



The Practice of Yoga and Mindfulness in Schools and In Classrooms

Role of School to Our Children

- Students average about 175-180 days of school a year (some less depending on sick days)
- Many students attend school for before and after school activities from roughly 7:30am-5pm
- Nearly half of a students' waking hours are spent in school
- Schools have the responsibility to teach both an academic curriculum as well as provide a solid foundation for students' self-confidence, autonomy, independence, resilience, and other “non-cognitive functions”
- Development of non-cognitive functions has proven to improve academic performance, social, and emotional wellbeing of students as well as teachers.
- Schools that incorporate academic learning with movement in the form of yoga as well as teaching mindfulness practices have proven to alter perceptions of students as they relate to their peers, teachers, parents and school work.

Adversity Effects on Children: Stress-Response Paradigm

- Adverse environmental factors (poverty, chronic physical, sexual, verbal abuse or neglect, poor health) → elevations in cortisol (a stress hormone), which if the adversity is chronic can cause both short term and long term physical and psychological effects
 - Immunological problems (sick more often and long term association with increase risk in some forms of cancers)
 - Increased cardiovascular risks later in life
 - Endocrinological problems such as hypothyroidism, obesity, and Type II Diabetes (often as a result of obesity and poor nutritional health and lack of exercise that may go along with living in an adverse environment)
 - Emotional problems such as hypervigilance and an overactive sympathetic nervous system, resulting in mind and body not having remission from high amounts of stress
 - Young children especially are vulnerable to perceptual distortions, believing that there is no safe place, that they are inherently bad, etc all of which result in poor development of a sense of self, self-confidence, and healthy relationships
 - Psychological Disorders such as anxiety disorders including PTSD, Generalized Anxiety Disorder, Phobias, Obsessive Compulsive Disorder
 - Substance Abuse and Addictions +/- comorbidity with other psychiatric disorders.

Effects of Adverse Environments on Children, Cont'd

- So **how** do we intervene?
- Intervention needs to focus on changing perceptions about themselves and the world around them, so that stable foundations can be laid that will maximize a child's ability to learn. Intervention needs to focus on the development of **non-cognitive skills**:
 - Building **self-confidence**
 - Teaching **coping mechanisms** to students when they are faced with difficulties (socially and academically)
 - **Self-regulation**
 - **Resiliency**
 - **Curiosity**
 - **Sense of belonging** within a classroom or community
 - **Self-appreciation** and sense of **self-accomplishment** of meaningful tasks

Research: Various Parental and Teacher Behaviors that Help to Develop Non-Cognitive Skills

- Comments on student work
- General attitude in the classroom
- Balancing creating a curriculum and work that is challenging to students, but not frustrating. Assisting students just enough so that they learn but also so that they feel empowered and feel a sense of accomplishment that they have finished **meaningful work**
- Connecting and interacting between school, community, home, and peer groups

Research on Interventions Beneficial for Physical Fitness, Cognition, and Psychosocial Wellbeing in Elementary Age Children

- Powell, Gilchrist, & Stapley, 2008
- Mendelson, Greenberg, Dariotis, Gould, Rhoades, & Leaf, 2010 study in poor urban areas of Baltimore
- Telles, Singh, Khumar Bhardwaj, Kumar, & Balkrishna, 2013
- Butzer, Day, Potts, Ryan, Coulombe, Davies, Weidknecht, Elbert, Flynn, & Khalsa, 2014

Creating a unified, cohesive, learning community

- Ice breakers?
- Group activities?
- Break up into groups of four and brainstorm for 10 minutes on what are some activities that teachers and therapists can do that can act as ice breakers to students as well as create a positive, supportive, and nurturing atmosphere for students to learn and feel a sense of belonging.
- How do you reward or motivate students?
- How do you create a calm, friendly, peaceful atmosphere?

Academic Perseverance

- 2012 – Farrington and researchers developed a list of mindsets, habits, and attitudes based on non-cognitive skills that are dependent on the context in which the children are learning. In classrooms that advocate and promote positive mindsets and effective learning strategies, results show improved academic performance. Farrington calls this academic perseverance and unlike non-cognitive skills (which may remain stable over a period of time), academic perseverance is highly dependent on the learning environment.
- The four core key beliefs influencing academic perseverance in the classroom are:
 - Feelings of belonging in the community
 - Feelings that ability and competence are dependent on effort
 - Feeling that the student can succeed (sense of self-efficacy)
 - Feeling that the work is meaningful or the student values the work
- Countering learned helplessness

Internalizing External Reinforcements to Build Intrinsic (and lasting) Motivation

- Intrinsic rewards – Feeling contentment on finishing a task or accomplishing a skill. An inner sense of pride. Motivation comes not from material consequences, but by the inherent enjoyment and meaning that those actions give us based on fulfilling three basic human needs. (Deci and Ryan, 1970s).
 - Need for competence
 - Need for autonomy
 - Need for relatedness or personal connection with others (sense of belonging)
- Extrinsic rewards – A tangible and visible reward given to an individual on achievement of something. In the classroom this can include earning enough stickers and having a pizza party, scoring high on a test and earning a sticker, etc.

Research on intrinsic vs. extrinsic motivation

- 2007-2009 – Fryer gave 9.4 million dollars in cash incentives to nearly 27,000 students in Chicago (for course grades), Dallas (for reading books), and New York City (for test scores)
 - Results: Impact of financial incentives on student achievement was statistically 0 in each city.
- 2010-2011 – Cash incentives given to students, teachers, and parents in Houston to 25 low performing schools. Incentives given if there was increased time spent on math homework and improved scores on standardized math tests.
 - Results: Students increased their time spent on homework, but math scores did not change and reading scores on standardized tests went down
 - The only slight improvements were found amongst the highest achieving students, who weren't the target
- Deci and Ryan – Study gave financial incentives for completing puzzles to one group and the other group did not over the span of three days. On day three, the rewarded group was told that he had run out of money.
 - Results: Group that was never paid grew more engaged in the puzzles and interested each day because they found them to be fun and interesting. The group that had been paid for two days had worked hard for two days, trying to earn money, but on the third day when the money had run out, they mostly ignored the puzzles
 - Conclusion: Extrinsic rewards may work for short-term motivation to complete a task, but do not foster any intrinsic motivation or reward that may be gained from developing genuine interest, curiosity, and pleasure from the project (non-cognitive skills). The extrinsic reward, the money, actually served to be counterproductive in the long-term as students completely lost motivation without the external reward.

Yoga and Mindfulness in Schools

- Create a sense of belonging within the community
- Through bodily awareness, linking breath, mind, and body, yoga and mindfulness practices help to diffuse tension in the classroom environment, improve frustration tolerance, and teach students, teachers, and therapists self-soothing strategies. Increases self-regulation.

How do schools and classrooms create a unified, supportive environment? (See Handout Teaching Elementary Age Children)

- Help students to build self-confidence and bodily awareness. Teach students to feel comfortable in their movements and in space. Teach individual yoga poses that are calming, soothing, and students can repeat on their own.
- Help students work together and get to know each other through partner and group exercises. Allow students to attune to another individual in their class as they work together breathing, balancing, or using strength to elevate each other.
- Create a fun classroom environment through incorporating creative games using yoga into the day. Get students moving, laughing, and reengage them before beginning another academic exercise. Helps to relieve group tensions. Some of these games can be incorporated into academic exercises such as creative writing.

How do schools and classrooms create a unified, supportive environment? Cont'd

- Incorporate mindfulness art and yoga art into the art curriculum or into the daily/weekly curriculum.
- Use read alouds in early childhood and elementary grades that incorporate different yoga poses that the class can do together. (see the handout with read alouds). Be creative; most childhood books can be adapted to create fun yoga poses, breathing techniques, and mindful movements.
- Make yoga and mindfulness practices a part of the daily routine and classroom culture! Perhaps start the day with a mindfulness exercise selected from a mindfulness deck or from a list and/or start the day with a short, but sweet, series of yoga poses. (See references for some options).
- Incorporate yoga and mindfulness exercises into extracurricular activities such as sports and other teams in order to build team morale as well as teach skills to self-soothe, decrease frustrations, improve sportsmanship, decrease self-judgment and judgment of others, and build perseverance and resilience.

Sample: Short and Sweet Yoga Morning

- 1). Downward Facing Dog
- 2). Warrior I
- 3). Humble Warrior
- 4). Standing Position – Elephant Breathing or other breathing exercise
- 5). Goddess Pose
- 6). Tree Pose
- 7). Bow Pose
- 8). Camel Pose
- 9). Kneeling Pose – Practice Lion Breath (3X), Practice Bunny Breathing (3X), and lastly 3-part Breathing
- 10). GOOD MORNING!

Downward Facing Dog

- Lengthening pose – stretches out spinal muscles especially important after sitting at a desk or a night's sleep/
- Engages arms, legs, abdomen, and back – helps strengthen these groups.
- Increases lung capacity through strengthening chest muscles – helpful for asthma and breathing problems
- It is an inversion (head is below heart level) – increases blood flow to the brain helping to awaken mind and body
- Four limbs on the ground – pose exudes stability and solid foundation; very grounding and empowering

Warrior I

- Feet firmly rooted on the ground and gaze overhead to arms stretched above.
- This fierce pose (can even have students play around with fierce facial expressions) increases leg muscle strength, stretching hip flexors and with gaze above and arms outstretched indicates an opening of the body and mind to whatever the day may bring. Whatever may happen, the yogi remains a fierce and powerful stable warrior.

Humble Warrior

- Yogi interlaces both arms at the sacrum and on an inhale takes a slight back bend, opening their chest inviting whatever the day may bring. On an exhale, the yogi folds to the inside of the front knee with interlaced hands reaching up and away from the sacrum. The combination of inviting whatever the day may bring and then the humbling exercise of folding forward encourages individuals to remember that yoga is empowering and intended to boost self-confidence and self-awareness, but it is not an exercise of the ego and we must remain humble.
- Intense shoulder stretch helps to relieve any built up tension or stress in the shoulders as the yogi folds forward, surrendering to what the day may bring.

Breathing Exercises

- Can use many different exercises (choose one that we went over in the beginning of the workshop depending on the intention of the breathing exercise)
- Bunny and elephant breathing – energizing
- Snake breathing – calming
- Lion breathing – helps to release anger and tension

Goddess Pose

- Arms bent 90 degrees out to the sides; toes are pointed out and heels are in with the knees bent approximately 90 degrees. This is an intense hip opener. Any intense hip openers can help the yogi to become attuned with their emotional status of the day as well as being cathartic. Hip openers can help with intense emotional release and with the yogi's gaze forward and muscles of the legs engaged, this pose can be extremely empowering.

Tree Pose (Vrksasana)

- This is a great pose to help individuals work on their balance and engage their focus before a task (or a school day or after lunch/recess). With one foot firmly rooted on the ground, the yogi feels empowered by the balance, grounded and focused. In addition, the opened leg provides an intense hip opener.

Bow Pose (Dhanurasana)

- On the belly, the yogi bends knees and reaches hands to both ankles or feet on the same side as hands. Slowly, using their breath, the yogis lift up chest abdomen and thighs as their feet or ankles press firmly into their hands. This is an intense chest opener, abdominal stretch, and slight backbend. With each inhalation the individual lets their belly rise and each exhalation, the belly slowly lowers. This exercise is empowering and calming as well as excellent at stimulating the intestines after a night's sleep. It can be very empowering for the rest of the day.

Camel Pose (Ustrasana)

- This is another powerful backbending pose. It serves to stretch the entire front of the body including the thighs, groins, hip flexors, abdomen, chest, and throat muscles. It also stimulates the abdominal and neck muscles, which is a bonus in the beginning of the day or after a period of stasis.

Kneeling Pose (and Lion Breath)

- Come to a kneeling posture or sitting on your heels (whichever is comfortable for the knees). Palms come to rest faced down on the knees. Take an inhale as you subtly straighten both arms, being careful not to lock the elbows, and on an exhale open the mouth wide and make a fierce sound of a roaring lion. Roar out frustrations, tensions, anger, and negative thoughts! Repeat 3X!

Partner Yoga Exercises

- Using partner and group exercises helps build comraderie and increase relatedness between students. Changing groups and partners frequently will prevent cliques and students from feeling left out.
- Briefly jot down how you feel before we do some of these exercises. When doing some of these partner poses, make sure that you change partners each pose.
- Do the poses; (see handout for references) Wide-legged forward fold, double tree pose, double boat pose, partner sitting forward bend pose, back-to-back breathing.
- Briefly write down how you feel after these exercises? Do you feel more connected to those around you?

Wide-legged forward fold



Double Tree Pose



Double Boat Pose



Partner Sitting Forward Bend Pose



Back to Back Breathing (seated or standing)

Group Exercises; Mindful Icebreakers

- Pass the Cup (older students can fill the cup higher with water or even try closing your eyes!)
- Gratitude Links – (for younger students) – Give each child a cut strip of construction paper. Have materials for decorating. Students can write and/or draw all of the things that they are most grateful for. At the end, the students paste the links together and the entire chain can be hung somewhere in the room.
- Telephone or passing the pulse – Promotes focus and attentiveness. Great opening exercise or closing of the day exercise.
- We might disagree, but we have a lot in common – Think of something you and your partner might disagree upon and then think of 3 things that you have in common and write them down.

Mindfulness Exercises To Help Self-Soothe

- Feeling my feet – Helps individuals to observe their thoughts while remaining firmly grounded/rooted in the present. Observe thoughts as they come and go, and as challenging and difficult some of the thoughts become, the individual remains firmly grounded (either in downward dog or Tadasana (mountain pose))
- Slow Down! – Have students pretend to move extremely slowly. Arms and legs make slow, subtle movements. Have students observe how their body feels in stillness vs moving slowly and thoughtfully. Helps bodily awareness, ease transitions, and calm the classroom environment.
- Setting and sending intentions (part of loving-kindness meditation)

Mindfulness Exercises for Interpersonal Conflicts

- Three Gates (or three important questions) – Helps to reinforce respect, sympathy, and kindness within a community. Helps to bring individual awareness back to how their language can effect others. Remind individuals that before they act or say something they should ask three questions:
 - Is it true? (emphasize here the importance of truth telling)
 - Is it necessary?
 - Is it kind?
- Reflection on actions (great for getting students to reflect on the consequences of their actions on themselves, others, and their community) – In partners or groups, have the individuals think of a complicated situation when it was hard for them to figure out what to do or say. What do they think would have been the best thing to do or say? Have them answer the following questions:
 - Is it helpful to me?
 - Is it helpful to others?
 - Is it helpful to my environment?

Mindfulness for Stress Release and Relaxation

- Full body progressive guided muscle relaxation (can abbreviate to shorten time)
- Mindful breathing – In, “I’m breathing in,” out, “I’m breathing out”
- Mindful listening – With closed eyes, have individuals listen for approximately 15-60 seconds depending on their age and count the number of noises they hear in the silent room. Can share when time is up. Sets to refocus and reset individuals.
- Guided visualization – have students make the connection between how the mind affects the body. (Also can refer to reference handout for some books that provide great guided visualizations)

Allowing students to use mindfulness and yoga practices to help self-regulate

- Working on preventing a full fight or flight stress response. Deescalating frustrations, anger, and anxiety before they overcome us.
- Provide an area of the classroom or room (a safe space/refuge) used for therapy or a nearby classroom for the student to excuse themselves in order to practice calming and mindfulness techniques to help deescalate frustrations, anxieties, and strong emotions. Provide cues in these areas (pictures of yoga poses and breathing exercises or written mindfulness exercises on the wall) to assist students.
- Provide students with books on yoga, a yoga deck, and mindfulness cards that are easily accessible. Perhaps create a routine that a student chooses one yoga exercise and one mindfulness exercise in the morning, one after lunch, and one at the end of the day to create a more mindful environment. Select a student to pick a yoga card or mindfulness card out of a deck.
- Scatter yoga poses and mindfulness exercises through the hallways, gym, lunchroom for students to see as they walk through the school. They will soak in some of these practices.

Mindfulness and Yoga Practice in Special Populations

- Helps focus concentration, stress, coordination, and self-esteem
- Improves sleep, reduces hyperactivity, and helps with asthma and breathing exercises
- **ADHD** – Weber and Newmark, 2007 – small group of students with ADHD given a yoga intervention. Improvement on ADHD symptoms in yoga groups measured by Conners' Parent Rating Scale. Multiple studies beginning as early as 1989 have found multiple improvements on self-reported questionnaires, and examiner/testing interviewing on ADHD scales as well as global index emotional lability and restless/impulsive ADHD indices.
- **Anxiety Disorders (Generalized)**
 - Starting with studies in the 1990s. Numerous studies reported decreases in heart rate, anxious behaviors such as fidgeting and self-reported measures, as well as decreases in cortisol levels after yoga therapy interventions (included yoga asanas and relaxation therapy)
 - Stueck & Gloeckner, 2005

Mindfulness and Yoga Practice in Special Populations, Cont'd

- **PTSD**

- Numerous studies have given rise to trauma-based yoga. There's a whole organization call Exhale to Inhale that is based out of NYC and LA that focuses on bringing yoga to victims of domestic violence and sexual assault.

- **OCD**

- Numerous studies have shown that yoga interventions have resulted in improvements on the Yale-Brown Obsessive Compulsive Scale and several other OCD measures.

- **Depression**

- Yoga interventions especially those emphasizing yoga postures thought to specifically alleviate depressive symptoms such as backbends (bridge, wheel, camel poses), standing poses, and inversions (any pose where the heart is above the head) have shown to decrease depression and anxiety symptoms such as negative mood and fatigue.

Ideal Environment for Fostering the Development of Autonomous, Confident, Mindful, and Curious Students

- Sense of belonging
- Sense of being understood
- Sense of autonomy
- Sense of self-efficacy
- Sense of being challenged and accomplishing something that is meaningful
- Learning frustration tolerance and mechanisms to self-soothe
- Gaining a sense of bodily awareness within space and relative to others
- Creating a warm, supportive, group environment where students learn to support each other in various tasks and learn to respect each others' differences.

Questions?

- For copies of more resources and links to pdf articles and updated information please visit:

yogaforourlives.org