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Breathe in, breathe out: An exploration of the impacts of yoga on self-regulation and classroom community

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BREATHE IN, BREATHE OUT

BREATHE IN, BREATHE OUT:
AN EXPLORATION OF THE IMPACTS OF YOGA
ON SELF-REGULATION AND CLASSROOM COMMUNITY

A Thesis Submitted
in Partial Fulfillment
Of the Requirements for the Designation
University Honors

Shaylyn Trenkamp
University of Northern Iowa
December 2019

BREATHE IN, BREATHE OUT

This study by: Shaylyn Trenkamp

Entitled: Breathe In, Breathe Out: An Exploration of the Impacts of Yoga on Self-Regulation and Classroom Community

has been approved as meeting the thesis or project requirement for the Designation
University Honors

Date	Dr. Sarah Montgomery, Honors Thesis Advisor, Curriculum and Instruction
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Date	Dr. Jessica Moon, Director, University Honors Program
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ABSTRACT

Research on the effects of yoga and mindfulness has demonstrated increased self-regulation and impacts on community in many settings, but specific data regarding the effects of mindfulness practices in the early childhood classroom is limited. The purpose of this thesis study was to take a closer look at yoga and mindfulness in the classroom and the impact it could have on self-regulation and classroom community for young students. Yoga and mindfulness lessons were taught in two kindergarten classrooms and student responses were collected throughout the project. Classroom teachers involved were also interviewed about how mindfulness affected their students and classrooms. Through the lessons and interviews, themes of extensive background knowledge, eager participation, classroom community building, and increased self-regulation emerged.

INTRODUCTION

A few years ago, my mother went through the training to become a yoga teacher. Since then, I have practiced yoga, including mindfulness practices, on a regular basis and incorporated these into many aspects of my life. With some time and reflection, I realized that the more time I dedicated to my yoga, the more my issues with anger and frustration subsided and the more my relationships with those around me began to flourish. As a future educator, I believe the impacts yoga could have in schools would only be magnified compared to my own experience.

The purpose of this thesis study was to explore how yoga in the school setting can support child self-regulation and classroom community. Over a two week span, I taught six lessons consisting of yoga poses, breathing techniques, and mindful practices to kindergartners in the Midwestern United States. The goal was to add to the limited research on mindfulness in early childhood classrooms while providing mindfulness practices for teachers to build classroom community and for students to utilize as self-regulation tools.

LITERATURE REVIEW

Mindfulness and Yoga: Supporting Self-Regulation and Community

Mindfulness and yoga in the classroom have recently become an area of great interest. Mindfulness is “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4). As yoga involves drawing awareness to the body and the breath, it is a mindfulness practice in itself and one that was embellished with additional practices such as mindful breaths and affirmations in this thesis study. Research is emerging on the benefits of teaching yoga and mindfulness to youth in school settings, but varies among age groups and techniques implemented. One constant finding, regardless of the age group studied, tends to be that integrating mindfulness and yoga practices into the classroom can support

student self-regulation (Razza, Bergen-Cico & Raymond, 2013; Bazzano, Anderson, Hylton & Gustat, 2018; Broderick & Metz, 2009). For example, Razza, Bergen-Cico and Raymond (2013) articulated that “Mindfulness-based interventions have been demonstrated to be effective in promoting self-regulatory skills and mental health among adults and are thought to be feasible among children and adolescents” (p. 373). With the research that has been done and the consistent results of yoga and mindfulness improving self-regulation and control, this thesis study may seem like a mere addition to the collection. However, extensive research on teaching yoga and mindfulness to young children is needed, and as an elementary educator, I find it necessary to draw attention to the benefits these practices could have for children who are just beginning to learn social behaviors and self-regulation in the classroom context. Further, these potential effects on child behavior, as well as the opportunities for peer engagement, result in possible altered classroom community aspects as well.

In order to understand how these practices could impact classroom community, it was important to first explore the possible results yoga has on self-regulation. According to Razza, Bergen-Cico and Raymond (2013), “Self-regulation refers to the process of modulating systems of emotion, attention and behavior in response to a given contextual situation, stimulus or demand” (p. 373). Particularly relevant in the classroom, limited self-regulation may translate as student aggression or stress. Bazzano et al. (2018) referenced a 16-week program of yoga and mindfulness for fifth- and sixth-grade students in an urban school, noting that after participating in the program “Students identified changes around domains of anger, aggressive behavior, and interpersonal stressors” (p. 87). These changes reflected a decrease in these areas. Student ability to self-regulate can support many positive outcomes in a school setting and may increase

consistency in student behavior even on days when schedules are interrupted or negative incidents occur.

In a randomized control trial with third graders who screened positive for symptoms of anxiety, Bazzano et al. (2018) led two professional development sessions and found that 80% of teachers claimed that yoga provided benefits in regards to self-regulation for their students. Some of these benefits were portrayed through student attitude and focus. Bazzano et al. (2018) also mentioned the benefits of mindfulness and yoga practices including better self-regulation, self-esteem, academic progress, and stress reduction, all of which have impacts on classroom performance. Similarly, in a pilot trial of the mindfulness curriculum Learning to BREATHE with senior girls in a private school, Broderick and Metz (2009) found, “Relative to controls, participants reported... increased feelings of calmness, relaxation, and self-acceptance. Improvements in emotion regulation and decreases in tiredness and aches and pains were significant in the treatment group at the conclusion of the program” (p. 35). Yoga promotes this self-awareness and relaxation in a way that can benefit students both academically and socially. Overall, students feeling calm and in control can support a positive classroom environment and positive interactions among students.

Self-regulation and classroom community go hand in hand as individual emotions and stress levels impact student interactions with peers and educators. In a meta analysis of yoga and mindfulness interventions for children with Attention Deficit Hyperactivity Disorder(ADHD), Chimiklis et al. (2018) found that the outcomes of these practices directly impacted hyperactivity, inattention, and executive functioning. With children who struggle with managing anger, paying attention, or ignoring aggressive tendencies, unwanted behaviors in the classroom often arise. Student conflict, disruption, and/or unwillingness to participate may seem like

unavoidable obstacles from time to time, but yoga and mindfulness have the potential to decrease said behaviors in the classroom. Greenberg and Harris (2012) pointed out that “...Interventions that include brief forms of mindfulness practice may help improve children’s social skills and school-related functioning” (p. 163). While research in this area is emerging, Greenberg and Harris (2012) suggested that mindfulness can potentially be very beneficial in the context of the classroom. In further analysis of two studies using mindfulness meditation, Greenberg and Harris (2012) wrote, “These reports also indicated decreased rates of absenteeism, suspension, hostility, and school infractions” (p. 162). If mindfulness can lower the number and frequency of student absences, it increases the opportunity for students to build upon valuable connections and learning and to adjust negative beliefs held about school. Teachers involved in this area of research have seen the results in their own classrooms, especially with yoga as the mode of mindfulness. The meta analysis study by Chimiklis et al. (2018) mentioned improvements in parent-child relationships as a result of mindfulness and yoga, which could easily be reflected in relationships with peers and teachers as well. Further, in the study by Bazzano et al. (2018), 48% of teachers participating in the study claimed that yoga improved the climate of the classroom, and 84% claimed that it was beneficial for classroom management. It was hoped that the teachers and students of this thesis study would observe similar results.

Yoga and Mindfulness in Early Childhood Education

This particular thesis study strikes some contrast to most studies about yoga and mindfulness, because the students involved were kindergartners. Existing research finds effects of mindfulness for mostly older children, adolescents and adults (Greenberg & Harris, 2012) but research is emerging on teaching these practices to early childhood students. Razza, Bergen-Cico and Raymond (2013) performed a study-- one of the first of its kind-- with the goal of

introducing mindful yoga to 3- to 5-years-old children in hopes of encouraging self-regulation. They utilized assessments from both parents and children with a focus on effortful control and executive functioning and found, “Specifically, children in the intervention demonstrated significant improvements in inhibitory control over time and maintained average levels of focused attention compared to control children who demonstrated declines in attention over time” (Razza, Bergen-Cico & Raymond, 2013, p. 8). Similarly, this thesis project focused on teacher and child assessment of self-regulation with a focus on the classroom setting of five to six year olds. Razza, Bergen-Cico and Raymond (2013) found that while mindfulness-based practices can support self-regulation among young students, the ways to best adapt the practices for early childhood remain unclear.

At the University of Wisconsin-Madison, Flook, Goldberg, Pinger, and Davidson (2015) took research about mindfulness practices within early childhood into their own hands by creating the Kindness Curriculum. Flook, et al. (2015) described the foundation of this curriculum as “mindfulness practice, aimed at cultivating attention and emotion regulation, with a shared emphasis on kindness practices (e.g., empathy, gratitude, sharing)” (p. 45). After their 12 week study teaching the curriculum to preschool students, the results showed that the intervention group performed better on end of year records on “indicators of learning, social-emotional development, and health” and the control group “acted more selfishly (sharing fewer resources with others) over time” (Flook, Goldberg, Pinger & Davidson, p. 49).

While Flook et al. (2015) observed improvements with the mindfulness intervention group, they also mentioned the need for larger sample sizes and additional studies. Given the shortage of data on mindfulness with younger students and the fact that student self-regulatory skills expand rapidly in the early childhood years, more research on the impact of teaching

mindfulness and yoga to this age group is necessary. It is crucial that educators support student self-regulation during this stage to promote school readiness.

This thesis study explored the impact of teaching yoga and mindfulness practices in two kindergarten classrooms. The goal of the study was to expand upon current research on yoga and mindfulness with early childhood students and gain insight on how yoga and mindfulness can affect classroom community and self-regulation. As these were the focus of the thesis project, it was hoped that students involved would benefit by gaining self-regulation tools and that teachers involved would gain knowledge about mindfulness and yoga in a way that improves their classroom community.

METHODOLOGY

Overview and Research Questions

The purpose of this thesis study was to explore how yoga and mindfulness in the school setting can support child self-regulation and classroom community, with intentions to expand research for early childhood students in particular. Answers to the questions of the study can supplement the resources provided and function as a guide for teachers to use yoga and mindfulness practices in their own classrooms. The main research questions were:

1. How do yoga and mindfulness practices influence child self-regulation, especially in the classroom setting?
2. What effect does including yoga and mindfulness in the classroom have on classroom community?
3. How does incorporating yoga and mindfulness practices change relationships within the classroom?
4. What differences do children recognize in themselves after doing yoga and mindfulness?

5. What differences do others (i.e. teachers & researchers) see in children after doing yoga and mindfulness?

Setting and Participants

The research for this study took place during the spring and fall semesters of 2019. The teaching of six 30 minute yoga and mindfulness-based lessons happened in two kindergarten classrooms in the upper midwest in mid May. The classrooms were comprised of 31 students total, including 17 males and 14 females. While all students participated in the lessons, 28 students provided consent to participate in the study. The kindergarten teachers involved were excited to participate and both had prior knowledge of mindfulness and/or minimal experience with its integration into the classroom. Teacher consent, parent consent, student assent, and principal approval were obtained through written consent forms following IRB (Institutional Review Board) approval. If a parent did not give consent or a student did not give assent, their work and reflections were not used for this study. If a student did not assent or consent, their work and/or reflections were not collected.

Research Design

For teachers and students that were present for the study, the six lessons were taught in a large group setting encouraging participation from all. Each lesson included a series of yoga moves, breaths and mindfulness practices. Please see Appendix C for an outline of all six lessons. Each session concluded with an opportunity for students to write or draw their observations and reflections after doing yoga. During this reflection time, students were also asked a few questions and had their answers written down by the researchers. After the six sessions were completed, the teachers were interviewed jointly for approximately 15-20 minutes.

Please see Appendix A and Appendix B for the teacher and student interview protocols respectively.

Data Collection

The research team consisted of myself and my advisor. Together we used three sources for data collection: observations, student work, and teacher interviews. Written observation notes were taken as the lessons were taught, with student responses and comments documented. Researchers' reflections were also documented during and after each session was completed. This study acquired IRB Human Subject's approval to conduct interviews and gather student work as methods of collecting data. Each session, students were asked to answer a question about the yoga poses and mindfulness practices completed that day with drawn and/or written responses. As students worked on these pieces each day, researchers asked questions about what students were drawing and writing as well as about their experiences with and perceptions of the mindfulness practices and yoga they had been doing. Researchers wrote down student responses. At the end of the unit the teachers were interviewed together and these interviews were audio recorded and transcribed. After data were collected and analyzed, all recordings were deleted and all identifying information about participants was retracted from the data. Pseudonyms were used throughout the transcribing process and collecting of research findings.

Data Analysis

The data analysis process began when the lessons, interviews, and transcriptions were completed. Researchers used the constant comparative method in order to identify thematic categories that emerged (Glesne, 2006). Through this process, themes found throughout interviews, observations, and student work aligned with each other, including an emphasis on knowledge, engagement, community, and self-regulation. Additionally, teacher interviews

demonstrated a view that self-regulation is a tool that can lead to ownership and self-efficacy for students. Triangulation of the three data sources allowed the researchers to unearth these themes and effects, which will be discussed in detail in the Findings section below.

FINDINGS

The main findings of this study were that the students had a stunning amount of background knowledge and interest in yoga and mindfulness, all were engaged and consistently participating, the classroom community simultaneously impacted the way students participated and was impacted by the way students participated, and students demonstrated self-regulation throughout the project through self-awareness and ownership. This section will provide details regarding these findings. First, the context of the study and experiences students had with yoga and mindfulness prior to the project will be presented. Second, a day by day outlook of the lessons complete with student work and comments will explore the thesis project in depth. This will be followed by the thematic findings of knowledge, engagement, community, and self-regulation.

Background Knowledge and Interest

In both of the Kindergarten classrooms, mindfulness practices had been previously introduced. Students were familiar with several breathing techniques, some of which were included in this thesis project. In both Classroom A and Classroom B, there were resources for mindfulness practices that the teachers referred to from time to time, such as posters, books, and flash cards. As the lessons began, many students also revealed they had practiced yoga before, whether in their preschool class or at home with family members. The students were familiar with mindfulness concepts and participated eagerly, and the teachers were excited to learn alongside their students.

Day by Day

Lessons took place in two classrooms, Classroom A and Classroom B. This project included six 30 minute lessons taught over the course of two weeks. Each lesson was taught first in Classroom A, then immediately after in Classroom B. The lessons adhered to identical outlines (see Appendix C) for both classrooms, with slight variations in practice occurring depending on student responses and/or adaptations the researcher saw fit to make after teaching the lesson to Classroom A first for every lesson. Each day began with an introduction of the theme for that day then led into a yoga practice and a mindfulness practice.

Day 1 The topic for the first lesson was breath. We used sun salutations and a cat/cow sequence to practice being aware and intentional of our breath. We followed the yoga with an anchor breath, where the students were allowed to place a hand in front of their mouth, on their heart, or on their stomach as we breathed together. When students in Classroom A were asked to share with partners how doing yoga and mindfulness made them feel, many students immediately answered “good.” In the group setting, a few elaborated, saying “It made my brain feel fun and confident,” “made me feel calm,” “felt fun,” “felt relaxing,” and “made my heart and stomach feel good.” Students in Classroom B discussed how it felt good to feel your breath. A student stated that they loved when their hand was warm from their breath, and other students that it was “relaxing” and “very, very cool.” For the reflection of the day, students drew themselves using their favorite anchor spot. In Classroom A seven students drew the heart anchor spot (see Figure 1), four drew the hand in front of the mouth breath spot (see Figure 2), and four drew the stomach spot (see Figure 3). In Classroom B, they preferred feeling the air of their breath with their hands with six drawings of the hand-in-front-of-mouth anchor spot (shown in Figure 4) and four drawings each for the stomach (shown in Figure 5) and heart anchor spots

(mentioned in Figure 6 and shown in Figure 7). Although it was noted that one student liked all of them and quietly did eeny meeny miny moe to decide.



Figure 1 Heart anchor spot

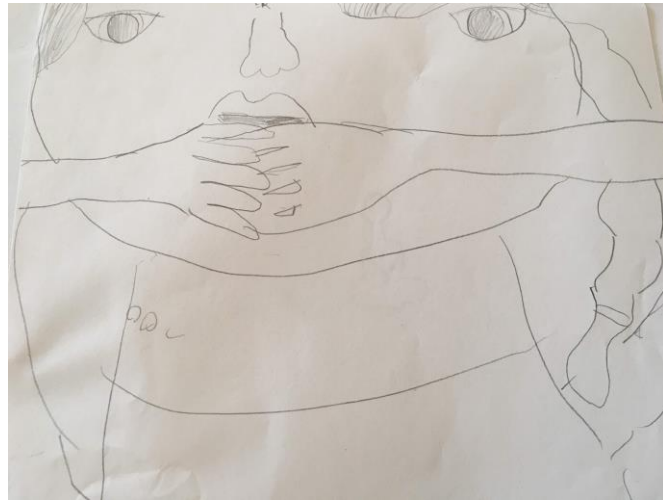


Figure 2 Hand in front of mouth anchor spot



Figure 3 Stomach anchor spot



Figure 4 Hand in front of mouth anchor spot



Figure 5 Stomach anchor spot

Day 2 The second day had the theme of strength. We began with a warrior sequence then I asked the students what they would tell someone else about the yoga we had been doing. In Classroom A, one student replied that we had been “stretching,” another said they would show them poses, and another replied they would “say it is good for your body.” Others mentioned the warrior pose we did that day, doing mindfulness breaths, and how “fun” and “cool” it was. We wrapped up our practice with a flower breath and pretzel breath together (See Appendix C). Students were then challenged to draw the pose they felt the strongest doing, and several students in Classroom A drew the hardest pose of the day, warrior three (pictured in Figure 8).

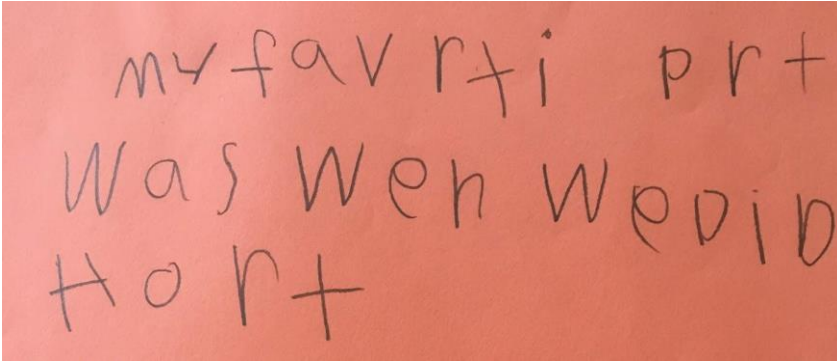


Figure 6 Reference to the heart anchor spot



Figure 7 Heart anchor spot



Figure 8 Warrior 3 pose



Figure 9 Downward dog pose

Another repeated response was downward dog (pictured in Figure 9). In Classroom B, the students instantly reframed the question from what they would tell others to what they would teach them. One after another, they began to list poses we had learned that they would share with others. After mentioning child's pose, tabletop pose, warrior poses, and more, students began to rise and demonstrate poses they had created themselves. The whole class joined as individuals displayed "elephant pose," (Figure 10) "ninja pose" and "hopping tree pose" (combined as one

pose in Figure 11). When it came to drawing the pose they felt strongest in, Classroom B had a greater variety of warrior poses, self-created poses, and poses from the previous day.



Figure 10 Elephant pose (student-created)



Figure 11 “The tree hopping ninja” pose
(student created)

Day 3 The third lesson focused on rest. I began with child’s pose and alligator pose and followed with shavasana or corpse pose, which the students dubbed “nothing pose.” In shavasana, we used an anchor breath and did multiple rounds of breathing in silence. A student commented that it was a “good time to rest” since this lesson was taught right after recess. Students were asked to draw a picture of a resting pose and include an explanation for how to do it. Most students drew the “nothing” pose. Figures 12 and 13 serve as some of the how-to examples and read “The nothing pose is where you lay down” and “How you do this pose: you lay down and put your hand on your heart.” As students wrote and drew, we asked if they had

taught anybody what we had been learning. If so, who and why? Five of fourteen students present in Classroom A responded yes.

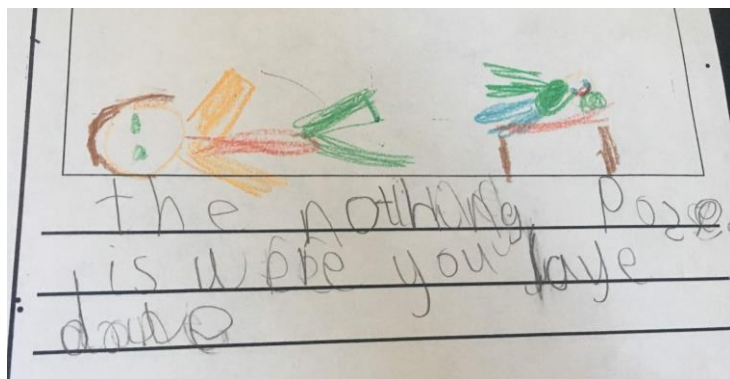


Figure 12 Nothing pose explanation

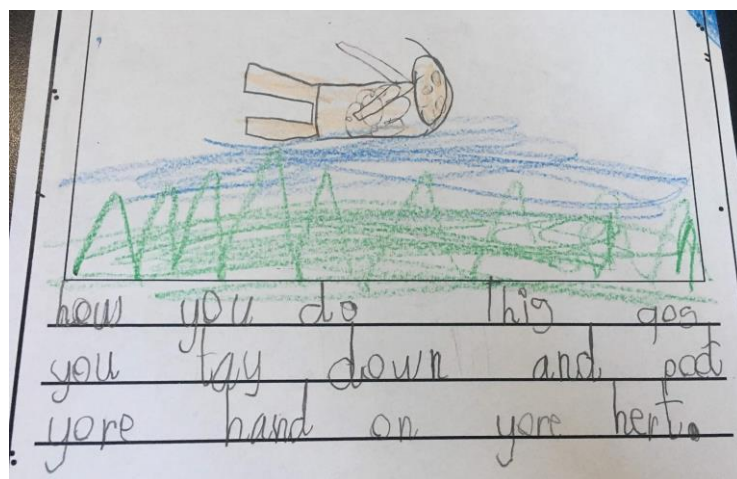


Figure 13 Nothing pose explanation

Three had talked to their moms, mentioning warrior pose and the pretzel and five-finger breaths. One had her little brother try ninja warrior (a student-created pose) with her. The other student told researchers her three-year-old brother “doesn’t understand this stuff” so she showed him how to do an anchor breath telling him, “You have to calm yourself down.” In Classroom B, a student started off the lesson by leading the five finger breath before we got to the poses. When we got to shavasana, the room became very quiet and still. The teacher of Classroom B noticed the “most active child” of the class was laying totally still and reflected, “That was fantastic. That was really nice and quiet.” She then asked for a handout of poses to give the students to take home to support their personal practice after this thesis project was finished. Four students of the fourteen present in Classroom B told us about teaching others what they had been learning. A bright and active participant during the yoga portions of the lessons said, “I taught everyone in this class-- the hopping tree pose.” This was a pose he created during our lessons.

Two students mentioned teaching younger sisters their warrior poses, and another student taught her mom “cow pose and the other poses too.”

Day 4 The fourth lesson centered around balance. The lesson began with breaths suggested by the students, such as volcano breath and snake breath in Classroom A. We then went to a lifted leg pose, tree pose, warrior three, and dancer pose. When asked to write about their favorite yoga pose, many students actually wrote about a breath. As yoga and mindfulness are closely intertwined, the researchers realized that this only enhanced the understanding of these practices and then modified the question to ask about favorite pose or breath, as the terms pose and breath became interchangeable in the students’ minds. Three students in Classroom A wrote about the pretzel breath with some reasoning for their preference being “It made me calm” and “we did it together” (Figure 14). Another student answered the volcano breath because “It makes me calm.” Four students answered warrior three pose, with one response exclaiming “because it makes me happy!” (Figure 15). Another four students answered with the nothing pose/breath. In Classroom B, the students began the lesson by not only leading breaths we had not done yet, but by creating new ones such as the bee breath and ninja breath. This classroom was more familiar with yoga and moved through the balance poses quickly. I added in the crow pose as a challenge and a couple students succeeded with this pose as well. All students wrote about poses during the reflection time. Five chose the tree pose (or some variation of it), two chose warrior three, two chose the nothing pose, one chose the elephant pose (student-created), and two chose crow pose which was the hardest pose we had tried up to that point.

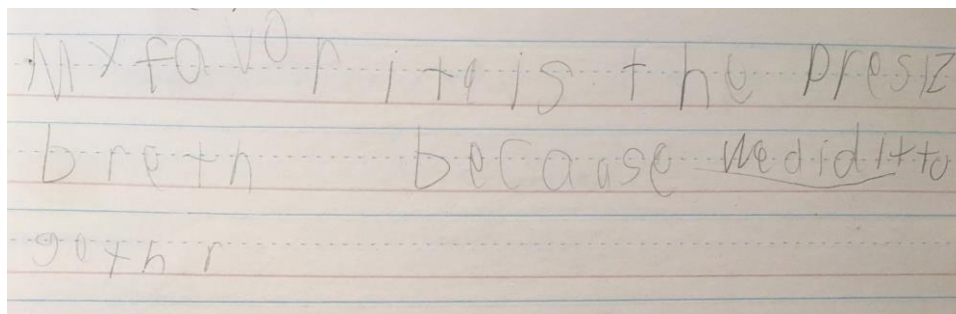


Figure 14 Student writing about Pretzel Breath

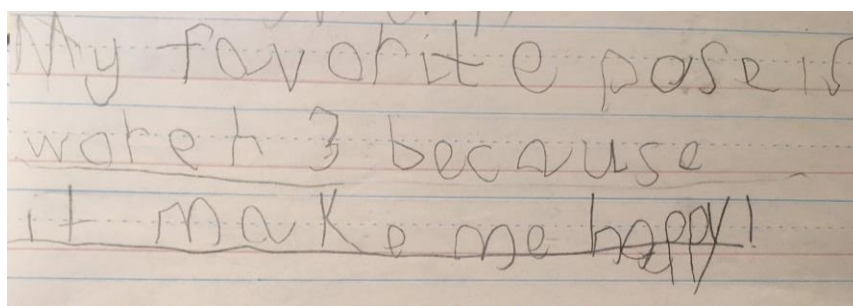


Figure 15 Student writing about Warrior 3 pose

Day 5 On Day 5 came the topic of connecting the body and the mind. Students, teachers, and researchers alike formed a line and we began with mindful walking around the classroom. This was well-received with some distraction in Classroom A. The classroom teacher participated as well. Researchers later reflected that when implemented in Classroom B, this mindful walking practice was “magical,” one of the best received practices introduced in lessons, and greatly supported by the classroom environment with windows open and lights off. After the walking, students laid down and participated in a body scan. We wiggled fingers and toes, clenched our hands then let go, focused on our breath, and noticed the parts of our body touching the ground. We took deep breaths together and in each class the students continually grew quieter and more still throughout the lesson. In our “nothing pose,” several students took the opportunity to practice anchor breaths as previously taught. When we gathered for discussion,

students in Classroom B had many reflections for the body scan. The researcher asked about body parts they noticed during the scan, and many students answered with “my back” while a few others responded with “my eyes,” “my toes,” and “my heart...it was beating slowly.”

Students in Classroom A commented in their written work how the body scan “made me really calm,” “was fun,” “makes my heart feel good” (See Figure 16) I asked students to write about a specific body part they noticed during the mindful walking and several wrote about the stomach. One response reads, “My favorite one was the stomach because it makes me calm” (See Figure 17). Another response was “I like when I put my hands on my stomach” (See Figure 18). An individual mentioned “I relax my head” (See Figure 19). In Classroom B, the most common answer was the legs. Students wrote “My legs felt good,” “my legs feel relaxing,” and “my legs feel happy” (See Figure 20).

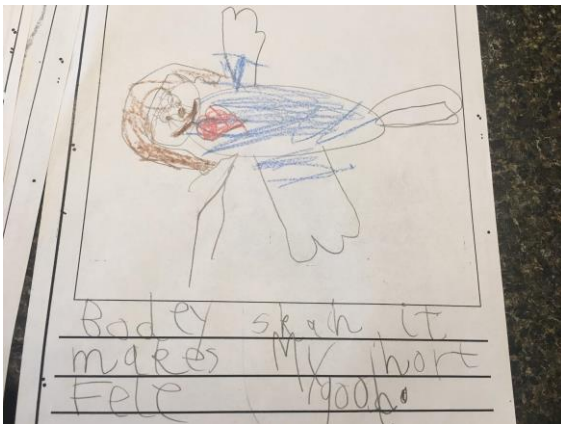


Figure 16 Body Scan

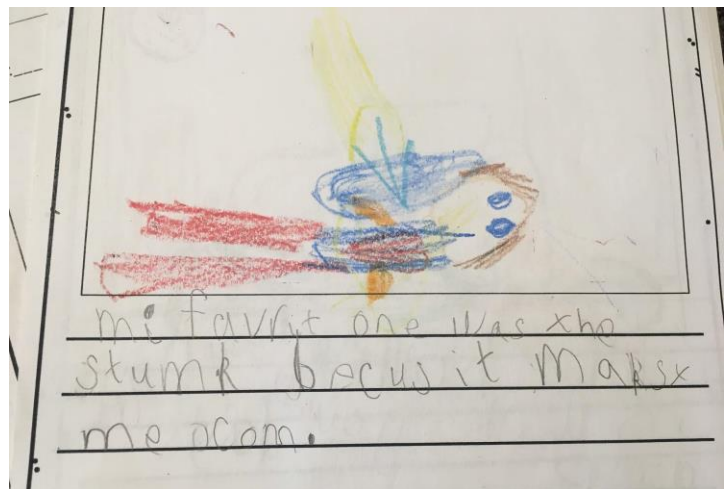


Figure 17 Stomach anchor spot

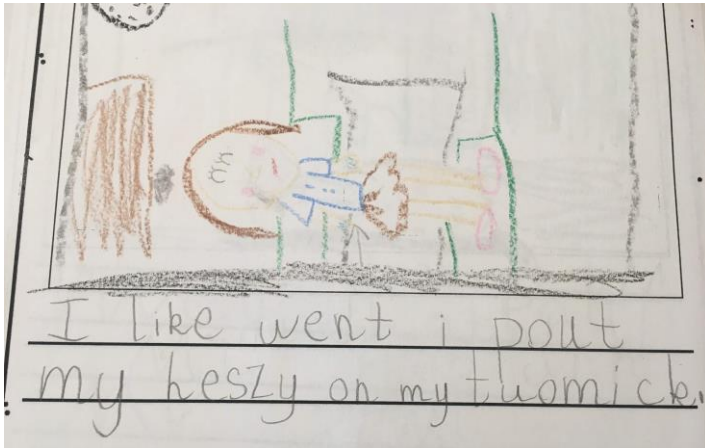


Figure 18 Putting hands on stomach

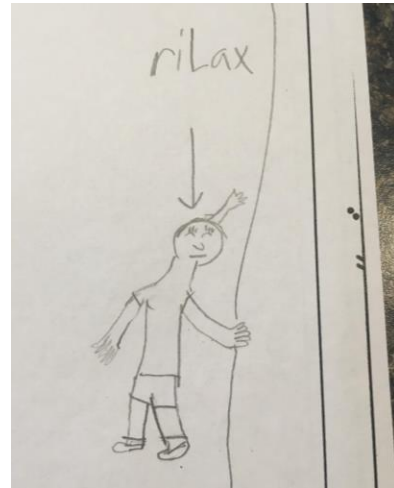


Figure 19 Relaxing the head



Figure 20 "My legs feel happy" in body scan

Day 6 Finally, I led the sixth lesson on connecting with others through yoga and mindfulness practices. In Classroom A, students requested beginning with the "nothing" pose as they were tired from recess. Then we revisited Warrior 3 as an individual pose. I reminded students to focus on our balance and use focal points. Then we moved into a circle and linked arms to try all going into Warrior 3 while connected. After some struggle, we did Warrior 3 while holding each other with ease. Next, we tried chair pose in the same circle setup. Later,

students in each class reflected how they felt “stronger when working together.” One student even reflected that when we did those poses together, it felt “like you could do anything.” We ended the lesson with sending loving kindness to others and ourselves. This consisted of the phrases “May (they/I) be safe. May I (they/I) be loved. May (they/I) be happy” repeated as we thought of loved ones and then of ourselves. Students were then asked to write about how it felt to do yoga with classmates throughout this project. In Classroom A, one student said “I like it because it makes me happy and focused and calm” (See Figure 21) while another answered “It felt [like] satisfaction” (See Figure 22). In Classroom B, a young boy had two comments to make, “When we all do it [warrior 3 pose] together, we feel strong” and “yoga connects our bodies and our minds.” Four others commented how it made them “feel strong when we are all together” (See Figure 23). Three additional students commented on how the poses feel “relaxing.” Other students said “It feels good,” “...it was fun,” and “I love it.”

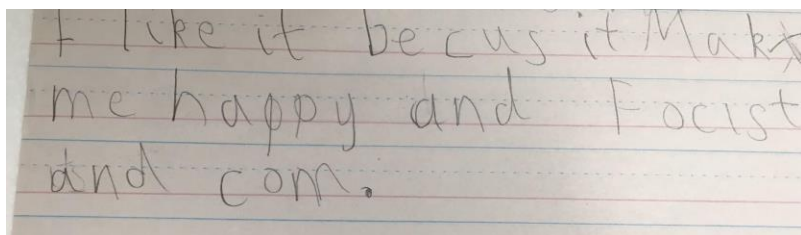


Figure 21 “Happy and focused and calm”

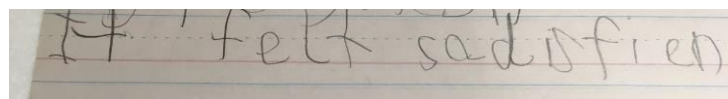


Figure 22 “It felt [like] satisfaction”

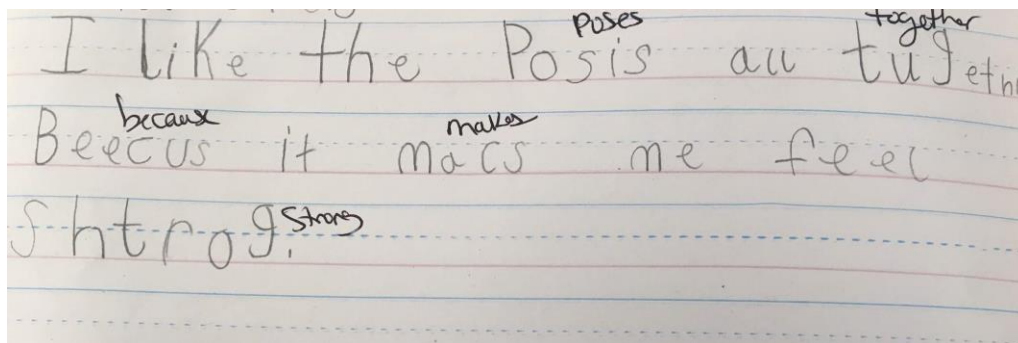


Figure 23 Poses together make the student feel strong

Thematic Findings

Five key themes emerged from analysis of the data sources for this thesis project. First, time and time again students saw yoga and mindfulness as one. Second, prior knowledge impacted student confidence and engagement. Third, engagement was evident not only among students, but teachers as well and guided meaningful yoga and student responses. Fourth, the classroom community was strengthened through vulnerability and sharing. Finally, self-regulation was demonstrated through both awareness and ownership and shone through with student responses and behaviors.

Yoga and Mindfulness as One

Throughout this entire process, these young students treated yoga as mindfulness and mindfulness as yoga. At first, dialogue among the research team brought about the idea that this was caused by a lack of understanding of the differences between practices. Upon reflection though, it became evident that this absence of distinction actually showed a better understanding of the lessons that were being taught. Yoga is about connecting the mind and the body (Santangelo White, 2009), which is best done through a consciousness of the breath. The main mindfulness practices used in this thesis were named breaths, sometimes with added movement. As children, these students have never been taught to separate yoga and mindfulness practices, so to them these are one. Yoga is connecting our bodies and our minds, which we accomplished with breaths and movements we called mindfulness practices.

Greenberg and Harris (2012) drew the connection between the two practices, emphasizing how those who do yoga can achieve the focused attention mindfulness aims to foster: “In meditative practices, a common goal is to sustain the focus of attention on mental contents or particular objects, such as the breath... This focused attention could occur through

sitting meditation, walking meditation, certain forms of yoga...” (p. 162). Mindfulness is being aware in the present moment, which yoga inspires us to do. In essence, yoga is mindfulness, and mindfulness is yoga. Razza and Raymond (2013) also commented on the shared goal of yoga and mindfulness, stating “One such approach is mindfulness-based practice, including meditation and yoga, as these activities share a common goal of promoting focused attention, as well as other facets of EC [effortful control] and EF [executive function]” (p. 1-2). The students understood this without having to be explicitly taught it. This understanding was possible because of four main factors: a) the students’ prior knowledge, b) the student and teacher engagement, c) the classroom community created before the thesis and the community building that yoga does, and d) the awareness and self-regulation demonstrated by the students. Each of these areas will be explored more in depth in this section.

Knowledge

The prior knowledge these students had coming in to this thesis was absolutely astounding. Many were familiar with the poses, breaths, and goals of mindfulness and yoga. When I introduced the cat/cow sequence on the first day in Classroom A, multiple students began doing cat pose and cow pose before further instruction. A few knew the warrior poses during the next lesson as well and on the second day a student in Classroom A brought up the idea of focal points. Seeing his classmates falling out of Warrior 3 around him, he said “You just have to find a place to focus your eyes.” Another student in that lesson professed “I do [warrior pose] at home every day.” In Classroom B, all but 3 students said they had done yoga before. They comfortably perfected Warrior 1, tree pose, and other poses immediately as they were introduced. A researcher observed a few students going into child’s pose naturally during the

first lesson. By the third lesson, a young girl in Classroom B raised her hand to show the researchers yoga she knew and had done before.

Other students with less experience still were aware that there were resources in and out of the classroom for these practices. The teacher from Classroom B had checked out books about yoga poses from the library before, and both classrooms had flashcards, charts, or booklets within the classroom focused on mindfulness. Among students who knew poses before the lessons and those who did not, both populations began creating their own poses by the end of the second lesson. This action of creating new poses also factored into the other findings, as students showed engagement by naming other students' self-created poses later on in their work, emphasized community when they shared poses with classmates and tried other classmates' created poses, and displayed self-regulation by taking ownership in the practices they were learning.

Engagement

The success of the lessons for this project was greatly influenced by student engagement, and these classrooms were full of eager participants from the beginning. Not only did students take part in every yoga and mindfulness practice offered, teachers in both classrooms did as well. Just as students were excited to share their prior knowledge, students were equally as excited to learn more. Nearly every lesson had multiple written or verbal responses mentioning how much fun students were having and how they enjoyed it. In the teacher interviews, Teacher A expanded on this: "I noticed some of my students that have a harder time staying on task did stay on task while you were teaching because they were interested and learning something new" (Interview, May 23, 2019). All students were paying attention and doing their best to learn and apply all information presented. Comments from Teacher B also showed how they were taking it

even further than participation within my lessons. She told me during the interview that her students asked to do shavasana or “meditation time” at different times throughout the day and that some would request it specifically when they felt the class was getting out of hand. She went on, “They would ask, a couple of them, ‘Can we do [shavasana] right now? It’s kind of crazy in here’... Then they realize that... other kids are having a hard time but they have a strategy that they could use together” (Interview, May 23, 2019). Again, this relates to other findings such as ownership and self-regulation and ties into the classroom community aspect as well.

Community

When it comes to integrating yoga and mindfulness into the early childhood classroom, community can be a large factor in the outcomes of such practices. However, this thesis also demonstrated that yoga and mindfulness have powerful impacts on the classroom community. As the knowledge portion of these findings shows, these students in particular were not strangers to yoga or mindfulness. This allowed students to take risks and be vulnerable with one another, knowing that they were being asked to do something they had done before (or their classmates had done before) and that had been successful and/or beneficial for them in the past. Further, their teachers and adult role models were taking risks and practicing mindfulness and yoga with them. The resources within their classroom also comforted students that yoga and mindfulness were meaningful practices they could keep using and had support for doing outside of these lessons taught. As previously mentioned, students in both classrooms readily created poses during the lessons and shared with classmates. These practices became more than learning and doing together; students were creating together. This also influences students to see each other as equals. Students were as open to teach each other as they were to learn from each other and had no hesitation when any student volunteered to take on one of these roles. On the day of the last

lesson, the benefits of yoga and mindfulness for classroom community really shone through.

After doing balance poses connected with linked arms in a large circle, students commented that doing yoga together made them feel “warm,” “strong,” and “like you could do anything.” Some students tried to pull others down, and one student reflected it “felt stronger when working together.” This response was not exclusive to the day we did poses all together with linked arms, though. Several reflections and responses throughout the lessons mentioned that their favorite poses and breaths were ones where “we did it all together.”

Self-Regulation (Awareness and Ownership)

A primary focus of this project was exploring how yoga and mindfulness could support student self-regulation. The students showcased self-regulation in two specific ways: awareness and ownership. Self-regulation requires first an awareness of our own minds and bodies, which we hope to foster with yoga and mindfulness. This awareness showed itself in more than just the breaths and poses asked of students. Students would enter the classroom for these lessons requesting certain poses, such as the “nothing pose” when they were tired from recess. This led to ownership once students recognized that they had the power to use what they had learned. The teacher in Classroom B also said in her interview that one morning a student requested a breath for the class to calm down, which meant this awareness of behaviors and how yoga and mindfulness can help reached beyond the time dedicated to this project. There are also cases of this ownership mentioned earlier in this project including the student who told her brother he needed to calm himself down and recognized the power we have to control our own reactions, students who mentioned doing poses at home or teaching others, and one student who shared that she tries doing anchor breaths and the five finger breath in bed to either start or end her day. This awareness began the very first lesson. Responses about what students liked after the first day of

practice included comments like “It made me happy” and it was very “relaxing.” It took no time for these students to be reflecting about how yoga made them feel, and this language about relaxing and these practices being calming continued throughout the entire project. Soon after, they applied yoga and mindfulness to other parts of their day. In the teacher interviews, teachers discussed the idea of autonomy with this. Teacher A stated, “They’re at an age where it’s hard for them to verbalize all the time how they feel. So, it gives them something to do instead of having to say ‘I feel sad because...’” (Interview, May 23, 2019). Yoga and mindfulness practices bring back a sense of that ownership, or power, over their own being and allows them to think and respond to their own behaviors or feelings in a way that does not worsen them or hurt others.

When I introduced this project, I explained yoga and mindfulness in relation to church and religious practice, as this project took place in a private Catholic school. I compared the two, saying “Just as prayer requires thought and quiet so it is possible to hear God and for God to hear the prayer, mindfulness requires thought and quiet so we can hear our own bodies and minds.” When students heard this, they instantly quieted and serious expressions fell over their faces. It was clear that many of the students understood self-regulation when it comes to church, which meant they could also comprehend self-regulation themes in yoga and mindfulness.

During the lessons, the impacts yoga and mindfulness had on self-regulation were almost immediate. Classroom B was quite rowdy on the second day when they began creating their own poses and sharing, but when we started practicing anchor breaths the entire class became very quiet and calm. The day of the body scan, students also noticeably slowed down and quieted down as they laid on the floor and breathed with awareness. On another day, when we completed mindful walking, the entire class in Classroom B was quiet and serious and listened carefully as they moved slowly. Researchers and students alike reflected how “peaceful” and “relaxing” and

“magical” it was. On the days where shavasana was practiced, it was also noted that the most energetic and talkative students were the most still in this pose. Yoga and mindfulness are not just practices for those who can already sit still and be patient; these are practices that all students can participate in and apply to their own experiences in various ways.

CONCLUSION AND IMPLICATIONS FOR PRACTICE

Throughout this thesis project, the student work and responses aligned with several themes supported by the literature. The first research question was how yoga and mindfulness influence student self-regulation, which was explored throughout the findings and found to be reflective of past research such as that of Razza, Bergen-Cico and Raymond (2013). Razza, Bergen-Cico and Raymond (2013) reported, “...our results suggest that mindfulness-based practice, when implemented daily, has the potential to support self-regulation across a broader context than more academically-focused preschool curricula” (p. 9). Self-regulation was fostered through mindfulness practices in this thesis, and children utilized self-regulation tools they learned through these practices during the lessons and at other times. The classroom community was also positively impacted via these practices, which related to research question two: what effect do yoga and mindfulness have on classroom community? Students took ownership over their learning, shared with one another without judgment, and took the risks involved with trying new poses and breaths while by each other’s side. The overall classroom community felt strengthened during these lessons and the practices introduced gave students the language to discuss mindfulness with peers and people at home. The third research question asked how incorporating yoga and mindfulness changed relationships within the classroom. Every lesson involved students taking on the roles of teacher and learner, but no student was ever considered

at a different level. Yoga and mindfulness are practices anyone can participate in, but there are no benchmarks for who is breathing better or stretching more successfully. No student was left out and no student had to compare themselves to anyone else. This in itself showed that the relationships between students were peer level in a non-competitive way. Depending on prior classroom community experiences, this could invoke change for student relationships. As for teacher-student relationships, the teachers actively participated with students in this project. This created a similar effect and put students and teachers on more of a peer level where everyone was learning and practicing together.

The fourth research question centered on the differences students saw in themselves after doing yoga and the differences others saw in them. Student responses discussed in the findings demonstrate that students felt emotional change during the practices and felt calm, relaxed, and happy after doing yoga. The teacher interviews reflected that teachers noticed more self-regulation and advocacy for using mindfulness when it seemed beneficial. A limitation for this research study was the short length of time, as it was completed over a two week period. Studies over longer lengths of time may impact changes in behavior over time.

In summary, this thesis project had the goal of exploring the effects of yoga and mindfulness on self-regulation and classroom community. Through six lessons of yoga and mindfulness, collecting and noting student written and verbal responses, and conducting teacher interviews, researchers were able to see such effects. Self-regulation and classroom community were enhanced when yoga and mindfulness were introduced in the classroom. Engagement and prior knowledge were very present which made implementation fairly easy. Given the findings of this study, these practices can aid in community building as well as give students ownership over their emotions and reactions or at least provide tools to help them cope with stress. It is

hoped that more classrooms will include mindfulness and yoga practices with students of all ages, especially those at an early elementary level, in order to provide ways for students to navigate responding to their own feelings and behaviors. After seeing the great engagement and positive benefits of trying yoga and mindfulness in these kindergarten classrooms, I will advocate for these practices in my classroom and the schools where I work. I would recommend that future research take place not just at the class level but at the school level or among multiple grade levels within the same time period and study. There are more data to be found regarding age and the effects of mindfulness on self-regulation, and implementing yoga and mindfulness lessons in more than one classroom could go further than impacting classroom community but also impact school community. As future research continues to emerge, the themes of self-regulation and classroom community will likely shine through and the benefits of yoga and mindfulness will become clearer. With more research and time, hopefully yoga and mindfulness can become widely spread practices that enrich the well-being of students, teachers, and communities across the world.

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Appendix A

Teacher Interviews

1. What differences (if any) in student behavior did you see when yoga and mindfulness was introduced and after participation with it?
2. How do you think integrating yoga and mindfulness into your classroom affects your classroom community?
3. Did you see any changes in self-regulation among your students after the yoga and mindfulness practices? (Examples of self-regulation may include managing emotions, handling frustration, controlling impulses, etc.)

Appendix B

Student Questions

1. How do you feel after doing yoga?
2. What is your favorite pose or breath we did today?
3. What would you tell others about what we are doing or learning?
4. Have you taught anyone else a yoga pose or breathing technique we have done? Who? Why?

Appendix C

Lesson Plan Outline

Lesson 1 BREATH Intro: “Hi everyone, I’m Shaylyn and I’m going to be doing some yoga with you this week and next week. Can you stretch two hands all the way above your head if you’ve done yoga before? Now stretch to the left, stretch to the right... and put your hands in your lap. In yoga, we are trying to connect our bodies with our minds. The best way to do that is with our breath. Can you all take a deep breath in with me? And deep breath out. Okay you all seem almost ready for yoga... but there’s one more thing. When we’re doing yoga and mindfulness, it can be really special. But to make it special, we have to be quiet. When we’re in church or when we pray, we’re quiet, right? We’re quiet so we can hear God and God can hear us. Well, when we do yoga and mindfulness we have to be quiet so we can hear ourselves and hear what our bodies and minds are telling us. Put one finger on your head and say in your own mind, “I promise to make this special.”

Yoga: Breathing with movement

-sun salutations (Everyone stand up, reach your arms to the sky and breathe in and breathe out, bring your hands to your heart/one more time, reach your arms to the sky, breathe in and this time breathe out and come all the way down into a forward fold. Step your feet back and softly put your knees down and make a table with your body so your back is flat)

-Cat/cow sequence (Now we’re going to act like some animals, but remember our focus is on our breath, okay? When you breathe in, curve your back and stick your head out like a cow. And when you breathe out, arch your back up like a cat and tuck your chin in. We’re going to repeat this one a few times, so breathe in, stick your head out like a cow. Breathe out, arch your back like a cow. In like a cow, out like a cat. Do it once more on your own. Awesome. Come back to our tables and stretch all the way back into what is called child’s pose. Take one deep breath in and out.

Mindfulness/Breath(s):

-anchor breaths/sitting practice (Now everyone sit up, give someone close to you a high five for the awesome cats and cows we just did! Now pat yourself on the back. And now find a good quiet sitting posture and sit comfortably. The mindfulness practice we’ll do today is the anchor breath. There are 3 different anchor breaths you can choose from so I need you to listen carefully. Number one is putting your hand(s) a little bit in front of your mouth so you can feel your breath. Everyone try that with me. Good. Number two is putting your hand(s) over your heart. Do that with me. And number three is putting your hand(s) on your stomach. Now that we tried all three of those, I want you to pick your favorite one and sit up straight. If you want, you can close your eyes and we’re going to take a couple minutes to breathe together.

Reflection: Draw a picture of yourself using your favorite anchor breath spot or write about your favorite anchor breath to use.

Question: How do you feel after doing yoga today?

Lesson 2 STRENGTH “Do you remember yesterday how I said yoga is connecting your body and your mind? Well connecting our bodies with our minds makes us really strong, so today’s yoga is going to be a bunch of poses that take some strength. Are you ready to be strong? Alright, everyone stand up and make sure you have some room around you.”

Yoga: Strength

-warrior sequence (We’ll start with a pose called warrior. Step back with your right foot and put your arms up, strong and steady. Think to yourself if an elephant were running toward me, would he run me over? Or could I stop him? That’s how strong of a warrior you want to be. Now we’re going to turn to face the side and put our arms out flat. This is warrior 2. We’ve still got to be strong here, so could that elephant run you over? Wow you all are super strong warriors. But there’s one more warrior pose and it’s the hardest one. We’re going to go back into warrior one first. Now shift your weight onto your front foot and start to balance on that front foot while you put your arms out straight and pull your back leg off the ground. Stay strong! Wow, you all did amazing. We’re going to move on, so show me you’re ready and stand up straight!

-plank into upward dog (We’re going to breathe in like we did yesterday, arms up and breathe out bend all the way over and touch your toes if you can. Put those hands on the floor and step those feet back into downward dog. Stretch your arms out along your ears and push your hips toward the sky! Now we’re going to shift into upward dog, which requires us to be strong again. Come down, flip your feet over so the tops of your feet are on the ground and hold yourself up with your arms. Your legs should be mostly off the ground, just your feet and hands touching.)

--if time: bridge (push heels into ground to get up)

Mindfulness/Breath(s): Today’s mindfulness is the flower breath. There are a bunch of beautiful flowers growing outside now that it’s spring. I want you to picture the most beautiful flower you can think of, okay? You can close your eyes if you’d like. Now that you’re picturing that flower, can you pretend you have it in your hand and put your hand out in front of you? That flower is not only pretty, it smells good too! Breathe in and smell that flower! Now breathe out and lightly blow on its petals. Breathe in and smell its sweet scent again, and breathe out. One more time... Let’s do another breath: pretzel breath. Reach both arms out in front of you, point your thumbs down, cross your wrists and interlace your fingers and fold them into your chest. You can also cross your legs if you’d like.

Reflection: Draw or write about the yoga pose that makes you feel the most strong.

Question: What pose do you feel the most strong doing? What would you tell others about what we are doing or learning?

Lesson 3 REST “We’ve been learning about yoga connecting our bodies and our minds, but an important part of yoga is rest. Sometimes our bodies need to rest and sometimes our minds need to rest, right? Today we are going to practice resting both our bodies and our minds.”

Mindfulness/Breath(s): 5 finger breath

Yoga: Rest/patience

-Child's pose

-Alligator

-Shavasana

Reflection: Write about a pose or a breath that can help your body or your mind rest. Draw a picture and then write to someone you know telling them how to do it.

Question: Have you taught anyone else a yoga pose or breathing technique we have done? Who? Why?

Lesson 4 BALANCE “Today I want to begin with a breath. Is there a breath we haven't done yet that you know?” (Take volunteers to lead a breath, backup: snake breath)

Mindfulness/Breath(s): Snake breath (hiss when breathing out)

“Sometimes we can feel off-balance, right? Sometimes our bodies are going all over the place, sometimes our minds are going all over the place. Yoga can help us with our balance too, so today we're going to work on that.”

Yoga: Balance

“Okay stand up y'all and find some room!”

-bring right leg up to 90 degrees, lightly have fingertips underneath thigh/knee (repeat other side)

-tree pose (both sides)

-prayer squat

-crow (look down or ahead, not at feet)

-warrior 3 (use warrior 1 to get into it)

-eagle or dancer poses if time

Reflection: Write about your favorite yoga pose we have done so far. What is it? Why is it your favorite pose?

Question: What is your favorite breath we have done so far? We've done anchor breath, flower breath, 5 finger breath, pretzel breath

Lesson 5 BODY/MIND “Yoga means connecting our bodies with our minds. In order to do this, we need to think about our bodies and focus on how they feel.”

For this, we're going to start with mindful walking. Have you done this before? We need to make sure we're really quiet so we can make this special and make sure everyone can listen to their own bodies and minds. I'm going to lead us so I'll do a little talking but that's it.

Mindfulness/Breath(s): Mindful walking

Then we get to go back to nothing pose today!

Yoga: Body Scan

-shavasana/corpse pose (Feel how air feels on exposed skin, squeeze hands and release, curl toes and release, tense up whole body, release, take deep breath)

Reflection: Draw a diagram and write about one part of your body you noticed when we did a body scan or the mindful walking.

Lesson 6 CONNECTING WITH OTHERS “Yoga and mindfulness also are ways to connect with other people.”

Yoga:

Warrior 3 (slowly shift weight onto front foot, lean chest forward as you extend your arms out front and lift back foot parallel to the ground)

Get in circle, arms on everyone’s shoulders, lean forward and put right leg up to back (warrior 3)

Chair together

Mindfulness/Breath(s): Sending Loving Kindness (think of a person to send loving kindness to, then send loving kindness to ourselves)

May (they/I) be safe, may I (they/I) be loved, may (they/I) be happy.

Reflection: Write about how it felt to do yoga with your classmates.