickly and easily into the mass culture, for his/her perceptions and life experiences may be drastically different from those shared by the majority of the student population.

Many people assume that empathy, self awareness, and interpersonal communication skills are automatically taught in the classrooms, schools, or in the home setting. Yet, there are few learning outcomes specifically highlighting these skills. At times, the home situation is not conducive to teaching these skills for a variety of reasons, due to the family dynamics, the need for parents and/or children/siblings to work during the evening hours, and the length of time when the children are at home alone. However, the reality is that our student population today is in need of self-monitoring skills that can help determine the ways of best expressing emotions and thoughts in an appropriate manner.

Research Literature on Yoga

Over the last three decades, studies have been done to evaluate the effect of meditation and yoga on the stress levels of participants. Linda Baker's (2001) study focused entirely on children and she created a curriculum entitled "Quiet Time". The rationale was to better connect the students' inner selves and experiences to their outer learning process, while reducing

situational stresses. Baker argued that yoga and meditation affect the brain in a positive way.

Research (Lazar et al., 2000, Herzog, Lele, Kuwert, Langen, Rota Kops, & Feinendegen, 1990) shows that the frontal lobe is stimulated and increases the relaxation response. It also activates the neural structures involved in attention and control of the autonomic nervous system. Baker (2001) proposed a two-part curriculum in which the students receive 15 – 30 minutes of yoga daily, generally after an active period, followed immediately by an extension activity. That extension activity would consist of reflective reading/writing activities, higher-order thinking activities or art activities.

Bernet (1997) found that relaxation techniques, especially meditation, enhance the immune system and are conducive to physical health. New programs, such as *Yoga for Kids*, focus on helping kids to “de-stress”, and to foster cooperation and compassion (Wenig, 1999). Wenig states that yoga enhances flexibility, strengthens the body, assists in coordination and develops body awareness. Furthermore, concentration and a sense of calmness and relaxation improve with yoga practice. Wenig contends that through “doing yoga, children exercise, play, connect more deeply with the inner self, and develop an intimate relationship with the natural world that surrounds them” (p. 1).

Some might ask: “How do children think about themselves? Can yoga help increase self-awareness and self-esteem?” Slovacek, Tucker, and Pantoja (2003) conducted an additional study to determine if “Yoga Ed” classes helped kids in the elementary and middle years to improve their attitudes towards themselves and school, and improve their emotional and physical health. The authors also wanted to explore whether there was a correlation between yoga and students’ academic attendance, behaviour, and performance. The results demonstrated that participation in yoga class appeared to help students improve their attitudes toward themselves across the entire spectrum of the study.

In classroom situations, the ability for a student to reduce anxiety levels would be an asset to learning and to processing new information. As schools explore the incorporation of relaxation programs into their daily schedules, researchers question the effects derived from these programs. Zaichkowsky and Zaichkowsky (1984) investigated the benefits of a six-week relaxation-training program on grade four students. Nineteen students were chosen for the control group, while 24 other students received 18 lessons on stress and stress management techniques. The stress management techniques consisted of 20-minute theoretical lessons and seventeen 10-minute lessons using progressive muscular relaxation, mental imagery, and breathing techniques taken from yoga sessions. The experimental group received 3 lessons per week, and each session was book-ended by pre- and post-testing. The results indicated that the experimental subjects did learn stress control in a period of six weeks, while the control group exhibited stress-related reactions. Furthermore, 12 weeks after the end of the program, these subjects and their parents reported that the skills were still being used and were being transferred to deal with “real life” stressors. It is interesting to note that, although the study on the benefits of yoga was short term in nature, the effects of yoga carried over to a much longer term.

It has also been established that yoga helps students who have difficulties maintaining attention. Hopkins and Hopkins (1979) sought to determine whether yoga might help such students to focus more effectively in the classroom. The participants consisted of 34 children, students ranging from grade one to grade six, all of whom “exhibited educational problems severe enough” that they were not able to attend regular classrooms (Hopkins and Hopkins, 1979, p. 343). The study altered the time period in which each of the participant groupings received the yoga training. Otherwise, a general psychomotor activity period took place. After each period of activity, the groups participated in the gross-motor programs. Along with an increase in the participants’ attention span, the findings indicated that the yoga training produced the same

results as those of the psychomotor activity; thus strengthening the argument that physical education should be an essential part of an elementary school program. Different forms of yoga require different ranges of physical intensity and endurance. When combined with other forms of exercise, yoga becomes a well-rounded physical education program.

The most studied form of yoga in schools is Hatha yoga, a popular branch of yoga in North America, which concentrates on the coordination of body and breath. Hatha is specifically centered on the body-mind partnership. This form of yoga focuses on removing duality and instead focuses on acceptance of all and has a powerful function on the body (Bhajan, 2003). Duality occurs when there is a separation of an experience instead of acceptance of the total experience, for example we can experience happiness and sadness when we are moving to a new city; sadness that we are leaving our community in our present city, and happiness at the chance of discovering a new city. Particular breathing techniques are taught while moving the body in a specific manner in Hatha yoga. While such coordination of body and breath will be integral components in this study, the yoga I used in this study is Kundalini yoga, a branch of yoga known as the yoga of awareness, encompassing body movements, breathing coordination, hand positions and meditation. This form of yoga focuses on the body-mind-spirit continuum, instead of the body-mind partnership. Until 1969, only master gurus knew the full extent of the power in this form of yoga. Yogi Bhajan (2003) the master of Kundalini yoga states, “yoga is a technology of awareness The techniques of yoga form the owner’s manual for human consciousness. Yoga explores your dimension, depth, nature, and potential as a human being” (p. 14). While traveling to the United States, Yogi Bhajan decided that the world needed to learn this method of self-revelation, and to use it to live within the reality of today’s life in order to recognize the inner power that each individual possesses. Shakti Parwha Kaur Khalsa (1996) describes Kundalini yoga as a “sacred science” that involves working and understanding prana,

the life force or energy. Kundalini yoga is a comprehensive science that uses hand mudras (hand positions), primary sound, breathing rhythms and postures to break up old patterns. These actions help to heal emotional scars, build consistent self-esteem and develop higher consciousness. Kundalini yoga focuses on yogic lifestyle, information on food, children, pregnancy, birth and death, and relationships. Within Kundalini yoga are exercises that can easily be used when walking or driving. It also features short meditations that train the mind to be positive, creative, confident and receptive. By stimulating the body and breath to work together, the purpose of Kundalini yoga unfolds as the person's awareness of the inner self and the rest of the world is heightened. The students of Kundalini yoga are to apply the techniques shared in the classroom to their everyday life, creating a balance for the body, mind and spirit.

Yoga is intrinsically versatile and is relatively simple to add to a daily routine in a classroom, a board office, a community center or a home. Kundalini yoga does not require any props other than a mat or blanket to provide cushioning and stability, whereas Hatha yoga will use props. However, in order to fully experience this form of yoga and to assess each student's safety, it is critical that the instructor be a certified Kundalini yoga teacher, just a certified teacher should teach all yoga classes.

Chapter 3 – Methodology

The participants in this study were the students in one class from my Middle Years school. Divisional and school approval and support was granted for this research. The study's population consisted of 15 middle years students, aged 13-14 years, although a total of 29 students participated in the yoga sessions. Students received yoga instruction three times during a six-day cycle for a 40 minute period. An English Language Arts class was used as the time period for the yoga instruction. Beginning in January 2008, the yoga instruction occurred over a period of 8 weeks, consisting of three 40-minute sessions per cycle, a total of 16 hours of yoga sessions over three months.

Most of the students had taken classes together before, but this was the first year that they remained together for all core subject areas. The classroom teacher taught both Social Studies and English Language Arts programs. The teacher was a master teacher in the Language Arts area and a veteran teacher at my school. As part of her regular English Language Arts and Social Studies curricula, she chose to do an explorative unit on the history of yoga and the Indus Valley social studies unit. While she taught this unit, I taught the yoga sessions during the ELA classroom period. In this way, the yoga sessions that I directed became an experiential portion of the history of yoga unit.

As part of the ELA curriculum, the teacher decided to use a variety of methods to assess the unit, including creating podcasts, journal writing, comprehension questions and a performance evening at the end of the unit. As I was the French Immersion resource teacher at my school, the selected classroom is one that I did not have any direct contact with, as it is an English classroom. Although I taught an extra-curricular yoga class at the school, none of the students were participants of this class. While the yoga sessions for students were integrated with the classroom teacher's ELA curriculum, they were not assessed or evaluated as part of the

students' classroom work, and I was not responsible for any classroom curriculum assessment.

The classroom teacher was to participate in the yoga sessions and be a model to the students. As a participant, the classroom teacher would have been able to communicate to me various changes that she perceived in the students.

Student Participation

Since the yoga sessions were part of the regular English Language Arts curriculum unit, the students participated fully in the experience. A consent form for participation in this curriculum extension was sent home. Two students chose not to participate in the classroom yoga sessions. These students received an alternative independent study activity to complete while the yoga sessions were occurring. Students who participated used journals to dialogue with me, the yoga instructor, about their individual experience. The consent form sent home before the commencement of the study also requested permission to utilize these journal responses as one method of data collection in the study, and I received permission to utilize the journal responses of 15 students. Thus, only the journals of the 15 students who returned signed consent forms were used for data collection, although each participating student dialogued with the yoga instructor/researcher.

Session Format and Flow

Aligning yogic knowledge with my understanding of the middle years student, I had the students participate in eight particular kriyas, or yoga sets. To ensure that students became familiar with the particular positions used in the kriyas (sets), I introduced six specific meditations during the course of the study. Some meditations required a partner, while others were more individualistic in nature. Prior to the yoga set, the students learned breathing techniques to relax their bodies, decrease their tension and to bring their focus to that particular moment. A yoga session generally followed this format:

Activity	Time	Procedure
Journal Review	3 minutes	Students received their individual journal and had an opportunity to read and respond to researcher/yoga instructors' comments.
Tuning In	1 minute	Group chanted the Adi Mantra (Ong Namō Guru Dev Namō – Appendix A) to help bring the mind's focus to the moment.
Warm up movements/breathing techniques	3 minutes	Basic stretches or specific breathing techniques were used to warm up the body.
Kriya (particular set chosen)	18-20 minutes	Particular movements that are done in a sequence for a specific period of time (Appendix B).
Meditation (may be done in pairs or solo)	5 minutes	This may be included in the kriya as well. A mantra (specific wording) is said while holding a particular posture.
Brief relaxation	5 minutes	Participants lie down on their backs for a brief relaxation.
Tuning out	2 minutes	Chant all together the “Long Time Sun” song (Appendix C) to conclude the session.
Total Class time used	39 minutes	Done in one class session
Journal responding	5-10 minutes	Done after the yoga session in another class period. The students received a writing prompt to which they can respond. Otherwise they can use the time to communicate their own experience and thoughts of the day's session.

Due to the nature of the school environment and the participants, the kriyas and meditations were structured time wise to meet the needs of the situation. Yoga mats for each student were provided as well as the Kundalini yoga resources, including music.

Data Collection

As this study focused on what effects the Kundalini yoga might have on the students' development of self, journal writing was used as a means of engagement. Journal writing times

were used to give an opportunity for the students to reflect upon their experiences, providing data for me as the researcher. This form of reflective writing is a typical ELA activity and the classroom teacher had the opportunity to read the students' writing for ELA assessment purposes. The classroom teacher would have used the journal writing to meet the following General Outcomes of the grade eight ELA curriculum:

- **General Outcome 3:** Students will listen, speak, read, write, view, and represent to manage ideas and information.
- **General Outcome 5:** Students will listen, speak, read, write, view, and represent to celebrate and to build community.

The journal writing provided me with an opportunity to dialogue with the students and gain understanding as to their personal experiences.

I chose to begin the study in January so as to permit the students and teacher to become acquainted and to establish a rapport. The study aligned with the ELA curriculum and the classroom teacher expected to participate in the yoga sessions. She was planning on providing teacher observations as to the impact of the yoga on student behaviour and learning that might be noticed outside the yoga sessions. These teacher observations regarding students were to focus on how the students might be more aware of themselves and their individual needs, and provide a secondary data source. Unfortunately, this source was not accessible for the study.

Just as the students were asked to reflect upon their experiences, I journaled my own thoughts and experiences, thus providing the final source of data collection. As the yoga instructor, I journaled my thoughts about the flow of the yoga sessions, noting any changes, inquiries or discoveries arising from the yoga sessions. As any teacher would, I chose the yoga kriyas and meditations to suit the needs of the students. Particular physical poses were not possible for certain students, thus eliminating the possibility of that kriya. In-depth field notes, in

the form of a journal, created after each session helped to record any observations noted during or surrounding the session. This opportunity provided a means for me to contemplate any tensions within the study or myself as I donned the dual role of researcher and instructor. As these sessions are learning moments for the entire learning community (students, classroom teacher, instructor, researcher), it was vital that all participants document their own experiences to provide a greater picture of the on-going development.

Journal Format for Students

As they participated in the yoga sessions, some students made connections between the various activities and their own personal lives, and the journal time provided reflection time. There was a journal time after each yoga session providing an opportunity for the students to reflect upon their individual experiences. As the researcher, I provided specific prompts, encouraging the students to respond in a paragraph or two. The prompts varied in their intention, as some encouraged the students to consider how the sessions may have affected them individually and their peers. This process required that the students be reflective and thoughtful in their responses. Students determined the content of information and degree of depth shared with the researcher. Some examples of the prompts used follow:

- How do you feel about this unit at its beginning? Do you have any specific questions about it? (intrapersonal)
- During the kriya (set) or meditation was there something that you learned about yourself? (intrapersonal)
- Have you perceived someone in a new light or manner since the beginning of this unit? How so? (interpersonal)
- Sometimes there are yoga poses that are challenging to a person. Other times, it is the meditation time. Which part of the yoga session is the most difficult for you? Why do you think this is a challenging part? (intrapersonal)
- Is there someone in the class for whom a challenging pose seems to be easy? What

strengths do you think they might have that helps them to do that pose? (interpersonal)

- Rate how you feel before the session (1 = miserable, 10 = fantastic) and give a sense of how this emotion affects your behaviour. Rate how you feel after the session. Has your rating changed and how do you think this will affect you now? (intrapersonal)

I read and responded to the students' journal entries after each session. As they were private, only the classroom teacher and I had access to them and they were kept in a secure location in the classroom, in a locked filing cabinet. Establishing privacy and respect for the students' thoughts helped in encouraging the students to share their experiences, to be reflective and to be conscious learners in this experience. My response to a student's writing attempted to encourage the student to reflect further on a particular comment or situation.

As students dialogued with me through the journals, I posed questions back to the students for the purpose of clarifying ideas. This provided an occasion to contribute information and to member check. Midway through the study and also at the end of the eight week sessions, I wrote an entry to each student noting what they as individuals have experienced and where their thoughts have led them based on the student's individual journals. The students were given an opportunity to review these in-depth responses and reply reflectively to me, the researcher. These comprehensive reflections provided the students with further opportunity to contemplate their own personal journey and development of self.

Data Analysis

Since the yoga classes took place amidst the regular class schedule, I was only able to address the journaling of my thoughts in the evening, after the work day. In order to help jog my memory about the day's events when I sat down to journal my thoughts in the evening, I would take time at the end of the session to jot down any particular notes on the kriya done that day. These notes then became the prompters for my thought process later in the evening.

Months after the research project was completed, I returned to the journals, reading and

re-reading them several times. As I studied the data, I noted it was not a mechanical process of interpretation. Rather it was contextually laden, subjective since I was the reader, the writer, and a participant. Yet the data was rich in detail and I began to see themes emerge from the writing. Another researcher might have discovered different themes from this set of data, since it is open to the interpretation of the reader based on his or her own perspectives and life experiences. When I saw themes emerging I used a highlighter to underline particular thoughts. When I was able to identify several overriding themes, I listed all the data pertaining to those individual themes, in order to gain greater clarity and a more comprehensive perspective. A coding system evolved through this process, coding particular themes that arose from the journal responses. This coding process followed the procedures of “open coding” as described by Hoepfl (1997):

Analysis begins with identification of the themes emerging from the raw data, a process sometimes referred to as “open coding” (Strauss and Corbin, 1990). During open coding, the researcher must identify and tentatively name the conceptual categories into which the phenomena observed will be grouped. The goal is to create descriptive, multi-dimensional categories which form a preliminary framework for analysis. Words, phrases or events that appear to be similar can be grouped into the same category. These categories may be gradually modified or replaced during the subsequent stages of the analysis that follow (p.57).

Confidentiality

Confidentiality was given the highest importance. It is important to note that students were given pseudonyms. The individual journals were kept in a secure area in the classroom, locked in the filing cabinet, during the research time period. Currently all materials are being kept in a secure area in the researcher's home. All records and materials will be shredded after three years to ensure and maintain privacy.

Chapter 4 – Clearing Hurdles**The Geographical Territory**

In January of 2008, the classroom teacher and I introduced The Indus Valley Social Studies experiential unit to the grade 8 classroom. I explained how a regular yoga session would flow, what the expectations were (to attempt the yoga positions), and the journaling that would be used throughout the experience. The classroom teacher highlighted the other components of the unit, such as the summary radio podcasts, the pen pal writing with other students studying similar material, and the feast that would mark the conclusion and the celebration of the entire experience. Students asked questions concerning the study and the unit of both the classroom teacher and of me, the researcher.

Students received an information sheet for the benefit of their guardians, along with a permission slip to engage in the yoga sessions. The school administration was very supportive of this experiential unit and expressed interest in the student / family feedback. I contacted the parents or guardians, whose response had not been received to ascertain whether the student was able to participate in the study.

The classroom consisted of 31 students in grade 8. Two students and their families opted not to engage in the yoga sessions due to their religious beliefs. An alternative assignment was provided for these students, which they did in the library during the yoga sessions. Two other students expressed concern about doing the yoga sessions, due to injuries. However, after they tried the first class and found that their injuries would not impede their movements, these students decided to continue with the sessions. Therefore, these remaining 29 students (from the original group of 31 that had been identified) began the yoga sessions during the second week of January. A total of fifteen positive responses from the permission letters were received for data

collection, boys and girls almost equally represented.

Before each session, the classroom tables and chairs were placed to the sides. Upon entry, the students retrieved a yoga mat from the divisional kit of 30 yoga mats held in a hockey bag. Then each student identified a space for him or herself. Due to the general layout of the classroom and the number of participants, the search for sufficient space was a challenge that presented itself throughout the entire length of the study. After the yoga session, the students would roll up their mats and return them to the storage area. These routines took some time away from the actual length of every single yoga session.

The classroom teacher was present for the first yoga session. After the first session, the teacher shared with me that the students asked many questions concerning the yoga instruction, such as why the yoga instructor wears white clothing and a white hat. After answering the questions as best she could, the teacher suggested that the students write these questions into their journals, so that I could respond to them directly, providing answers from the yogic philosophy.

The presence of the classroom teacher was unfortunately irregular. For the second yoga session, she was ill and the substitute teacher remained in the classroom. The substitute teacher later spoke to the students, while they were writing in their journals and commented that the students were inflexible and lacked concentration. The classroom teacher returned for the third session, informing me that, due to an injury incurred over the Christmas holidays, she was to go on sick leave for an undetermined amount of time. Therefore, for the next eight sessions, the students had a number of different substitute teachers, none of whom had had any experience with yoga. Furthermore, none of the substitute teachers left the classroom during the yoga sessions as I had suggested it to them. Due to this inconsistency of the substitute teaching personnel, it was not possible to make any progress on the other experiential activities associated with this unit. The yoga sessions were the only activity the students experienced with the unit,

and the substitute classroom teachers were not able to make the connection between the social studies unit being addressed and the yoga sessions themselves.

Prior to the fourteenth yoga session, a long-term substitute teacher was hired. This substitute came to chat with me about the study and the experiential unit. As the substitute teacher was uncertain as to how many weeks he would be in the classroom, he was hesitant about continuing other projects attached to the experiential unit (podcast, writing to pen pals, celebratory meal). The regular classroom teacher requested to be kept informed on an ongoing basis. In the meantime, I had made contact with a teacher who was teaching yoga to a group of students in New York, and who expressed interest in the pen pal component of the study.

In their journals, the students began asking questions about when the regular classroom teacher would return and about the other branches of activities associated with the unit. As I did not have any definite information about the timing of the regular teacher's return, I spoke to the entire class once a week and updated them with any news I had and could share with them. The substitute teacher began to consider going ahead with the podcasting idea. When podcasting was described, the substitute teacher admitted that his limited knowledge of technology might be more of a hindrance than a benefit. The technology teacher in the school offered to teach both the substitute teacher and the students how to create podcasts, as it was an easy procedure, and would ensure that students used skills learned in technology class. The substitute teacher felt that he was not in a place to learn something new, as he found the students in the three grade 8 classes to be quite a challenge. To add to this, the regular classroom teacher had also arranged for a student teacher to be spending time in the class. The 8-week block of time when the student teacher was expected to be there would be starting in a short time.

The end result of this turbulent environment was that the yoga sessions comprised the only portion of the students' study of the Indus Valley that was experiential. The pen pal

components were done with the yoga club students (an extracurricular group). The classroom teacher did not return to the classroom for the rest of the year, and the substitute teacher remained until the end of June.

Throughout the journey of this qualitative study, with all of its unexpected changes, there was a transition between what was expected to be done and found versus what was observed in the actual situation and the direct learning that emerged from it. McMillan (2004) notes that one of the distinct characteristics of qualitative research is that “behaviour is studied as it occurs naturally” (p.257). As the study evolved, the shift from what was anticipated to occur to what actually took place required that I as a researcher conduct the study within the limitations and reality of the natural setting. Malterud (2001) contends that the qualitative researcher’s duty “is to explain, and maybe question, the hypotheses as ingredients of the preconceptions and as reflections, rather than applying procedures for testing them” (p. 484). Holloway and Todres (2007) state that qualitative research “needs imagination and it should be communicated to others while also demanding rigour and structure” (p.13). Whenever problems arose over the course of the study, it was apparent I needed to remain open, both in thought process and in acceptance, to whatever might happen. As the yoga instructor, I needed to be able to think on my feet, as it were, in order to be able to observe the participants’ needs regarding the yogic training, to react accordingly to those needs, and to communicate the necessary instructions. I also needed to provide the students with any relevant information they required in regards to the classroom teacher’s situation and the layout expectations of a yoga class.

From this evolution of the study, the necessity of reflection was apparent. When transitions occurred, it was crucial that I identify and acknowledge any:

preconceptions brought into the project by the researcher, representing previous personal

and professional experiences, pre-study beliefs about how things are and what is to be investigated, motivation and qualification for exploration of the field, and perspectives and theoretical foundations related to education and interests. (Malterud, 2001, p.484)

The transitions required me to be open to new approaches that would best serve the students, at the same time that I was aware of my own biases and preconceptions. As I reflected on my work, I was aware of the fact that I too was an integral part of the evolution of the study. I contemplated how my actions might indeed have some influence on the participants' own reflections. (Holloway & Todres, 2006). My own personal reactions to the external changes became a valuable source of data in the research. Communication was an integral component of this qualitative study. Since there were so many different alterations to the study's original conception, communication with the administration personnel, participants, classroom teacher, the pen pal teacher contact, and the substitute teachers was paramount. That communication needed to be ongoing and constant, with honesty and integrity as its cornerstones.

In qualitative research, the context in which an inquiry takes place influences the inquiry. The data and entire research content flows from that context. Through the understanding that the data is immersed in the context as well as in the perception of the participant, the qualitative aspect of emergent research design transpires. As McMillan (2004) explains:

a qualitative researcher will begin the study with some ideas about what data will be collected and the procedures that will be employed, but a full account of the methods is given *retrospectively*, after all of the data have been collected. (p.259)

In this particular inquiry, the research design altered and redefined itself numerous times throughout the study. The many ways in which the research design unfolded provides a rich example of how qualitative research is integrated into the natural setting and how the locus of

control is not necessarily in the hands of the researcher. The process of the study is as important as the product. Once again, we can understand that the journey is as important as the destination, and that meaningful learning occurs along the way for both the researcher and the student participants.

Throughout the many transitions that this qualitative study underwent, it was vital for me as both the researcher and the yoga instructor to maintain an “open mind” and allow the study to unfold. As we encountered each hurdle, it became apparent that “going with the flow” was more than a state of mind. Acceptance and patience was needed as each transition in the qualitative study occurred. The learning truly occurred in small moments of time and affected us each in different ways.

Chapter 5 – Findings and Interpretation of Data

The first source for data in this study was my own journal and then the second contributing source was the students' journals. Journaling was a mandatory component of the data collection process. Themes found within the data were discovered in both my own writing, as well as in the students' journals, and these are discussed individually. As I read through the journals I began to realize that there were a number of shared themes between my entries and those of the students. These parallel themes are discussed in this chapter and three particular journeys are highlighted at the beginning of this chapter.

Three Journeys

My Journey.

As I explained in the introductory chapter, I have been including yoga in my daily life for most of my adult life. Teaching yoga is very different from being the student, as meeting the needs of each student can be challenging. Some students need more verbal guidance than others, while others find the “talk” too much. In Kundalini yoga, the instructor models the poses, offers verbal directions, but never touches or physically modifies a student's pose. I have taught large classes with as many as 40 participants, as well as intimate classes with only two participants. I realize that the movements I am instructing may be more challenging for some than others so I present modifications, but it is up to each person to determine their own comfort level. I ensure that every individual in a class understands that it is vital to listen to his/her own body. Students often find they have aches and pains following instruction. This is also a challenge for it requires encouraging people to shift their focus from a negative perspective to a positive one. At times, explaining the purpose of the kriya or meditation can be complicated because not everyone will experience it the same way. As with any teaching, choosing the “lesson” to meet the class needs can be daunting some days. It is inspiring to see students internalize the learning and to see them

grow in their understanding of themselves, of others, and of the world around them. Yet, in order to help the students flourish, I need to study them, to understand and learn from them, and become a student again. Each time I do a kriya, there is a new experience or understanding that evolves. I have realized that I'm still the student of this yoga, and still on the path to mastering.

Starting this study I felt so many emotions - fear, anticipation, wonderment, excitement, anxiety and curiosity. I had no method of knowing what was going to evolve. Yet I had a belief that the classes would be similar to previous yoga sessions that I had taught. In my second year as a teacher, I taught yoga to a grade eight academic class in order to share some stress reducing techniques. Since I knew the classroom teacher, I felt that the sessions would go well because she had a connection with the yoga and the students, and might provide the link to understanding. I thought I would need to “win” over some of the boys in the class and ensure all the students and parents understood that the yoga was not part of any religion. I wondered if any of the students who participated during class time might pursue further yoga study with me during the extra curricular class offered on Fridays. Now, I understand I held some unrealistic expectations that the yoga classes in the study would be similar to my other classes. In my other yoga classes, however, the students eagerly sought yoga experiences that weren't part of their “schooling”. Yoga was exterior to their work schedule, whether that be school learning or a job. It was not connected to their regular academic courses as it was in this research study.

Before the study even started, two families were unwilling to take part. They were offended by the idea behind the study and were convinced that this was a religious exercise. They did not communicate this directly to me, but to another teacher, and I felt there was unintentional stress and discomfort caused by my choice of topic for the study. I had to rely on my yoga experience to release the feeling of inadequacy and lack of control. It was the first time I sensed that this experience wasn't mine to control.

Once the situation evolved that the classroom teacher would not be present, I struggled with a desire to give up. The lack of control that I felt with the study, and the fact it wasn't going the way it was supposed to, was overwhelming. The revolving door of substitute teachers, each sharing their own beliefs of yoga and of the students' participation in the study, was a factor I had not anticipated. These constant changes affected our learning environment: trust was hard to establish. The participants were less likely to engage in the moment because they were uncomfortable with what the substitute might say to them later. Once a long term substitute was hired, the participants did enter into the class more willing to try meditation, chanting mantras, and exploring more challenging positions.

I could not let go of the “ideal” situation, which was working with the classroom teacher, sharing our perspectives and helping the students to explore their own. Seeing other facets of their learning develop through the other experiential learning activities we had planned, and seeing the connections between their learning evolve had to be released. Letting go of the idea of control, of not obtaining the ideal setting and perceived evolution of the yoga study was vital, and releasing my own fears of the unknown and simply living within the moment was imperative. Once I realized I needed to teach and experience the moment, the tension and frustration that had been mounting disappeared. My role wasn't to force an experience upon these participants, but rather to present the opportunity for them to engage in a new experience. This shift in perspective brought clarity to me as to my role as “teacher” and “researcher”. My role was to prepare the groundwork and then to observe what occurred. I would accept whatever results emerged from the study as the reality, and not hang on to pre-conceived hopes or conclusions.

This shift in perception led me to understand the relationship between teaching and learning. Teaching is about learning from others, from mistakes, from the unknown and taking risks. There are risks to trying new strategies and activities. Teachers have individuals in their

care, not computers, and those individuals are constantly evolving. Students try on new personas to see if they fit, to see what feels natural to them. Only through trying on new character traits does a person realize who they are and who they are not. Teaching requires me to be in the moment, to read the situation at hand, and adapt my “plan” to the needs in front of me. This requires me to learn in the moment, to learn from the students: a parallel to the yogic belief of living in the moment. The only control we have is in the moment. This is true for me whether I am in the classroom teaching a subject, or working with a particular student, or instructing a yoga class. By taking a risk as a teacher, doing something outside of my own comfort zone, I learn from the experience, I discover what strategies are comfortable for my students and me, and I learn more intensely about the students.

Sarah’s Journey.

Sarah was one of the students whose own journey during this study shifted many times. At the beginning, Sarah was a willing participant who saw this time as a possibility of increasing her flexibility. Furthermore, she commented that it was nice to “have a break in the day.” Although Sarah participated throughout the sessions, I could tell that she wasn't putting all of her effort into the movements. Her eyes were often scanning around the room, checking out what others were accomplishing. During the relaxation time, she would let her eyes close, but peek around randomly.

Mid-way through the 16 week study, Sarah began sharing part of her personal story with me. She shared how she was an immigrant to Canada and how difficult the transition was on her and her family. When asked what she was hoping to get out of the yoga classes, she replied that she wanted “good exercises and time to think about some things.” Sarah began commenting on how proud she was that she could accomplish the movements and “keep up” with me pace-wise. She asked many questions during her journey about why we did particular movements or mudras

in class. Sarah wanted to understand everything and her journals were filled with questions for me.

During the last few sessions of our yoga classes, Sarah began relating the yoga to other experiences. She mentioned how “people too often judge people by looks and I still see racism and judge people by their culture” and how the yoga has helped her “to think before speaking.” A connection between thinking of the movement when in the midst of it and how it helped to achieve better results came through in her journal. In the last journal entry, Sarah thanked me for sharing techniques with her that would help to keep her “from judging people” before getting to know them and staying focused on what was really happening. Sarah often would relax so deeply during the rest period that her sister would have to jostle her awake. “I was surprised that this class was more deeper than I originally thought it would be.”

Jacob’ Journey.

Jacob came to the first class, threw down his mat and grumbled that he had to do this girly yoga because his mother signed the form. Being part of the leadership council from our school, he had a prominent role in the student population but was known to be more of a follower than a leader. Jacob actively watched what the other boys in the class were doing before he joined in. Often he would mimic their half attempts at the movements, such as bending his elbows, flapping his hands instead of keeping the arms straight and the hands still. Jacob's journal entries at the beginning were filled with unrelated comments, such as “I'm hungry, man ... I am itchy.”

As the movements and the breath techniques became more entwined, Jacob began responding with more intensity. He liked the challenge of including the breath of fire with a pose and commented that “it's complicated” to do it together. Jacob shared that he wanted to become more flexible for hockey. At this point Jacob wrote an entry that was completely fictitious. He

commented that one of his friends had mastered the poses, the same friend who sat through most poses doing nothing. “I think the fact that he's not concentrating helps him.” In the same entry, Jacob asked what Sat Nam meant and I used this to share with him that Sat Nam means “true identity” and questioned if his last comment was a true representation of his true identity, of speaking the truth. Jacob responded to my query with honesty and shared that he was trying to get me angry and that he was struggling to master all the poses when usually physical challenges came easily to him.

After this written exchange, Jacob became more inward during the yoga classes. He stopped scanning around the room for the behaviours of his peers. Jacob began relating how yoga was helping him with his flexibility in his “shoulders for basketball.” As well, he shared that his concentration during intense moments, such as a shoot off or a quiz, had improved as he wasn't “daydreaming” as much. Jacob commented that he had “underestimated the yoga classes” and the effect it might have on him, relating this realization to how his teammates often discounted him during games. When asked what his greatest accomplishment was during the 16 week study, he highlighted “succeeding in concentrating” and thanked me for the booklet of sets to do at home.

Teacher Themes

During the research period, I journaled after each yoga session to capture my thoughts as the researcher, as well as the instructor. Often after a yoga session, I would simply jot down key thoughts and return to these jot notes later in the evening when I had more time to expand upon them. Often the jot notes were on the photocopy of the kriya or meditation that was done, permitting me to associate the thought with a particular movement or mantra. Months later, I began rereading the data. As previously mentioned, themes evolved from my own writing and I highlighted them for clarity. The time between the research period and the data interpretation

provided an opportunity for me to distance myself from the emotional aspect of being “in” the experience, allowing for a “fresher” set of eyes to be used while interpreting the data. In time I was able to process my own learning through this research period and noted three themes: internal struggle, motivation and growth.

Internal Struggle.

The first theme that I noted was an internal struggle that was apparent throughout the process of my journal writing. I was unable to reach two girls who were not allowed to take part in the study. My job as an educator, to encourage students to extend themselves beyond their comfort zone, to take reasonable risks in their learning and thinking, felt like it had been taken away from me. Other than these two girls, the rest of the class participated. Towards the end of the study, a student wrote an entry that questioned the two students’ absence from the project:

If yoga is an exercise, not religious then why are two kids in the class not doing yoga because of their religion. Doesn't it bother you that they don't even give yoga a try.

Maybe they would realize that they might even enjoy it. They could probably figure out that it is exercises and stretches. They would only have to give it a chance.

I reflected on this entry in my own journal and noted that it was our second last class of the study when he wrote this entry.

Jim did an empathetic entry today. I wonder why it happened today that he brought up the girls and how it was strange that they didn’t try the yoga first before making their decision. This entry from a lad who was resistant to trying yoga at all. It seems that the first hurdle in this experiment is coming back as a reflection. A cyclical situation.

Besides the impact of the absence of these students from the project, other factors complicated the flow of the study. I found my role shifting frequently from that of the yoga teacher and facilitator to that of a classroom teacher when there was no other teacher in the

classroom. The lack of a permanent teacher affected me throughout the study, causing much internal struggle as my role.

A student who had been away for a while, came back to school today. It was interesting to see the power that one individual seems to possess or rather how others concern themselves with a change in the classroom. The dynamics were entirely different. I found myself having to walk around and redirect more than I would as a yoga instructor. The role of a disciplinarian is not one that I espouse in my yoga classes and I make that very clear when I teach kids.

I found myself uncomfortable with the dual role that I assumed in the yoga sessions, that of both yoga instructor and classroom teacher. The role of a yoga instructor is to encourage the energies of the participants to evolve as they will, yet I also had to keep in mind appropriate student behaviour and how that affected the other participants. As I embraced this ongoing internal struggle, I began to ponder whether my own learning was contingent on the belief that whatever happens in the yoga class is meant to happen and that I needed to accept it, in lieu of controlling the energies as I might when wearing the hat of the classroom teacher. "... It is about letting go of the control theory of research and just riding the wave, I suppose." Initially, this slowed down the progress of the research project.

This dual role continued and then became more difficult until we received word that the regular classroom teacher would not be returning. The permanent substitute teacher wasn't quite sure what his role was during our yoga classes, nor was I certain about the boundaries between the substitute teacher's role and my own. I knew the students and the material, and I was hesitant to step on the new teacher's "toes". This situation was not resolved until the last week of our yoga classes. This factor in the classroom dynamics was stressful for me, both as the researcher and as the yoga teacher.

The internal struggle felt during the study in correlation with the disruption in the learning environment resulted in a frustration with the situation. The loss of the classroom teacher resulted in the cancellation of external and correlated learning opportunities such as:

- 1) Through the podcast assignment, students were going to be able to record all they had learned pertinent to the study and post these findings onto the Internet, for others to learn from.
- 2) The “pen pal” exercise would have allowed the students to have personal communications with actual students in India.
- 3) For the celebratory meal, students would each have brought a different recipe, and each “pot luck” portion would have been presented as a dish at the celebratory meal. The celebratory meal had been intended to serve a dual purpose in itself: a) the students would be able to, in fact, celebrate their learning achievements throughout the project, and b) the meal would serve as a learning experience for parents and others to savour some of the tasty products from the Indus Valley. Finally the original intent had been to share the podcast produced by the students with parents and others at the celebratory meal.

However, all these correlated learning opportunities were cancelled due to the fact there was a lack of time, knowledge and comfort for the “permanent” substitute teacher to be able to plan and implement each of these components. Therefore, the students were only able to learn a limited portion of the intended learning outcomes, as they had originally been set. Other unfortunate results that came from the curtailment of learning activities include (but are not limited to):

- a) A disappointment experienced by the students and myself in not being able to achieve the full array of learning activities and to understand their correlation to one another.
- b) A disengagement from the actual learning taking place in the yoga sessions. Without an integrated understanding of where yoga fits in the lives of actual people in the Indus Valley, students only perceived the yoga sessions as “just yoga”.
- c) A lack of opportunity for students to learn and to share their knowledge with others.
- d) An inopportune cancellation of possible inspiration for future study by students on this particular subject, which has applications on the way life is lived.

As I wrote in my journal,

The yoga sessions stand out individually ... There is no continuation with their learning ... it seems very disjointed – which brings the possibility of the students questioning what the purpose of this is and why they are doing it.

I feel that the students' learning and exploration have been disjointed from the unit of study. The podcasts, pen pals and meal have been lost because the classroom teacher has not been here. I understand why there has been more resistance or verbal backlash in the journals as the students are trying to find the connection between the yoga experience and the rest of the unit. It is too vague for them. This was a huge risk for them to undertake and it is still a risk. They have to do movements that may be uncomfortable or risk failure in front of their peers. The sheer expectation that they try, when most of the students are not risk takers at all with their learning, is a hard one to meet.

As I wrote in my journal, “This is a class that has many students who are known to resist change. They have a particularly hard time with change of teacher, of type of instruction, and of routine.” The one consistency throughout the entire study was that I would be teaching them yoga classes and that there was an expectation of writing after the class. Toward the end of the yoga classes, the students began to write more in their journals and to participate more in the classes.

Motivation.

Alongside with the internal struggle I sensed, the theme of motivation became apparent in my journal writings. Apart from the challenges presented by the inconsistency of the teacher leadership, other challenges arose from the students themselves. Some students were not motivated to participate in the yoga classes. They appreciated not having regular classes, yet did not participate fully in the exercises, movements, journal-writing, and other assignments related to the research project.

Another teacher came in today to observe the class. She commented that it was incredible

to see how many students were unwilling to take the risk and try a new pose. They would rather sit there and not participate. I have begun to wonder how hard it must be for particular students to take risks and start something new, with the fear of judgment and teasing and with the influence of peer pressures.

I found it very difficult to motivate some students, and draining to watch them. I was acutely aware of how these students affected others. Yet these same students would provide probing questions in their journals for me to answer.

Growth.

Despite the overwhelming challenges, I perceived a strong sense of the growth in both the students and myself. The students' growth, as perceived through my journals, was evident in many areas: individual students, the instructor, and the class as a whole (when with the instructor). As the class became more efficient in setting up and in dismantling the classroom space at the beginning and end of each session, we saw instruction time expand. I found that the students became more comfortable in the setting, opening up an increased willingness to try new movements, take more risks, and laugh at their results.

It is incredible to see how some students rise to the challenge and try to keep pace with me. Today, we were sitting down and standing rapidly without using our hand. A few students ensured that I was aware that they were keeping pace with me. It was a challenge ... I was out of breath when we stopped. The kids had huge smiles and giggles on their faces.

The students embraced saying "Sat Nam", meaning "truth is my identity", at the end of each session:

The students are still saying Sat Nam at the end of the class. I am not certain if they have started to relate it to their lives. However, based on the science of the meridians, the sheer

fact that they are saying the words should have a positive effect on their brain chemistry.

As students felt more comfortable in the yoga sessions and with the movements, they began to focus more on the activities, on their movements and less on the peers around them. When I offered the students a yoga booklet of the kriyas that were done during the eight weeks, more than half the class requested it. This surprised me as some of the students who requested a booklet were the more resistant students during the sessions.

The personal growth I felt as the researcher was twofold. The first area was in surrendering to the qualitative nature of the study as it transpired. With all of the unexpected bumps, shortened classes, school trips, staffing changes, and removal of students from classes, it was necessary for me to truly embrace the theory of “going with the flow”.

Meditation is the most daunting experience here, because I find that it is the least controlled portion of the class. It is difficult for me to embark on it without taking a huge risk that the students may not follow the instructions or movements, and simply laugh through it. Perhaps that is the point ... experience is whatever happens in that moment.

Concern surrounding how the students would respond to the meditation left me hesitant to try a meditation within the first four sessions. Yet, as the students became more comfortable with the postures, and less resistant to trying new ones, I could not set aside this concern. Just as the students overcame their original hesitancy towards the yoga sessions, I set aside my own fear of taking a risk. I was concerned not only with the meditations but also with the journals. In response to a lack of journal entry after one particular session, I felt frustrated as I left the class. I later wrote:

I also feel that the journals are not as descriptive as I would like. Again, we come back to me not needing to control the situation but to let it unfold as it occurs. Observe and not judge – that is the challenge.

Incorporating time during which I would have reminded the students in the classroom

about the journaling would have perhaps helped this matter. However, my position in the school and the duties I was called to perform did not allow me to do so.

Besides the personal growth I felt as a researcher, I also identified growth within myself as a yoga teacher. It is recommended that teachers of yoga foster the ability to “be” in each moment as it evolves, to have a goal without permitting that goal to define the moment and limiting the possibilities. As both a yoga instructor and a classroom teacher, I worked with students “to increase or improve their present rate. It is the self-acceptance of where you are in this moment of time”.

Throughout the eight weeks of the research project, the time period students seemed to consider most sacred was the relaxation period. At the end of the kriya, five minutes or more were devoted to students relaxing on their backs with their eyes closed. By the second session, the relaxation portion was silent and none of the students interfered with another person’s personal time. The students’ journals truly voiced their disappointment if the relaxation time was shortened or interrupted by announcements.

During one yoga session, the students had a longer relaxation period of 11 minutes in the kriya, instead of the usual 5 minutes. I watched the class carefully during this relaxation period, noting that many fell asleep. Through their journals, students requested longer relaxation periods in the future classes, which made me wonder how much time we set aside to “allow students to have some actual quiet time in the day”. Students wrote that without the music playing, it was difficult to relax fully, even though my own vocal addition was appreciated. The need for quiet time continued to be prominent in the yoga sessions, and I wrote the following in my journal:

It makes me wonder how often they (the students) have an opportunity to quiet their mind – to simply be with themselves without any other expectation. In this world we are

constantly assessing situations, reflecting upon them and then having to respond. Are we teaching students how to reflect inwardly? To know where their limits are, how to recharge when necessary and continue onwards? Even as a child, I can remember quiet time in my day but I do not see that throughout this class' schedule. It is constantly going from one activity to another and perhaps that is why their own energy seems frenetic – the need to talk during silence.

They need to create ripples in the stillness of the day. Yet they completely relax and are silent for 5 minutes.

Student Themes

Once the yoga sessions had ended and the journal writing had been completed, the student data was typed and read in order to identify themes, patterns, differences and commonalities amongst the students' responses. As particular themes emerged for me, I formulated a chart to correlate each emergent theme and identify where it grew out of the students' journals.

The purpose of having students write journals was for personal reflection and to provide an opportunity for dialogue with me. Over the course of the eight weeks, students were provided prompting questions to initiate responses. Twice throughout the study, I wrote a personal reply to each student, based on each student's responses. In my response to the students I focused on some of the particular questions, challenges, or successes that the students shared earlier in the journal writing.

Physical self-awareness.

This was a fairly strong theme that jumped out from the student data. Kristy compared yoga to “a massage: painful while it happens, but feels so good afterwards.” Other students commented that they were surprised at how challenging the movements could be for their bodies. Ellen wrote: “I found this class challenging because my body wouldn't move the way I wanted it

to and I couldn't do some of the things we did today.” Pamela also found the stretches challenging, yet she found they sparked a desire within her to increase her flexibility. “I want to heal my body because I'm going to get weaker and weaker. I need some strength at the back.” Although Pamela did not want to participate at the beginning of the sessions, she needed to stretch her legs more “because I'm not used to stretching up my legs.” The students started to become aware of the connection between breath and their movements. Brian commented that he found it “hard to keep the movements going with the breath.” A few weeks later, he stated that he was able to move at the rate of his breath much more easily. After learning a particular breathing technique, Brett shared that he found the breath of fire technique “very interesting” and “complicated when you do the poses with it.” During an entry on the power of breath, Charlie shared that “you usually don't notice yourself breathing so it doesn't affect you. But if you are breathing in yoga, it really calms you down.” He also reflected that “the breathing is making me a lot more calm.”

As the sessions continued, students began to focus on their own development, while being aware of their own surroundings within the class structure. Using their peers' behaviour as a reflection pool, the students began to notice the overall shift in the classroom dynamics. As the students became more accustomed to the routine of the classes, there was a stillness that began to settle in the room. Susie noted that:

The most noticeable change to me is that less people (sometimes no people at all) giggle at the beginning of the class. Though there's still people not doing things they are asked to do or doing something goofy, I think the number has decreased.

Sarah stated that the “class is much more concentrated and quiet than the first class. People weren't used to tuning in and out but now some of the students are taking it well.” As the routine and the understanding of what to expect settled, the students participated more in the yoga

classes, including vocalizing the opening and closing mantras.

One of the most noticeable changes the students experienced was their awareness of the variation of the physical abilities that were needed. Charlie wanted to strengthen his knees, to help with his hockey. Charlie was excited when his knees touched the floor during the third session. He shared in a later entry that his “knees got a lot better because of the yoga techniques.” As we continued the sessions, Charlie commented “I feel more relaxed during yoga classes ... because it is quiet and still.”

Susie made the connection between her body's capacity to adapt at the beginning of the sessions and how her body was adapting to the movements as the sessions progressed. At the beginning of the sessions, she was unable to touch her feet. During the sixth session, Susie said she believed that her flexibility had increased, stating “Yeah, so reaching for feet exercise was fairly nice. Even though relaxation is supposed to be easy it was hard. Not to move and lay still is fairly harder than you think.”

Brett found that he was able to relax more quickly. “Yoga has helped me relax more. I feel a change in the muscle relaxation.” He wanted to do more difficult poses because they helped him fall asleep during the relaxation period. “I think the part where our hands were in the air for the whole time was the most challenging. Again, I fell asleep during the relaxing period. I’m surprised not all people did.” Brett also questioned why he experienced particular sensations during the class. After doing a particular pose, called "Ego buster", where the hands and arms are held at a 60 degree angle in the air while doing breath of fire, Brett asked why he had a tingling sensation in his fingers during the session. I explained that the tingling feeling was really energy being released by the body. Brett responded in his journal that “I like yoga but I think some of the stuff can be proven by science. Don’t get me wrong. It is fun, but I don’t believe in the whole energy thing.”

Later, Brett expanded upon his thoughts, “I think that the kick of blood going into your finger tips and then the sudden rush of blood can result in a tingling feeling.” This area of discussion continued throughout the remainder of the yoga sessions.

During the first session, the classroom teacher noticed that Calvin was very attuned to the yoga postures. During the fourth session, Calvin explained how the yoga sessions were affecting him, “Yoga is getting me more energized. Breath of fire is a good rush.” The next session, he commented that yoga “has helped my mood somewhat over the classes. It’s helping my posture and my sleeping habits a lot. I’m considering taking up yoga outside of school.” During the fifth session, Calvin appeared out of sorts. In his journal that day, he wrote, “I was very tired today. My nose was congested and I had a headache. Yoga seemed to fix that.” As we completed the yoga sessions, Calvin reflected in his journal that he was “rather impressed with my ability to do some of the harder stretches. I may continue to do some of the breathing exercises.”

Another aspect of this theme was the role yoga could play in other domains of their daily lives. For instance, students began to notice the inter-relationships between yoga and other activities in which they participated. Charlie mentioned that his hockey coach had encouraged him to do yoga more regularly, as it was increasing his flexibility. Jacob was definitely hoping to become more flexible in his shoulders “because in baseball I have a lot of wear and tear on my shoulder because of the repetitive motion.” Whereas, at the beginning of the sessions, Jacob underestimated the effect that yoga would have on his own body, he was now able to note that often in hockey, other players would underestimate what he was now capable of as he became more flexible.

Physical awareness is one of Gardner's multiple intelligences. Although Gardner has highlighted eight distinct intelligences, it is noted that there may be overlap in their usage. These intelligences or skills are not learned in isolation, rather they reinforce each other. Howard

Gardner stated:

Although they are not necessarily dependent on each other, these intelligences seldom operate in isolation. Every normal individual possesses varying degrees of each of these intelligences, but the ways in which intelligences combine and blend are as varied as the faces and the personalities of individuals.” (Howard Gardner, in a 1997 interview with Kathy Checkley, on-line) (Checkly,1997)

From the students’ entries in their journals it was clear that there is a direct relationship between the students' growth in physical flexibility and in the intrapersonal self awareness domain. When growth was noted in one area, the students became aware of change in the other domain.

One of the areas that became the topic of an ongoing conversation between the students and myself was how one's state of mind influenced the actual experience one would have of the yogic exercises. This dialogue stemmed out of our discussion on why we chant. The students were asked to attempt to erase the phrase “I can’t” from their thought process and to replace it with “I can”. Pamela shared that she was surprised by her results:

I misjudge myself because we are doing yoga I always say or think 'I can't do it' but sometimes I think 'I can do it' and well ... I can do it by trying it.

Pamela was one of the students who hesitated to attempt the yoga sessions, fearing that it would be difficult on her body.

Sarah and Susie were both surprised at how deeply these sessions affected them. When asked what she was hoping to gain out of the sessions for herself, Susie responded that she wanted to grow both “mentally and physically (and be a little more flexible...) ... and I need to focus more, but that's for me to work on.” Susie had stated earlier that having the strength for a yoga pose came from the ability to focus on the pose. As the classes continued, she was able to make a stronger connection with some of the more profound benefits of yoga. “Sure, everybody

knows yoga helps you with your flexibility and other physical things, but I think it also helps you with your mind. It gives you time to think through things more.” Originally, Sarah indicated that the primary benefit of yoga was an increased flexibility. Yet, as the time continued, she indicated that the classes were great for reflection time. “What I want from these classes are good exercise and time to think of some things. I like the meditation. I don't know if I'm supposed to think about nothing but I think about past things.” When asked to reflect back upon the entire journey, Sarah commented that her thoughts had changed from the original one:

I was surprised that this class was more deeper ... kind of yoga than some I saw while moving through TV channels. I learned some Sanskrit from tuning in. ... I got to know you through this yoga class and it was exciting to have a new teacher and get to talk to you. I will try not to judge people by looks. I learned this from this class and I think it'll help through times to come.

Susie and Sarah both shared with me later in the year that they missed the classes, as they were an opportunity for them to go inward and to think about things going on. Plus, they said it was one of the few times that the class was quiet, outside of exam and test times.

Intrapersonal Self Awareness.

Throughout the sessions, students were beginning to assess their own awareness of themselves and their emotions. Ellen shared how her moods had become more apparent to her:

I have noticed my mood shift during yoga class. I got really sleepy or energetic during today's session. Like for example, my friends and I were talking and giggling for nearly the whole class. I found it was easy (to do this session) but the slightest noise causes me to tense again.

Like Ellen, Missy had noticed her moods shift during the yoga sessions and shared that “at the beginning of class, I feel all tense and mad, but by the end of the class I feel different.” Trudy, as

well, shared that her moods had become more balanced.

My moods have relaxed, from tensed to calm and relaxed. My mood swings from unhappy to neutral to content to happy. It was less hard to relax than last time because I was still pretty nice and relaxed last class.

Trudy related how her mood affected her ability to relax during the last portion of the class. As she became more comfortable, she was able to rest during the last 5 minutes of class.

The journaling aspect of the yoga sessions became a place where Ellen was able to reflect upon her own past. As a new student to our school, Ellen had an opportunity, in a sense, to create a new beginning for herself socially. Through the journals she shared some of her mistakes from the past:

My worst mistake was when I stole something from Safeway and got banned for 5 years. I felt confused, sad and angry because of what I did. I learned that stealing is wrong and you can hurt people in the process. I got my friend grounded for a bit. Then, I was taken from my mom. But was it for the better or for the worse, ... I don't know.

Ellen found the yoga class to be an area of peace. By reflecting on her past, she was able to release some of the tension she had held onto for a long time. Ellen wrote that the meditation time had allowed her to touch the deep feeling of disappointment she experienced in regard to her parents.

I confronted disappointment when I learned I was being lied to by both my mom and dad. I didn't know who to believe at the time, and actually I still don't. The only people I could listen to were my friends. Yet with yoga, I could relax and have fun since I first moved to Winnipeg 2 years ago.

Ellen later verbally confided in me that she would appreciate having the opportunity to discuss her past experience more at length with me. However, because of the professional role I carried

as part of the student services team, I recommended that she contact our guidance teacher. Ellen did meet our guidance counsellor and continued to reflect upon her past experiences, discovering appropriate ways in which she might cope with the various emotions carried over from those previous incidents. Later that year, Ellen returned to the middle school and informed me that she had continued with yoga at home, and that it had helped her to "stay grounded in herself" whenever her emotions were flying high.

Sarah and Susie shared how moving to Canada was an enormous transition in their lives. As the journaling expanded, the girls were able to share how this life-changing experience of geographical relocation had affected them. Sarah commented that she "experienced new opportunities that (she) couldn't encounter in (her) homeland." Susie mentioned that she was quick to react and had a temper. Part of her reflection included some very mature thinking:

A few years ago, I sat down and thought about my actions. When you're a kid, you don't think things through before you do something or say something. So I sat down (or alone in the room) and thought about what I did and 'I didn't think about the consequences'.

Sometimes I still do make mistakes as in above, but it's, what I think, only way to learn.

Take a deep breath, relax for a bit and start again.

The yoga techniques of focusing on breathing and on the body were techniques that Susie tried to practice when she would get upset, rather than focusing on the emotions welling up inside at the moment. These techniques were ones that gave her a coping mechanism when she "couldn't walk away from the problem to cool off." Alicia shared that she noticed that "after I leave yoga I still feel calm and happy" and a sense of pride was evolving from what she was able to accomplish during the yoga sessions. Brett wrote that he was most surprised by "how relaxed I became" during the relaxation period. He also commented that he was impressed that he "managed to try and succeeded in doing the bow pose."

Calvin was aware of how the timing of the class affected his own response to the yoga classes. "I noticed yoga is tiring in the morning. I think it's better in the afternoon. I noticed I'm also paying more attention this time." As a reflection to the yogic experience, Calvin wrote that he found the classes to be a "very enlightening experience ... I was rather impressed with my ability do some of the harder stretches."

Ellen recounted how yoga could be used to deal with daily stress, although she didn't feel she was focused enough to reap all of the benefits. However, she was able to recognize a difference within herself since the yoga sessions began. "I noticed I began to relax until I heard something move. I also became energetic which doesn't happen often. I felt like a different person." Missy also shared that she noticed her moods changing throughout the class, from being angry and tense to finding a calmer state. Later, Missy shared that she "feels relaxed after we do yoga" and learned that she could be successful with difficult poses.

These moments of self awareness were evident throughout the journaling activity. The students were indeed developing a more sensitive and robust intrapersonal intelligence. The students began demonstrating more understanding of their own moods and desires, increasing their intrapersonal intelligence awareness. Susie shared that her awareness of her own judgment had broadened. "People too often judge people by looks and I still see racism and judge people by their culture. I think I often judge people too soon. You never know the whole story of them." Ellen began to realize what role she and others played in her own life. Furthermore, she reflected how this incident affected her present day.

Interpersonal Self Awareness.

The student journals also revealed another important reflective portion of the yoga experience, one that is critical in the development of any person's social behaviour. The theme of interpersonal intelligence began to surface more consciously and frequently in the reflections of

the students as the sessions progressed. Students were quite aware of the other participants in the class. They paid attention to others' emotions, temperament or intentions as they demonstrated their interpersonal intelligence. This was different from being aware of their own self-understanding and emotional state (self awareness). Peer relationships are important in how middle years students see themselves and judgments based on others' behaviours is commonplace. Alicia wrote that people often judge others based on the music they listen to or the way they dress. "I apparently look like someone who would listen to classical music, but I actually listen to heavy metal."

Calvin would talk to me outside of class about yoga. He often would have to be brought out of the meditation periods directly by a peer, as he would get "lost". Calvin shared in his journal:

A little while ago I was being a big jerk to a lot of good people. A good friend of mine sat me down and told me I needed to stop. If anyone else told me this, I wouldn't have given it any mind. I suppose yoga is doing this for my body.

During further reflection, Calvin shared that he noticed he had become calmer during the yoga sessions and that others had commented he was more sociable.

Ellen found that the class dynamics had changed throughout the sessions. She commented that at the beginning of the sessions there was a lot of giggling and fooling around. Ellen noted later that "I see many people because they are somewhat taking this seriously and I like to look up to them and take their example." Another student, Sarah, made note in her observations that Kristy was finding success in the yoga session:

I found Kristy does challenging poses. It's not that she does perfectly or does it for the full time but I always find Kristy trying to do the best she can do. She concentrates. Closes her eyes, no talking ... etc.. Maybe, the strength comes from not wasting energy

Sarah later commented that her ability to concentrate in the yoga sessions depended on which day of the week the session was held. “At yoga on Fridays – it is quieter – much quieter.” She also was surprised at the response of her peers. “Through this unit, I learned that our class is actually following instructions and participating more than I thought.” As this was a class that had a reputation for being unruly and was known for its need to develop social skills, Sarah's comment was surprising.

An administrator enjoyed walking the hall during our yoga classes, peering through the window at the door, and observing how focused this class could be. He would share his amazement with me around the students' composure whenever he got a chance. The science teacher who would often receive this group of students following a yoga session also made it a point to comment that the class was calmer and the students seemed more respectful to her and to one another. She even jokingly suggested that I teach a yoga session prior to the science exam at the end of the school year.

One of the more salient themes identified by the students in their journals was the effect of yoga on how they acted, i.e. how the yoga sessions affected them. The sheer realization that they were paying attention to their own reactions to what they were learning resulted in improvement in their behaviour. This was a highlight among all the results. Some of these students were perceived to be the “tough” kids of the school and some teachers dreaded seeing them come into the classroom. After the yoga sessions, comments were made by subject teachers that the students seemed to be more settled.

Parallel Themes

It was important for me to observe that, as the students were undergoing critical internal shifts, I was not immune to them either. I was able to observe a parallel growth and

metamorphosis taking place within myself, one I had not expected to occur. The change that was happening, within me and within the students, was one that was partially triggered by the new flexibility in body and spirit that yoga had enabled. In this section, I will be highlighting three major themes that developed amongst the students' and my own data. Each theme centers on the overriding subject of change and growth. The first theme focuses on the physical growth that occurred. Evidence of intrapersonal growth surfaced in both data sources as we journeyed through the study, shared and remarked on personal discoveries. The last prominent theme was interpersonal growth, as evidenced by the way in which the students and I began to notice differences in others and in the class in general.

Growth.

Since the theme of “growth” was so evident throughout the students' experiences and mine alike, it encourages us to look more closely at the variety of ways this common theme emerged so strongly. The students recorded their experiences in their journals: they were growing in their understanding of themselves. They were growing in the amount of physical flexibility they could attain, and they were growing in the way they could better accept and interpret the actions of others around them.

I was living my own parallel set of growth experiences. I grew as a teacher of yoga, gaining new insights into the depth of yogic wisdom and how it applies itself to the lives of people of all ages. I grew in my efforts to become a more effective researcher, delving into data that was often intangible and often immeasurable in terms of precise outcomes, discovering ways of presenting my findings more clearly. I could also attest to learning and developing new teaching skills in situations in which I had to expand my scope of responsibility. Throughout the study, I had to learn how to be more flexible in terms of how much control I thought was necessary for the class content to be covered. I had to become more flexible in allowing the

study to unfold in the way it would, naturally. My approach to research was evolving, right before my eyes.

These yoga classes were a new experience where the students and I were all exploring. They had embarked upon a new adventure. Of course, new adventures often carry chaotic moments of their own. For instance, no one could really establish what the final outcomes of the yoga sessions would turn out to be. Each student had a unique expectation, based on what s/he understood yoga to be. That fundamental notion would bring each student to “expect” a certain scenario to take place in the classroom.

From my standpoint as the yoga instructor, I also brought certain biases to the initial sessions. I had certain notions about what the class would look like, what the class dynamic would be like, and what the class participation would sound like, all based on past teaching experiences and my own experiences as a yoga student. However, due to the way this particular study evolved and, with its numerous peculiarities, we all had to throw our preconceptions out the window within the first month.

At first there was resistance from all parties as to what was occurring in the yoga sessions. Biases were evident and it was through the act of letting go of these preconceptions that individuals were able to accept the “new” reality. By this acceptance, there was the fertile ground for change to occur. This change and growth primarily developed in three main areas: physical, intrapersonal self awareness and interpersonal self awareness.

Physical growth.

The first parallel theme was physical growth. When first asked what they thought they might gain from the yoga classes, most of the students wanted to become more flexible. Physical stretching would lead to physical growth. These students were at an age when physical growth was a significant factor in their lives. Overall, the students did increase their capacity in physical

flexibility. As they grew more accustomed to the sessions, and as they were able to shed their concern about what others in the class might think of them during the exercises, the students began to focus inwardly on their own individual growth. This physical growth was an important success for the students to achieve. What resulted from this focused individual effort was that the tone of the classes changed. There was less commotion, less distracting noise, more cooperation, more opportunity for growth, as individuals and as a class group. From their viewpoint, the students were more prone to identifying their individual steps in physical growth as the salient gains. From my viewpoint as the instructor, I would point to the growth in self-reflection as the greater gains to emerge from the physical stretching exercises. As an instructor, I was able to develop a greater understanding of which poses might require adaptations or more explanation for the students.

Growth in Intrapersonal Self Awareness.

The second area of growth that emerged was within the intrapersonal domain - a person's self understanding. Some students observed they had grown in the mental and emotional domains of personal well-being. For some students, this type of growth was indeed unexpected. Sarah and Susie, for instance, treasured the opportunity to reflect on their individual transitions to life in Canada. Ellen was able to come to terms with troublesome parts of her past and investigate what steps she might be willing to take to move forward. The yoga sessions allowed the students some time to integrate the elements of their lives. They were able to integrate what they were doing in the yoga sessions, what was said during the classroom discussions, and their journal entries with their own life experiences. They could better contextualize and understand the various events in their personal lives, better see how these had shaped them as individuals up to that point in time, and what some options for the future might be.

I realized there was also an undercurrent of change happening within myself, as the yoga

instructor. I was also experiencing a shift in my role as the researcher. What accelerated the process within me was what I observed happening to the students. I could tell from their attitudes in the classroom, as well as from their journal entries, that not only had they come to the point of overcoming their resistance to change, but also that their willingness to step forward was allowing each one of them to discover themselves.

The yoga sessions also helped me to recognize that I had grown emotionally. I came to understand I needed to release the reins of perceived control over the process and speed of student growth. I came to understand that the students would grow in their own time, not according to my schedule.

Furthermore, the entire process of the qualitative study centered on being at ease in one's environment, allowing it to unfold naturally, and observing what occurs instead of attempting to control what and how that happens. As a researcher and a yoga instructor, "going with the flow" was imperative not only for the study to evolve naturally, but for my own development as well. I had been able to reconnect with a quotation I had learned while pursuing my education degree, a tenet expressed by Carl Jung: "Learn your theories as well as you can, but put them aside when you touch the miracle of the living" (<http://www.des.emory.edu/mfp/edquotes.html>). This particular quotation reminded me of the need to be open to the growth of the students, because growth was the path to true learning, not the instruction. It was necessary for me, both as a researcher and as a yoga teacher, to be able to release control of the situation. I had often heard my own yoga teacher say that, as an instructor, one is the conductor of the learning, but not the learning itself. The teacher is not the master of the information, for each student will interpret the information differently and uniquely for their own needs. I had to remove my ego from the situation in order to facilitate the truest opportunity for each student to grow.

Emotional growth also manifested itself in the willingness the students and I showed in

facing our own individual fears and uncertainties. As the students questioned and resisted participating in certain movements, I anxiously anticipated what their response would be when meditation would be introduced in the program. Each hesitation seemed to grow out of a fear of risk-taking, or a fear of losing control. In the stillness of meditation, I could not guarantee that each participant would be positively involved. Since meditation is a highly personal experience, growth would emerge if an environment for students to experience their own “moment” was created and honoured. Through the yoga sessions, students released their “status”, that is “where they were at” as they approached this new experience from a place of “unknowing”. During the yoga sessions, it did not matter whether someone was inclined toward sports, or whether someone was academically gifted, or whether someone preferred to play the role of the “class clown”. The focus was on the personal experience, not on which position someone held in the classroom hierarchy.

My growth and the growth of the students was intertwined. To bolster that sense of complete involvement, the students and I were all expected to make journal entries daily. This journaling task and responsibility provided a space for personal reflection and for self awareness. It allowed each individual, whether student or instructor, time to review personal beliefs held before a particular experience occurred, and how, in the light of that experience, those same beliefs could now be challenged, stretched, reinforced, or replaced by more enlightened thinking. During the time allotted for journaling, students were free from any peer pressure or judgment, there was no analysis of journal entries at that time nor were there any expectations regarding what information entries were to include. Students could write whatever they felt was important for them to write. Each writer was able to express himself/herself freely, vent, question, and share surprise without fear of reproach. It was an opportunity for students to “be at ease in the moment”. Students also enjoyed a parallel experience of “being in the moment” during the

relaxation period. As each student unveiled his/her thoughts in the journal, the process of “re-creating” one’s self was then translated into their actions later. Just as a child psychologist uses the drawings of young children to identify what their own beliefs are, the journals reflected the mindset of each participant. Some of the journal entries reflected how this mindset affected the behaviour of the writer later in the study.

One of my responsibilities as a teacher is to help students recognize where they are in their individual process of growth and development, and to help them to more clearly assess and accept themselves where they are in that process and at that moment. As a teacher, I want to help students better understand how each experience helps to shape who they are, and who they can become.

The students’ journals highlighted some rather strong moments of self awareness. Susie and Sarah described how their initial responses to people or situations had changed. Instead of immediately reacting to a new situation or to new information, they were now more ready to take time to think about what was happening, before taking action. Charlie recognized that he was feeling less constrained physically, that he was becoming more flexible, not only in his body but in his thought process, too. Calvin mentioned that his life seemed to be gaining momentum, and that this was displaying itself in better results in his grades, in the fact he now had a girlfriend, and in improved relationships with his friends. As the study evolved, so did the students. Their understanding of yoga and of themselves was undergoing some undeniable deepening. Of course, since each individual was unique, the pace or rate at which his / her understanding would unfold would appear in ways unique to that individual, and according to that individual’s needs.

At the same time as I was observing the gradual transitions happening in each of the students, I was also becoming acutely aware of my own transition during this study. I realized more and more that I too needed to live in the moment, as my yogic training had taught me to do.

I needed to let events occur (unfold) naturally. I consciously became engaged in the process of self awareness, as described by bell hooks (1994), and inscribed what I saw as my metamorphosis in my journals. I was concerned about taking self perceived “risks” with the students, especially during this time of instability that they were experiencing. Yet it was necessary for me to embark upon that adventure with them, not only for their benefit, but for my own as well.

My reflection brought me to the point where I could understand how my position in the school affected the way I perceived these students and the way the students perceived me. I was not one of their classroom teachers. I was more of an “outsider looking in”, and hearing their comments about the various teachers they had in their lives. Since the students did not know me as one of their subject teachers, they understood that I did not have any pre-conceived notions about who they were - as a class group or as individuals. They understood they had a “clean slate” to work from in their relationship with me, and it was up to them to present who they were to me.

I observed that my own self-confidence as a school teacher and as a yoga instructor had increased. I was able to share with the students what I had learned about myself. Having gained a clearer understanding of who I was, I saw areas in which I could attempt to create a stable, safe, and secure space for the students to have a new experience, one they could express freely, without having someone make judgments about them or the particular experience.

Growth in Interpersonal Self Awareness.

In the beginning of this study, there was a routine to learn, poses to teach and attempt, mantras to understand, and acceptance of these activities to be gained. As the project unfolded, the parties involved began to understand what they needed to do. Since there was an understanding, the unknowns were released and both parties were able to “be in the moment” and

allow the situation to evolve. The students began to overcome their resistance to change. They did so as individuals and as a group. Then it was my turn to adjust my expectations and teaching style, when necessary. Each of the parties, therefore, arrived at the point where they could overcome that resistance to change.

It is only in overcoming resistance that one opens doors through which one can then enter the various domains of growth. Through acceptance, personal growth can occur and the person may become aware of how the change has affected him/herself. This new understanding may affect a person's self concept and how s/he considers others and the actions of others.

Throughout this entire study, the students were keenly aware of one another. At that time of their lives, they make it their business to know which people they can befriend, which ones they don't like, which ones are most like them, and those they have nothing in common with. This yoga study was providing an environment that was different from the usual classroom environment and learning material. The yoga exercises and the journaling responsibilities were not familiar to this grouping of students. Since this particular class' strength was conversation, the teacher often used open dialogues and debates in lieu of journaling. The uniqueness of this yoga class caused the students to re-examine themselves in some instances, so as to regain that sense of comfort in participating in the group.

The space that comprised the area in which the yoga exercises took place was within a classroom, filled with filing cabinets, cupboards, white boards, desks, chairs, long tables, boxes and couches. Of course, desks and chairs were moved to the sides, in order to create space, so that individual yoga mats could be set on the floor. There was not much space between the yoga mats (only 12 centimeters). Therefore, the students had to cope with really tight quarters, which might have cramped the need that some students had for individual movement and personal space. Furthermore, being a social group by nature, this particular group of students constantly

wanted to discuss their individual reactions to the movements, resulting in continuous chatter among students in the room.

The majority of the students' journals reflected how much they appreciated the atmosphere of silence in which the exercises were performed, as well as the time allotted to relaxation. The students mentioned they had discovered a greater appreciation of the true essence of that relaxation period. When time was taken away from the relaxation period, the result was a written uproar in the journals.

As the students took notice of the way silence and relaxation had a positive effect on the group, they were also able to notice how other individuals in the group progressed. In some journals, students clearly made comments about the progress some of their classmates were making in the postures, noting who was doing what movement well and, when prompted, might even speculate around what that particular student was doing to reach a positive outcome. By observing what their peers were doing, each individual had his/her own "measuring stick" by which to judge their own abilities. As the class became more accustomed to the routine of the yoga sessions, the students started to indicate, through their actions as a group, what denoted acceptable behaviour. They were getting in touch with how their individual performances might affect others.

Just as the students were becoming more aware of the changes in their peers, I observed their changes through the eyes of the instructor. I needed to know what movements they were capable of doing, which movements would be the most effective in their learning, and what level each student was capable of, concerning particular movements. There was a particular kriya for each session and I was the one who chose the kriya that would be the most appropriate. However, in order for me to know which one to select, I needed to first ensure the students would be capable of doing all the related movements. I had to make sure the students could attain the

level of flexibility required in the postures. I could see how the students would react to a series of movements. Their level of ability provided feedback to me as the instructor. This feedback, in turn, revealed the students' level of comfort and commitment regarding each individual movement. The communication they gave me by their physical and verbal reactions to individual movements told me what I needed to know before introducing a meditation or a more advanced posture.

The self-confidence the students displayed more and more in their physical flexibility jumped from the floor mats to their individual journals. More and more, the journal entries revealed growing inner confidence. The students felt more comfortable in sharing their joys, their pains, their concerns, their observations of others, and their questions. They were starting to feel safe in talking with me about who they were, beyond the journal entries, even when we would meet in the hallway.

By better understanding the mood of a student or that of the class in general, I was learning what they needed in order to become motivated. I was discovering how to encourage them effectively during the session. It was the students who set the pace of the learning, just like in any classroom. I was fortunate to be able to identify what they needed by observing what they were communicating. My role was to respond to that need.

Overall Impressions.

At the start of this yoga study, I could only anticipate what might emerge as some parallel themes. I thought, for instance, that Gardner's Theory of Multiple Intelligences would be demonstrated throughout this study. The feedback from the classroom teacher was to be a major component of this study. Similarly, I hoped that each student might be able to write four paragraphs daily in his / her journal.

What I had not anticipated, however, is that the unforeseeable snags had an impact on the

entire yoga study. The prolonged absence of the regular classroom teacher required that I add that role to the others I was already performing in the study. In turn, these challenges forced me to take another look, a different view, of what was taking place in the yoga sessions and what adjustments needed to be made.

This particular yoga study had been designed to use a variety of “learning spokes” through which other information about yoga may have been discovered and processed. Due to the unforeseen snags that occurred, several “spokes” fell away from the central theme of the Indus Valley. We weren't able to pursue certain methods of learning the students might have found interesting.

I explored and investigated the students' yogic experience and their journals. This provided me with further insights about the various ways yoga can help students. The yoga exercises, the daily journaling tasks, and the on-going discussions that took place between the students and myself all proved to be rich veins of precious insights in this unique experience of yoga.

This study uncovered my eyes to the knowledge that I was an element in the parallel themes. My actions influenced those of the students and of the study. By discovering my own fears, struggles, and moments of growth, I was able to better see the students' own growth within the full context of the study. My own struggles of resisting risk, of struggling with internal fears and acknowledging moments of growths were reflected in the students' journals.

I discovered that students need to be ready to undertake personal risks. They would understand the possible results if they proceeded to explore what yoga could do for them. When they became open to taking risks, their individual efforts had a remarkable effect on the class group in general, and on the learning process itself. In analyzing each parallel theme, what emerged was that not only did yoga have a positive effect on individual students on a personal

level, but also that the positive experience of the individuals influenced the growth of the entire group.

Chapter 6 - Conclusion

The purpose of this study was to analyze whether regular practice of Kundalini yoga would have any effect on Grade Eight students, and in what ways. In this particular study, the students who were offered the opportunity to be participants were all in the same Grade Eight class at a middle school located in Winnipeg. Another intention was to provide students with the opportunity to remove themselves from academic expectations and focus internally. A third purpose was to learn about physical activity outside of the physical education class.

I believe the results that have emerged from this unique study have relevance not only for the particular group of students involved, but for Grade Eight students in other educational settings. Furthermore, I believe yoga can serve to help students at various academic levels improve their self-esteem and become more aware of themselves and the world around them. It was with this belief that I undertook this study.

The results that emerged exceeded the boundaries that had been set by the original expectations. Not only did the students grow but they experienced growth on many different levels, many of which were totally unexpected. In some areas students' growth was quite noticeable. One example of this more apparent type of growth is the area of students' physical abilities. In other areas, students' progress and development was less overtly visible as it was shared through students' journals, such as the individual intrapersonal discoveries.

Gardner's Intrapersonal and Interpersonal Awareness

One of the purposes of this study was to explore whether there might be a link between the practice of Kundalini yoga and the development of Gardner's interpersonal and intrapersonal intelligences in students. Throughout the study, individual students highlighted how the yoga sessions were providing time for them to reflect on themselves, on their day, and on the actions of others. Two students, Susie and Sarah, stated how they paused before reacting, and spent a

moment reflecting prior to choosing a response. The flexibility of the body was also connected to a greater flexibility of mind by Charlie. Students began seeing themselves in a different light. Ellen revisited a momentous event in her recent past, and was able to reflect on her role and how it affected others. The breathing techniques were helpful to students as they encountered quick stress, and were used to stay present in the moment, as Susie and Alicia shared. Students were finding other methods of coping with stress and were becoming more aware of their physical reaction to stress. Many students shared that the relaxing moments of yoga helped to release much of the stored tension from the day. Individual students noted through their journals how their intrapersonal understanding developed throughout these yoga sessions.

Students were also aware of how the Kundalini yoga sessions affected their interpersonal intelligence. Susie shared that she studied a person more before assuming what they meant when she was talking to someone. Jim attempted to understand the absence students' decision to remove themselves from the project while in the context of the class. Perceived successes of other students' yoga abilities were shared in the journals. Given the context of this study and the determined length of time, it is difficult to note whether the students began to further develop their interpersonal intelligence. Rather, it would be more accurate to state that students began to reformulate their judgment of others and to begin to be more attentive to their own interpersonal intelligence.

Awareness of Growth

While skills and abilities in physical flexibility clearly emerged as one of the major accomplishments for the students and for the group, something less visible and tangible was also taking place. The student journals and the instructor's journal all attest to a greater awareness of development on the level of interpersonal and intrapersonal intelligences.

Self-awareness was a central common theme throughout this yoga study, throughout the journal entries, and the conversations that ensued. Collins (1998) states that research on yoga has primarily focused on the positive outcomes achieved in the physical domain, yet little research has focused on the alterations in the domain of self-awareness and intuition. This may be due to the difficulty of quantifying the results, even though the changes in self-awareness, self-perception, and the perspective of others can be the most sustainable outcomes of a yoga practice. As the body shifts away from the “fight or flight” mode, the mind is encouraged through techniques and through the focus on movement control to center inwardly and to release its scanning of external sensations (Collins, 1998).

The students' journal entries also mentioned physical growth as one of the highlights in their yoga experience during the sessions. The ability to record their own physical progress and see positive results provided the students with the necessary feedback about their skill development. Slovacek, Tucker and Pantoja (2003) researched the effect of yoga on school-aged children. The results of their study included improved physical fitness, flexibility, upper body strength and aerobic capacity (Slovacek, Tucker & Pantoja, 2003). Alexander (2002) found that yoga classes allowed all students to be challenged and to enjoy physical activity.

While physical growth was a concrete measure of the benefit derived from the yoga class, there was plenty of growth in other areas as well, though perhaps at different individual rates. Each student could identify growth in the realm of self-discovery, in emotional understanding, and in becoming more aware of others. Slovacek, Tucker & Pantoja (2003) found a 20% improvement in how students felt about themselves, as a result of yoga sessions. When yoga was used in family treatment, in conjunction with existing medical treatment, improvements in self-esteem and a decrease in anxiety were noticed (Harrison et al., 2004). As one's level of anxiety decreases, one's awareness of one's own self and that of others can then take place.

Students were acutely aware of the behaviours, struggles and growth of one another during the yoga sessions. Once they accepted their peers around them, the students could then take notice of their individual self-awareness, and how their internal state affected their personal experience of the yoga sessions and the experience other students had. Susie shared that when she closed her eyes and just paid attention to her breathing, she was able “to notice changes in (her) body and let go of anger.” Calvin said that “the breathing is helping me think of one thing at a time.” Furthermore, the students could also notice how their internal state impacted their participation in other daily interactions. That dual awareness heightened the degree of change each individual sensed within himself / herself and in the group as a whole.

Dynamics of Change

Whether it was obviously visible or less so, whether it was individual or collective, change was happening. Each person participating in the study felt this dynamic in a very real way. Change was a major factor throughout the study and throughout the sessions themselves. Change manifested itself in the layout of the experiential unit, in the seemingly never-ending rotation of classroom teachers, in the dynamics of the individual students, in the dynamics taking place in the classroom, and in the mindsets of both the students and myself.

Change is an important aspect of life and one of the mantras for meditation highlighted this truth. As the students reflected upon a life experience where change occurred, they had an opportunity to recognize how that change affected them on a personal level. By connecting with the event and how it had affected them, the students sensed a growth within themselves. They recognized they are beings of change. As the students prepare to go into a new level of education, i.e. high school, change will also play a big role in their future.

Confronting and Overcoming Resistance to Change

This yoga study also underlined that resistance to change was a force that both the yoga

instructor and the students had to deal with directly, individually and as a group. The students' individual journal entries showed that change was a reality that would only take place if certain conditions were accepted by those involved. Hewitt indicates that in order to avoid rejection within a new experience, students will sometimes opt to reject the "teacher" (<http://www.behavioradvisor.com/TestingLimits.html>). In their journals, the students questioned me about particular movements, breathing techniques, and beliefs of yoga until they were comfortable with the sessions and a permanent substitute was assigned. Then more dialogue about how the yoga sessions were affecting them on a personal level began to unfold. Change was a constant reality in this study that affected every person on various levels.

Growth doesn't simply "happen". It occurs with much fostering, and shedding of old ways. When people are ready to enter the change process, growth will occur. However, before individuals or groups are ready to change, they must confront the realities of resistance to change, and then move on by overcoming that resistance.

In this particular study, the events that arose which caused resistance included a constant rotation of substitute teachers, an inconsistency in the amount of real time available for the yoga sessions due to the school schedule, a lack of continuity with the learning that was to be contributed by the classroom teacher, and a lack of follow-through with the extending activities. All these factors made their presence known as the study unfolded and affected the students' response.

In order to grow in a positive way, people desire a secure, stable environment, yet some of the greatest moments of growth evolve out of periods of chaos. A consistent environment was lacking around the element of time for the proper unfolding of this project. In the face of shifting factors surrounding this study, it was difficult to provide a consistent environment in which the students could stretch and expand. While the routine for the yoga sessions became well

established, the broader learning about the historical development and cultural effects of yoga with the Indus Valley did not occur, thus leaving the yoga sessions as the sole expression of experiential and reflective learning venues to which the students would be exposed. The entries the students inscribed in their journals and those I recorded in mine clearly voiced our common frustrations. Those same frustrations showed themselves as behavioural reactions within the yoga sessions themselves. Nevertheless, the students and the yoga teacher dug deep within themselves to find what they needed to overcome these resistance factors and allow new growth to occur.

Other Results

Whether the learning process is more individual in nature, or whether the learning that occurs applies to a group, the findings that emerge from studies in various domains can all serve to bolster what we know about the dynamics of learning. This study sheds new light on various aspects of learning, either by confirming the processes already identified in other studies, or by pointing to new dimensions in which learning can take place.

Effects on Kinesthetic Learning

One obvious result of this study is the importance yoga can play in the domain of kinesthetic learning. Every participating student commented on their expanded flexibility and how the yoga sessions had positively affected their physical abilities. The area of physical learning is generally entrusted to physical education teachers and it is a domain that rarely appears in other disciplines. This yoga study showed that the integration of the yoga experience during an English Language Arts class permitted the students to have an opportunity to do some physical movement outside the normal “physical education” class.

Brown (2002) published an article about seven unique public schools in New York. Due to budget cuts, these schools did not have any physical education teachers. As a means of

meeting (at least some of) the physical education curriculum outcomes, the regular classroom teachers were trained in the YogaEd program (Brown, 2002). The yoga sessions focused on the physical, mental and emotional aspects of the ancient art. Yoga became a part of the physical education curriculum, and was integrated into the daily class routine. For example, a yoga session would take place 10 minutes before a test would be administered. As physical education curricula move toward lifetime and lifestyle activities, yoga is an option teachers have and might consider. Brown (2002) indicated that parents have noticed changes in their children's emotional state at home as well, resulting in a calmer, more relaxed child in all activities.

For students who did not excel in the regular physical education class, due to a variety of reasons, these yoga sessions provided an opportunity to exercise their body in a different way and to gain flexibility. As the Ministry of Education contemplates how to incorporate daily physical movement in all grades, this study provides an example of how students can learn another facet of physical growth and strengthening.

There are some benefits to the adoption of yoga in schools. As yoga can be a low budget activity that can be done in a classroom as well as outdoors, the incorporation of this form of physical exercise would be ideal in a number of situations. Most often, schools already have mats that could be used. Gym space is an issue for schools, yet there may be an empty classroom or other space that could be used for yoga. Providing students with strategies for increasing their flexibility, no matter their body type, as well as drawing attention to their breathing techniques, may provide students with skills that could be used outside the school on a daily basis. These skills can be used to help with relaxation, and acknowledge the need for “quiet time”.

Furthermore, it is recognized that a person's learning capacity is enhanced in the measure that a person can “connect” to the activity at hand. When a person is engaged in a learning activity, that person's brain is releasing synapse connections. The more ways a person can

connect to a particular learning activity, the better. The greater the number of synapses occur in that person's brain during a learning activity, the more effective the learning becomes. With 30 billion synapses in the adolescent brain, the more connections that are made with the learning in a variety of methods, the greater the number of synapses communication take place, resulting in a stronger understanding of the learning. (Crawford, 2007, p.15) Even for babies, the greater the number of repetitive experiences that take place while engaging multiple facets of learning, the stronger the association to the learning the more engrained it will be in the brain. As the students were participating in the yoga sessions and in the journaling exercises, they were using their kinesthetic, linguistic, interpersonal and intrapersonal intelligences to learn. Their senses of touch, vision, and hearing were all engaged in the learning process.

Importance of Relaxation

This study also confirmed another "common-sense truth": the importance of relaxation in the process of growth and achievement. With each yoga class, a relaxation portion is done at the end to allow a time for integration of the experience with the body and/or mind. The students respected this time and remained completely silent, which allowed them to relax, to escape the pressures of the day, and to return to their inner core as individuals and as a group. Whenever class time was shortened, I insisted on making sure the class would still receive the benefits of the special place this relaxation time held in the entire process of experiencing yoga. That relaxation time was to be considered quasi-sacred.

The students requested more time for relaxation, as demonstrated through their journal entries. My own journal highlighted the importance of honouring the relaxation period, as well. Furthermore, other staff members voiced their positive reflections about the benefits they could observe as the students would leave the yoga session and proceed to their next class. As Zaichkowsky and Zaichkowsky (1984) noted, the relaxation techniques may be used in a variety

of situations and to deal with “real life” stressors.

As our culture and society continue to set a more and more hectic pace, it is becoming more and more necessary to establish a quiet time in the day for students and teachers, allowing them to have some “personal time” while still surrounded by others. In 2008, the National Summit on Student Health and Education in New York City focused on the importance of quiet time. During the conference, those in attendance received information and tips on how to derive the greatest benefit from transcendental meditation and on the “Quiet Time” program that has been established in numerous schools (<http://www.stressfreesummit.org/why-this-summit.html>). More and more the need for solitude within a busy life is becoming an overwhelming reality.

The Uniqueness of this Study

It is also important to note that this research was the first of its kind in Manitoba. Most previous studies have focused on Hatha yoga, and there has not been any research done on the effects of Kundalini yoga on school-aged children. While there is an increasing amount of literature on the effects of yoga on the lives of people, most of this literature focuses on the effects yoga has had on adults, and more specifically on the physical flexibility of adults. Only recently are school districts beginning to incorporate yoga programs into the physical education curriculum. Even then, however, the yoga programs only gain the recognition as “extracurricular” programs within the physical education curriculum. The findings from this study may inform new thinking about how we offer opportunities that promote physical well being as well as emotional growth.

For example, YogaEd develops wellness programs for parents, teachers, and schools to improve “academic achievement, physical fitness, emotional intelligence and stress management” (<http://www.yogaed.com/about.html>) and is being used in schools across the United States. The study I have undertaken provides documentation for teachers who would like to incorporate yoga

into the regular classroom. This study provides important data regarding the effect of yoga on the student population, specifically physical growth and in the areas of interpersonal and intrapersonal self awareness.

I am aware of only one elementary school that has incorporated yoga classes into its curriculum in my School Division. This attempt to introduce yoga into the classroom has been approved as part of a grant from the Government of Manitoba and has been in place for two years. Each grade level in that elementary school receives an hour of instruction from a yoga instructor per week, who adjusts the material to meet the needs of each grade level. The actual focus of the instruction is to provide education to the students on the art and importance of stretching and relaxation. Only three families withdrew their children from the instruction due to religious concerns. The instructor modified her program, entitled “Calm’n Sense”, in order to adapt it to the needs of children in an elementary school environment. As a YogaKids instructor and trainer, the yoga instructor applied her knowledge of yoga and of children to craft programs for each grade level. Overall, the yoga was a success. Students shared their progress with parents, who then shared positive feedback with the teachers and school staff. Staff state that the program has helped to provide relaxation techniques that they employ in the class at times. The school hopes to continue to receive funding to carry on with this program.

The study I have undertaken looks closely at the effects that Kundalini yoga can have on a middle school student population. For administrative personnel, teachers or parents who are interested in the effects of yoga on a middle school student, this study provides some documentation for them to consider. Besides offering many unique insights around the effects of yoga on students, this study also investigates the personal growth of the yoga instructor. Hence, this study provides insights to professionals around the vagaries involved in providing yogic experiences in a classroom setting. Finally, this study also offers insights into other factors that

merit consideration whenever such a program is introduced into the classroom, such as the effects derived directly from school-related realities like student withdrawal and the inconsistency of classroom teacher presence.

As both an educator in the school system and a yoga instructor, the realization of the indeterminate nature of teaching kept surfacing. No matter how well planned I was, I could not foresee other factors, nor control the other direct members of the study (the students) or the indirect forces (substitutes, other members of the school). When I tried to remain on the course that had been percolating in my mind, the result was tension and frustration. Nothing was working the “way it was supposed to”, yet later I realized that everything was unfolding in its own way. I just needed to let go of the “plan”. Planning is always set aside when entering a classroom: it can be a guide but teachers negotiate and adapt plans instantly to address the needs of the students. Nothing is pre-determined in teaching, nor is it in research. But teaching in the moment is possible whether in the classroom or in a yoga session. As a researcher, letting the moment unfold as it will without directing it can be as challenging as teaching in the moment. All the time spent on plans and preparation becomes secondary to the learning that is occurring in that moment.

If we consider that the ever-growing adolescent mind is active and constantly developing, we will admit that it is vital for students to have the opportunity to interact with their learning in a variety of ways. Furthermore, we know the adolescent mind is stimulated by the emotional association it has to the adolescent's learning (Wolfe, 2001). As the yoga sessions progressed, and as the students became more familiar with the movements and the routine of the class, their minds could begin to contemplate other facets of the learning, such as becoming more aware of their own personal emotional needs, and better understanding how their own behaviours influenced particular life experiences. When the students questioned me as to why we were

doing particular movements, or demonstrated a specific emotion attached to the experience, they were in fact dissecting, analyzing and re-arranging their own understanding of the experience.

Recommendations Emerging from this Study

The purpose of this study was to explore the effect of Kundalini yoga on one particular grade-eight class in a neighbourhood. Educators who read this study may discover a direct correlation to their own teaching story. Looking at the findings that emerged from this unique study, it is also obvious that further study could and should be undertaken in this area, in a different classroom, in order to provide a reasonable comparison to the results analyzed here.

Other recommendations around further study on this topic include framing the study within an entire term, or within an entire school year. In that way, more comprehensive analysis would add considerably more information to the literature that could help similar studies in the future. Since this current study only spanned a portion of one term of schooling, it does not reflect everything that could be uncovered, discovered, or recovered over a year-long study. Therefore, this study should not be used as a comparative in such projects.

It would also be positive to complete a follow up study on the students who participated in this study after a passage of some time. The intent would be to see whether or not the effects of the study were lasting. It would also be interesting to note whether the students themselves sought out yoga as a personal interest activity.

I also recommend that any future study be integrated with other subject areas, such as physical education, English Language Arts, Health, and Science. The numerous cross-over effects of this study indicate that students might develop a significantly improved appreciation of other aspects of those programs, due to the success they experienced in the yoga sessions. Real learning is situated in real life.

Finally, any further study around the analysis of the effects of yoga on students would

markedly benefit from a strong integration with the student services department of the school. A more collegial relationship would build on the community learning in the school, provide more immediate and direct feedback to the rest of the teaching staff in the school, and provide more support for students who discover they want to reflect more seriously on events happening in their own lives.

References

- Alexander, K. (2002). Yoga at school poses a learning opportunity. Classroom Teachers note calming effect, better concentration among their students. *Los Angeles Times*, 28 April 2002.
- Baker, L. (2001). *Quiet time: An environment for school success*. Retrieved July 7, 2005, from Yale New Haven Teachers Institute. Web site: www.yale.edu/ynhti/curriculum/units/2001/6/01.06.06.x.html
- Bernet, M. (1997). *Emotional health, emotional intelligence, and physical health*. Retrieved June 18, 2005, from Institute for Somat Awareness. Web site: <http://somats.com/epa1997.htm>
- Bhajan, Y. (2003). *The aquarian teacher™: KRI international kundalini yoga teacher training level 1 textbook and manual*. New Mexico: Kundalini Research Institute.
- Bijlani, R. L. (2004). Influence of yoga on brain and behaviour: facts and speculations. *Indian Journal of Physiology and Pharmacology*, 48(1), 1-5.
- Brosnan, B. (1982). *Yoga for handicapped people*. London: Souvenir Press.
- Brown, P. L. (2002, March 24). Latest way to cut grade school stress: yoga. *New York Times*. Retrieved from <http://www.nytimes.com>
- Buvinic, M. & Morrison, A. (2000). Living in a more violent world. *Foreign Policy*, 118, 58-72. doi:10.2307/1149670
- Caine, G., Caine, R. N., McClintic, C., & Klimek, K. (2005). *12 brain/mind learning principles in action*. Thousand Oaks, CA: Corwin Press.
- Canadian Government of Depository Services Program (1993). *Citizen Education in Canada*. (BP-326E). Ottawa, Ontario: McKenzie, Helen. Retrieved January 21, 2011 from [http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/BP/bp326-e.htm#ASPECTS OF CITIZENSHIP EDUCATION\(txt\)](http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/BP/bp326-e.htm#ASPECTS OF CITIZENSHIP EDUCATION(txt)).
- Checkley, K. (1997). The first seven...and the eighth - a conversation with Howard Gardner. *Educational Leadership* (on-line), 55,1. Available: <http://odie.ascd.org/pubs/el/sept97/gardnerc.html>
- Collins C (1998). Yoga: intuition, preventive medicine and treatment. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 27(5), 563-568. doi: 10.1111/j.1552-6909.1998.tb02623
- Crawford, G. B. (2007). *Brain based teaching with adolescent learning in mind*. Thousand Oaks, CA: Corwin Press.

- Gardner, H. (1983). *Frames of mind: the theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (1999). *Intelligence Reframed: Multiple Intelligences for the 21st Century*. New York: Basic Books
- Gardner, H. & Hatch, T. (1989). Multiple intelligences go to school: educational implications of the theory of multiple intelligences. *Educational Researcher*, 18(8), 4-10.
[doi:10.2307/1176460](https://doi.org/10.2307/1176460)
- Getz, H., LaBahn, J. & Regan, K. (1999). Social skills and the junior high school student. *Dissertation/Theses*. (ERIC document reproduction service ED434297).
- Greene, Maxine (2000). Imagining futures: the public school and possibility. *Journal of Curriculum Studies*, 32(2), 267-280. [doi:10.1080/002202700182754](https://doi.org/10.1080/002202700182754)
- Harrison, L. J., Manocha, R., & Rubia, K. (2004). Sahaja yoga meditation as a family treatment for children with attention deficit-hyperactivity disorder. *Clinical Child Psychology and Psychiatry*, 9, 479-497. [doi: 10.1177/1359104504046155](https://doi.org/10.1177/1359104504046155)
- Herzog H., Lele, V.R., Kuwert, T., Langen K.J., Rota Kops, E., & Feinendegen, L.E. (1991). Changed pattern of regional glucose metabolism during yoga meditative relaxation. *Neuropsychobiology*, 23(4), 182-187. [doi:10.1159/000119450](https://doi.org/10.1159/000119450)
- Hewitt, M. B. (2000). After testing the limits: active resistance. *CHOICES*, 2, 15-18. Retrieved from <http://www.behavioradvisor.com/TestingLimits.html>
- Hoepfl, M. C. (1997). Choosing Qualitative Research: A Primer for Technology Education Researchers. *Journal of Technology Education*, 9(1), 47-63.
- hooks, b. (1994). *Teaching to Transgress*. Routledge: New York.
- Hopkins, J. T. & Hopkins, L. J. (1979). A study of yoga and concentration. *Academic Therapy*, 14(3), 341-345.
- Holloway, I. & Todres, L. (2007). Thinking differently: challenges in qualitative research. *International Journal of Qualitative Studies on Health and Well-being*, 2, 12-18.
[doi: 10.1080/17482620701195162](https://doi.org/10.1080/17482620701195162)
- Jensen, P. S. & Kenny, D. T. (2004). The effects of yoga on the attention and behavior of boys with Attention-Deficit/hyperactivity Disorder (ADHD). *Journal of Attention Disorders*, 7(4), 205-216. doi: [10.1177/108705470400700403](https://doi.org/10.1177/108705470400700403)
- Khalsa, G. K. & Maxwell, A.M. (1989). *Sexuality and spirituality with the kundalini yoga sets and meditations of Yogi Bhajan*. Coronado: Yoga Technology Press.

- Khalsa, G. D. S. & O'Keeffe, D. (2002). *The kundalini yoga experience: bringing body, mind and spirit together*. New York: Simon & Schuster.
- Khalsa, S. P. K. (1996). *Kundalini yoga: The flow of eternal power*. New York: A Pedigree Book.
- Khalsa, D.S. & Stauth, C. (2001) *Meditation as medicine: Activate the power of your natural healing force*. Toronto: Pocket Books.
- Lalvani, V. (1999). *Classic yoga for stress relief*. New York: Sterling Publishing Co., Inc.
- Lazar, S., Bush, G., Gollub, R., Fricchione, G., Khalsa, G. & Benson, H. (2000). Functional brain mapping of the relaxation response and meditation. *NeuroReport*, 11(7), 1581-1585. doi:10.1097/00001756-200005150-00041
- Malterud, K. (2001). Qualitative research: standards, challenges, and guidelines. *Lancet*, 358, 483-488. doi:10.1016/S0140-6736(01)05627-6
- McMillan, J. H. (2004). *Educational research: fundamentals for the consumer (4th ed.)*. New York: Pearson.
- Murphy, J. (2008). *Move the body, stretch the mind*. Edmonton: Windsound Learning Society.
- Ness, C. M., & Ness, A. E. (2003). Can you hear me? Are you listening? *Reclaiming Children and Youth*, 11(4), 200-202. (ERIC Document Reproduction Service EJ662367).
- Palmar, P. (1999). Evoking the spirit in the public education. *Educational Leadership*: 56(4), 6-11. Retrieved November 27, 2004 from EBSCO publishing.
[http://proxy2.lib.umanitoba.ca/login?](http://proxy2.lib.umanitoba.ca/login?http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=1383459&site=ehost-)
<http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=1383459&site=ehost->
- Peck, H. L., Kehle, T. J., Bray, M. A. & Theodore, L. A. (2005). Research to Practice: Yoga as an intervention for children with attention problems. *School Psychology Review*, 34(3), 415-424.
- Quiet time in the classroom: National summit on student health and education (n. d.). Retrieved September 12, 2008, from <http://www.stressfreesummit.org/>
- Roots of Empathy (n.d.). Retrieved June 24, 2006, from <http://www.rootsofempathy.org/ProgDesc.html>
- Rozman, Deborah (1994). *Meditating with children: The art of concentration and centering, revised edition*. California: Planetary Publications. (ERIC Document Reproduction Service ED412473).
- Seamon, J. G., & Kenrick, D. T. (1994). *Psychology*. New Jersey: Prentice Hall.

- Seiler, G. & Renshaw, K. (1978). Yoga for kids. *Elementary School Guidance and Counseling*, 12(4), 229-238. (ERIC Document Reproduction Service EJ181028).
- Sharma, V.K. Das, S., Mondal, S., Goswami, U., & Gandhi, A. (2005). Effect of sahaj yoga on depressive disorders. *Indian Journal of Physiology and Pharmacology*, 49 (4), 462-468.
- Slovacek, S., Tucker, S. & Pantoja, L. (2003). A study of the yoga ed program at the accelerated school. Retrieved from June 18, 2005 from *Program Evaluation and Research Collaboration*. Web site: www.calstantela.edu/academic/ccoe/c_perc/c_perc
- Stroebel, C. F., Stroebel, E. L., Holland, M. (1980). *Kiddie QR*. Weathersfield, Conn.: QR Institute.
- Stueck, M. & Gloeckner, N. (2005). Yoga for children in the mirror of the science: working spectrum and practice fields of the Training of Relaxation with Elements of Yoga for Children. *Early Child Development and Care*, 175 (4), 371-377.
[doi: 10.1080/0300443042000230537](https://doi.org/10.1080/0300443042000230537)
- Stukin, S. (2001) Om schooling: As these innovative educators have discovered, assigning yoga to kids can improve test scores and reduce disruptive behavior. *Yoga Journal* (November): 88-93, 151-153.
- Taylor, S.E., Klein, L.C., Lewis, B.P., Gruenewald, T.L., Gurung, R.A.R., & Updegraff, J.A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review*, 107, 411-429. [doi:10.1037/0033-295X.107.3.411](https://doi.org/10.1037/0033-295X.107.3.411)
- Toby, Jackson (1983). Violence in school. *Crime and Justice*, 4, 1-47. [doi:10.1086/449085](https://doi.org/10.1086/449085)
- Tummers, N. (2005). Yoga for your students. *Strategies: A Journal for Physical and Sport Educators*, 19(2), 35-37.
- Wenig, M (1999, March). Yoga for kids. [Electronic version] *Yoga Journal*. Retrieved June 18, 2005, from http://www.yogajournal.com/practice/210_1.cfm .
- Westheimer, J. (1995). Sketching Community in Schools: Uncertain Lessons for Policy and Practice. *Annual Meeting of the American Educational Research Association*, San Francisco, CA. Retrieved from www.eric.ed.gov/ED390169.
- Wolfe, P. (2001). *Brain matters: Translating research into classroom practice*. Alexandria, VA: ASCD.
- Yadav, R. K., Ray, R. B., Vempati, R. & Bijlani, R. L. (2005). Effect of a comprehensive yoga-based lifestyle modification program on lipid peroxidation. *Indian Journal of Physiology and Pharmacology*, 49(3), 358-362.

Yoga Ed. (2005). *About YogaEd.*. Retrieved October, 12, 2005, from the YogaEd website:
<http://www.yogaed.com/about.html>

Young, J & Levin, B (2002). *Understanding Canadian schools*. Toronto: Nelson.

Zaichkowsky, L. B. & Zaichkowsky, L.D. (1984). The effects of a school-based relaxation training program on fourth grade children. *Journal of Clinical Child Psychology*, 13(1), 81-85. [doi:10.1207/s15374424jccp1301_13](https://doi.org/10.1207/s15374424jccp1301_13)

Zipkin, D. (1985). Relaxation techniques for handicapped children: A review of literature. *The Journal of Special Education*, 19(3), 283-289. [doi: 10.1177/002246698501900305](https://doi.org/10.1177/002246698501900305)

Appendices**Appendix A**

Tune in Mantra

ONG NAMO GURU DEV NAMO

Calls on the creative forces within us and the creative forces of the Universe to guide us as we begin our yogic journey.

Appendix B

Basic Spinal Energy Series (copyright Yogi Bhajan 2003)

Tune in

Sitting cross-legged (easy pose), relax your hands on knees. Bring your shoulders up toward your ears and let them drop gently down and back, sitting tall. Your head will be in a neutral position so that your chin is parallel with the floor. Close your eyes and slowly inhale through your nose. Now slowly exhale through your nose. Try inhaling for a count of 4 and exhaling for a count of 4.

(Long Deep Breathing for 3 minutes)

Kriya

1) Sit in easy pose. Grab the ankles with both hands and deeply inhale. Flex the spine forward and lift the chest up as you inhale. On your exhale, flex the spine backwards on your sit bones. Keep the head level so it doesn't "flip flop". Close the eyes. Your breath determines the pace of the movement while your heart leads the movement. 3 minutes

Rest for 1 minute

2) Sit on heels. Place the hands flat on the thighs. Flex the spine forward with the inhale, similar to the first position. With your exhale, flex the spine backwards with the exhale. Close your eyes and let your breath control the movement. 3 minutes

Rest for 2 minutes

3) In easy poses, grasp the shoulders with fingers in front, thumbs in back. Inhale and twist to the left, exhale and twist to the right. Breathe long and deep and close the eyes. Continue 26 times. Inhale center (forward). 2 minutes

Rest for 1 minute

4) Bring your left hand in front of the heart with the palm facing out. Take your right hand, with the palm facing in, and curl your fingers together in front of the heart center. This is bear grip. We are going to move our elbows while keeping our fingers together. As you inhale, lift your left elbow up and right elbow down. As you exhale, the right elbow goes up and the left elbow comes down. Breathe long and deep, closing the eyes. Continue for 26 times. Inhale center, exhale and pull on the hand grip (keeping the fingers together). 2 minutes

Rest for 30 seconds

5) In easy pose, let your hands fall on your knees. Your elbows are straight during this exercise so your hands may move. Begin flexing your spine again. Flex the spine forward and lift the chest up as you inhale. On your exhale, flex the spine backwards on your sit bones. Keep the head level so it doesn't "flip flop". Close the eyes. Your breath determines the pace of the movement while your heart leads the movement. 3 minutes

Rest 1 minute

6) In easy pose, bring both shoulders up towards your ears as you inhale. As you exhale drop your shoulders down. Close your eyes. Continue this motion with your breath. 1 minute 45 seconds. Inhale up and hold (15 seconds) – exhale and relax.

7) Roll your neck slowly to the right 5 times. After 5 times, roll your neck slowly to the left. Breathe long and deep. When you are finished, please bring your neck up to the neutral position. 4 minutes

8) Lock fingers in bear grip at the throat level. Inhale. Now hold your breath and slightly pull on your grip (keeping the fingers together). Exhale, relaxing your hand tension. Now hold again and pull again slightly on the grip. Inhale and raise the hands above the head. Hold the breath and pull slightly. Exhale and relax. Hold & pull grip slightly. Inhale and bring hands down to heart center again. (repeat cycle 3 times in total) 3 minutes.

9) Meditation – Sat Kriya

Sit on your heels with arms stretched over your head. Interlock your fingers except for your index fingers which point straight up. Eyes will be closed. We will say "Sat" (pronounced "sut") as we pull in the navel point and "nam" as we relax the navel point. ("Sat nam", rhyming with "but mom", meaning "truth is my identity") We will continue together with a steady rhythm. 3 minutes. Inhale – hold the position. Hold the breath and take the energy from the base of the spine and push it up the spine ... up through the heart, the throat, the head and out of the finger tips. Exhale and relax.

10) Come. Lying down on your back. Your feet should be separated about 15-30 cms. Hands are relaxed at your sides, palms facing up. Close the eyes and try to fall asleep. Let your body use the energy that was created to heal itself. 10 minutes

11) Inhale deeply. Exhale completely. Grab your knees and hug them to your chest. Rock 2 or

3 times on your back from tailbone to neck before slowly bringing yourself up into easy pose.

Tune out

**** Times are to be adjusted to meet the class format.

Appendix C

Tune out Mantra

Long Sun Shine Song

May the long time sun shine upon you

All love surround you

And the pure light within you

Guide your way on

May the long time sun shine upon you

All love surround you

And the pure light within you

Guide your way on

Guide your way on

Guide your way on

+++++

SAT NAM

(true name, true identity)

Appendix D

General Student Prompts

January 21st/08

What thoughts did you have about this lesson? (preconceptions)

Were these ideas confirmed or how did they differ?

What are your thoughts about the similarities or differences?

January 23rd/08

What was new in this particular yoga class? How would you compare the two classes? Did you find this class more challenging, relaxing, focused, etc? How so?

January 24th/08

What did you notice about yourself this time? Did you see any changes? Be specific and descriptive. If you have any questions about what we have done, please ask.

January 31st/08

Wake up and get moving in the morning (kryia)

What thoughts might have floated through your mind during the set? Do you think they have changed since the first class? How so?

February 1st/08

Have you noticed your mood shift during yoga class? Provide some examples or details. Look through your journal to answer the questions asked. How easy or how hard (difficult) was it to relax?

February 11th/08

Many celebrities use yoga to promote stress reduction, tone the core muscles, and develop single still point needed to focus clearly. How do you think that yoga might help you in your life outside of school? Do you feel that you are capable and ready to do a longer and more focused meditation? Do you have any questions?

February 14th/08

Today's set attracts positive opportunities to each participant if s/he is open to receiving it. Was there a movement that challenged you or that was easy for you? Are you surprised by your response to the set? How so? Are you surprised by anybody else's response? How so?

February 19th/08

Over the last few weeks, you have done over 25 different poses. Is there someone in the class who seems to be able to master a more challenging pose (even if it isn't the full time)? What do you think they do (physically or mentally) to master the pose? What strength do you think they might have that helps them do the pose?

February 26th/08 personal reflection

Feb. 27/08

Suyra Kryia

I'll go the distance for each of you and as a whole class because I see and believe in the truth within you and in your essential goodness. I'm not here to manage or cater to loud negative personalities, nor the belief that it's cool to be rude or disrespectful. Neither of these serve you, it doesn't serve the people in your life (whether you choose them to be there or not) or the global community. I'm here to invest in you and in this community. You are the future. In 5 years the world will shift dramatically and you will be leading it. Go through this experience with respect – for me, for your peers, for these teachings and most importantly for yourself. Be truthful and honest with yourself.

What do you want out of these classes? What is your response? This is an open dialogue, please use it to express your true opinion and thought. What are you learning about yourself on a deeper level? Is there something that I can help you with or be a soundboard for some thoughts rambling through your mind? There are no negative consequences for expressing your thoughts if they are respectful and honest. Embody the meaning of SAT NAM ... truth is my identity.

March 3rd/08

Basic series

Today we repeated the first yoga set that you were introduced to at the beginning of this part of your class. Reflect back to your first yoga class (whether it was the 1st class one or a later one) and compare and contrast it with today's class. What is the same as the first class? What are some differences that you notice (within yourself, of your peers, and of the environment) Some questions to consider may be:

- what was your first opinions?
- Have those first perceptions changes over time or have they remained the same?
- What would you have rated your response to the first class? How would you rate today response? Why did you rate them in that way?
- Has you body's flexibility shifted over time?

March 5th/08

Stretch in the Morning Kryia

One of the reasons that we do physical poses in yoga is to help “burn” some energy. You have probably been told by others to go outside and burn off some energy by family members when you were younger. By using this energy to move through the poses, a person is generally able to then focus more directly during a meditation. The body is more willing to sit for a period of time after having been through some exercise. Since one of the purposes of meditation is simply to find a “still point” in yourself, a quiet focus place, it helps when your body isn’t jittery. Meditation doesn’t mean that your thoughts will stop or that you won’t be aware of the sounds around you. It simply means that you are trying to focus on the moment, instead of the next second, minute, task or hour.

Sometimes there are yoga poses that are challenging to a person. Other times, it is the meditation time. Which part of the yoga session is the most difficult for you? Why do you think this is a challenging part for you? Be specific and descriptive please.

March 6th/08 ...

Set: Connecting physical and universe reality

Life is about change. Change is not something that we can control. The earth spins without any human control the season change, and the clouds shift. Yet we like to have control of change ... we like to resist change. Transitions of any sort are difficult – different school, class, moving houses or cities, growing taller or one’s friends changing. Even a new haircut or a new teacher is sometimes hard to accept and get used to.

The mantra – SA TA NA MA – is all about change. It means: birth, life, transition, and rebirth. It is the cycle of life ... a seed, growth of the stem and roots, flower blooming and then returning to a seed for the winter. Going to a new school is a similar situation:

SA = entering into the grade 6 class, fear of the unknown, anxiety, excitement.

TA = the entire grade six year – busy, moments of joy and anger, shifts in emotion

NA = the end of grade 6 and exams or projects, anxiety, fear, stressed

MA = end of year reports and realization that next year is grade 7, excitement, realization that you know the routine, new peers in classes, new teachers, sense of comfort though

Think of a time when you have gone through a transition – a new sports team, a move, a loss of a family member (including pet), a new experience – and break it down into the SA TA NA MA description or feel free to discuss something else with me personally.

March 11th, 2008

Please choose one of the topics to write a detailed response to & circle it. Your entry should be at least 5 sentences long and express your true thought in its entirety. If none of the topics attract you, please feel free to talk about something of interest.

Topics:

Tell about an event in your life that has caused a change in you.

If I were the yoga instructor, I would...

I was most angry when... and I solved it positively by ...

My worst mistake was ... and I felt ... I learned ...

If you were an insect, what kind would you be and why

March 12, 2008

Choose one of the choices below to respond to in a descriptive, expressive paragraph (of at least 5 sentences) communicating what you truly think. Relate your thoughts to this yogic experience.

- 1) People often say “Don’t judge a book by its cover.” Describe a time when you misjudged someone based on his/her appearance or when someone misjudged you. (apply it to the yoga experience).
- 2) The way a person handles disappointment reveals a great deal about what is important to him/her. Tell about a time in your life when you confronted disappointment and how you handled it. (can you relate it to the yoga experience.)
- 3) Many experiences in our lives are memorable because they force us to examine our basic beliefs and values. Tell about such an experience in your life. (can you relate it to the yoga experience.)

March 15th ... personal response

March 17, 2008

Please write a final reflection on your experience during this 8-week time period where we explored yoga, an ancient cultural past-time of the Indus valley. In your reflection, please touch upon:

- What surprised you the most about this portion of the unit?
- What did you learn about the Indus Valley culture?
- What challenges you managed to try and have some success with.

- What you learned about yourself, someone else or the teachers involved.
- What you will take away from this experience?
- Will you continue any particular stretches or breathing techniques?

Appendix E

Parent Consent Form

Investigator's Statement

Your child will be taking part in a unique unit of study in conjunction with his/her Language Arts and Social Studies curriculum. The purpose of this information/consent letter is to give you the details needed to decide whether or not your child's journaling/written responses may be used for research documentation. This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the Master's of Education research is about and what your child's participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask and contact me through the above number and email. Please take the time to read this carefully and to understand any accompanying information. When all of your questions and/or concerns have been addressed, you will then decide whether your child's work may be used in the study or not. This process is called "informed consent". You will receive a copy of this form for your records.

Purpose of the Study

The focus of my Med. Thesis is to explore a possible link between Kundalini Yoga (the Yoga of Awareness) and the development of the interpersonal and intrapersonal intelligences of students.

Kundalini Yoga is a non-denominational practice. It is a safe and comprehensive system of exercise, breath control, and mediation. The exercises consist of gentle movements that are coordinated with the breath. These are designed to stretch the body gradually and smoothly, stimulating the body's circulation. It works to strengthen and balance all parts of the body: nervous system, glands, immune system, and circulation. Yoga helps to provide tools to decrease stress levels.

Howard Gardner, the developer of the theory of Multiple Intelligences, theorized that personal intelligences (both inter and intrapersonal) are two of the most useful intelligences in our society. Interpersonal intelligence relates to our understanding of another person's thoughts, actions and behaviours, whereas intrapersonal intelligence refers to the comprehension of our own thoughts, actions and behaviours. Both of these asses are importation in developing strong communication skills, a necessary skill for life long learning and success.

Procedure

After the winter break, your child will participate in 16 KUNDALINI Yoga sessions during the Language Arts class time, as part of a larger unit of study on the ancient civilization of the Indus Valley. I will be working together with your child's regular classroom teacher, and my role will be to conduct the yoga sessions that will form the experiential portion of this unit fo

study. I am the French Immersion Resource teacher, as well as a qualified Kundalini yoga instructor with 5 years of yoga teaching experience. The 16 yoga sessions will be held three times a cycle during a Language Arts period over the course of 8 weeks. Each session will be approximately 40 minutes in length. Through the experiential portion of this unit, the students will be gaining knowledge of the original Sanskrit language and common physical activities of this civilization.

The class yoga sessions will include breathing techniques (3 minutes), physical movements (20), partner and/or personal meditation (5 minutes). After each session, your child will be asked to reflect upon his/her experience through a journal entry. The yoga sessions will be a physical experience and there is no connection to any religious beliefs. Long deep breathing techniques, along with various stretching and physical positions, such as leg or spinal stretches and alternate leg lifts, will be incorporated into the yoga sessions. A meditation is done to develop a still point, focusing the mind on the present moment. Meditations use positive affirmations, or mantras, to focus the mind on one point. Prior to resuming their daily activities and after the meditation, the students will have a brief relaxation, approximately 5 minutes in length. A yoga mat will be provided for each student and your child is encouraged to wear comfortable clothing for these sessions.

I would like to use your child's responses to this yoga experience as part of the data for my thesis research into the relationship between Kundalini yoga and the development of personal intelligence. Your child's perceptions and experiences could be one indicator as to whether there is a connection between the regular practice of Kundalini Yoga and the development of the personal intelligences. Direct quotations from the students' journals may be used as part of the findings, which I will incorporate into my Med. Thesis. Quotations from the students' journals will not be connected to the students' names as their names will be kept confidential. The classroom teacher will be communicating her own perceptions of the sessions as a form of data as well. As findings from the students' journals from this study may be presented at educational conferences or published in future education journals, it is important to note that students' names will be kept confidential, and that the school will not be identified. All records relating to this research will be kept in a secure area at the researcher's home. The individual journals will be kept in a locked facility within the classroom during the research time period. Only the researcher and the classroom teacher will have access to the journals. All records and materials will be shredded three years after the completion of the study to ensure and maintain privacy.

There will be a definite procedure for data collection. I will transcribe the students' journal entries and assign a code to the transcripts. Any link between your child's name and the transcripts will be destroyed by June 2011. Once the study has been fully completed, a letter will be sent to your home to indicate the findings of the study.

Participation in this study will not require any time outside of school. The use of your child's journal entries is voluntary. The use of this information will not affect his or her Language Arts grade or any other evaluation. Your child is free to withdraw from the study at any time, and/or refrain from answering any questions he/she prefers to omit, without prejudice or consequence. If your child chooses to withdraw from the study, a letter of withdrawal addressed to the researcher is requested and must be signed by both the parents/guardians and student. I will phone home as well to verify that I have received the letter of withdrawal. As the yoga sessions are the experiential portion of this multi-disciplinary unit, all students will participate in the sessions, but your child can choose not to have his/her journal included in the research study.

Some people feel that providing information for research is an invasion of privacy. I will protect your child's privacy by assigning a "pen name" in all writings related to this research. As the students' muscles begin to be moved through the yoga position, there may be some slight muscular discomfort. This discomfort will decrease and disappear as the students continue in the yoga sessions.

Benefits of the Study

I hope the results of the study will help us determine if there is a connection between the regular practice of Kundalini yoga and the development of one's own awareness, self-understanding and the understanding of others. Participation in these yoga sessions will help your child gain flexibility, and techniques to decrease his or her stress levels, and regulate breathing rates.

Other Information

Permitting your child's journal entries to be used in this study is voluntary. Your child's standing in the classroom will not be affected if you choose not to let his/her journal entries be used as part of the data for this research. Any information your child provides is confidential. Any information provided by your child will be coded. The link between the study information and your child's name will be destroyed by June 2011. If the results of this study are published, we will not use your child's name. Government of university staff sometimes review studies such as this one to make sure they are being done safely and legally. If a review of this study takes place, your records may be examined. The reviewers will protect your privacy. The study records will not be used to put you at legal risk of harm.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to allow your child's journals to be used as data in this research. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. Your child is free to withdraw from the study at any time, and/or refrain from answering any questions he/she prefers to omit, without prejudice or consequence. Your child's continued participation should be as informed as the initial consent, so you should feel free to ask for clarification or new information throughout your child's participation.

This research has been approved by the Education/Nursing Research Ethics Board (ENREB). If you have any concerns or complaints about this project you may contact any of the above named persons or the Human Ethics Secretariat. A copy of this consent form has been given to you to keep for your records and references.

Parent's/Legal Guardian's Statement

The study has been explained to me, and I voluntarily consent to allow my child's journal entries to be used as research data. I have had an opportunity to ask questions. I understand that the investigator listed above will answer future questions regarding this research study should they arise. I give my permission for my child's journal entries to be used for data collection. If I have questions about my child's rights as a subject, I may contact the above named person or the

Human Ethics Secretariat. I will receive a copy of this consent for my records.

_____ I give permission to use my child’s journal entries for research purposes.

I would like to receive a summary of the results of the study at the address listed below:

Email: _____

Postal: _____ (street address)

Winnipeg, Manitoba _____ (postal code)

_____ I DO NOT give permission to use my child’s journal entries for research purposes.

Name of Student

Signature of Parent/Legal Guardian Date

Printed Name of Parent/Legal Guardian

Date

Copies to:
Parent
Researcher