

**FACTORS AFFECTING
STUDENT ACHIEVEMENT
AND
RELATED BEHAVIORS**

SUMMARY AND CONCLUSION

*Dr. Janet Buckenmeyer
Purdue University Calumet*

*Dr. David Freltas
Indiana University South Bend*

January 1, 2007

OVERVIEW

This study explores the relationship between yoga participation in schools and the effects on students' academic achievement, general health, personal attributes and relationships.

METHODOLOGY, DESCRIPTION AND DESIGN

Survey research methodology was utilized in this study to determine the effect of yoga on students' academic achievement and related behaviors.

Six survey instruments were created to elicit responses. Two surveys captured reflections from Kindergarten through Grade 2 students before (pre) and after (post) a series of yoga experiences. Two additional surveys captured pre and post data from students in grades 3-5. Teachers and parents/guardians also completed surveys regarding the effect of yoga on participating students.

Table 1 identifies each survey, lists the total number of questions in each survey, the total number of potential responses per survey and the corresponding totals.

*TABLE 1
NUMBER OF QUESTIONS BY SURVEY AND
TOTAL NUMBER OF POTENTIAL RESPONSES*

SURVEY/ CATEGORY	TOTAL NUMBER OF QUESTIONS	TOTAL NUMBER OF POTENTIAL RESPONSES
Grades K-2 Pre-Yoga Instruction	37	74
Grades K-2 Post-Yoga Instruction	49	98
Grades 3-5 Pre-Yoga Instruction	37	148
Grades 3-5 Post-Yoga Instruction	49	196
Teacher's Survey	21	84
Parent's/Guardian's Survey	21	84
TOTAL	214	684

Each survey contained questions related to one of four categories: academic achievement; general health; personal attributes; and relationships. Subcategories are listed next to illustrate topics contained in each of these broad categories.

Academic Achievement – grades, homework, academic challenges, concentration, attention to detail

General Health – stress, posture, absenteeism, nervousness, fitness, energy level

Personal Attributes – self-confidence, behavior, attention span, self-esteem, personal responsibility, general demeanor, personal pride, sense of humor, creativity

Relationships – conflict resolution, taking care of one's own problems, getting along with classmates and teachers

The specific number of questions in each category, by survey, is detailed in Table 2. Responses to open-ended questions provided additional invaluable information.

TABLE 2
NUMBER OF QUESTIONS BY CATEGORY

SURVEY/ CATEGORY	ACADEMIC ACHIEVEMENT	GENERAL HEALTH	PERSONAL ATTRIBUTES	RELATION- SHIPS
Grades K-2 Pre	14	6	12	5
Grades K-2 Post	16	6	20	7
Grades 3-5 Pre-	12	7	13	5
Grades 3-5 Post	17	6	19	7
Teacher's Survey	8	3	7	3
Parent's/Guardian's	8	3	7	3

The Kindergarten through grade 2 surveys asked students to respond *yes* or *no* to a series of statements related to these categories. The grades 3-5 surveys asked students to *strongly agree*, *agree*, *disagree* or *strongly disagree* to categorically related statements. Teachers and parents/guardians were asked to reflect on the effect of yoga on students - *strongly positive effect*, *positive effect*, *negative effect* or *strongly negative effect*.

Teachers, parents/guardians and K-5 students completing the post surveys were also invited to react to an open-ended question about the effect of yoga on academic achievement and related behaviors,

SURVEY RELIABILITY

For each of the areas measured on the survey (academic achievement, general health, personal attributes and relationships), summary data were obtained and reliability analyses were conducted. The reliability analyses are critical to determine whether the same sets of survey items, would elicit similar responses, if the same questions were recast and re-administered to the same respondents. Data derived from these surveys are determined to be reliable only when they provide stable responses over repeated administrations.

Reliability is reported on a scale from 0 to 1.0. A score of 1.0 means the instrument has perfect reliability. Thus, the closer the reliability is to 1.0, the better. By scientific convention, reliability coefficients lower than .60 is common in beginning or exploratory research. A .70 is considered "adequate." A "good scale" is at least .80. Over .80 is considered exceptional.

The reliability coefficient for the student survey was .92. Reliability coefficients for the teacher and parent/guardian surveys were above .83. The surveys in this study yielded, therefore, highly dependable data.

SURVEY RESPONSES

Six schools from the United States and Canada, as listed in Table 3, responded to the surveys. Three of the six schools completed all surveys. All schools completed the four student surveys.

Four hundred seventy-seven surveys were returned from all schools. Table 4 lists the specific number of returns for each survey.

TABLE 3
SCHOOL RESPONDERS BY SURVEY

SCHOOL/SURVEY	K-2 PRE	K-2 POST	3-5 PRE	3-5 POST	TEACHER	PARENT
Cameron Public School North York, Ontario Canada	X	X	X	X	X	X
The Children's House Montessori School - Miami, Florida	X	X	X	X		
PS 187 New York, New York	X	X	X	X		
PS 242 New York, New York	X	X	X	X		
Sand Creek Middle School Albany, New York	X	X	X	X	X	X
Spruce Street Elementary School Sauk City, Wisconsin	X	X	X	X	X	X

TABLE 4
NUMBER OF RETURNS BY SURVEY

SURVEY	NUMBER OF SURVEYS RETURNED
Grades K-2 Pre-Yoga Instruction	169
Grades K-2 Post-Yoga Instruction	45
Grades 3-5 Pre-Yoga Instruction	108
Grades 3-5 Post-Yoga Instruction	81
Teacher's Survey	8
Parent's/Guardian's Survey	66
TOTAL	477

DEMOGRAPHIC INFORMATION

Each survey requested demographic information from respondents. The results are presented in the following tables by responder type – students, teachers and parents/guardians.

DEMOGRAPHIC DATA OF STUDENT RESPONDERS (TABLES 5-7)

The majority of student responders in grades Kindergarten through grade 2 were age 6 for both pre and post surveys. They were appropriately distributed by gender and race. The majority of student responders from grades 3 through 5 were white females. They were somewhat evenly distributed over the age ranges of 8 through 12.

TABLE 5
AGE OF STUDENT RESPONDENTS BY SURVEY (%)

SURVEY/AGE	5	6	7	8	9	10	11	12
Grades K-2 Pre-Yoga Instruction	15	58	17	7	1	0	0	0
Grades K-2 Post-Yoga Instruction	14	49	17	17	2	0	0	0
Grades 3-5 Pre-Yoga Instruction	0	0	0	22	18	14	25	20
Grades 3-5 Post-Yoga Instruction	0	0	0	25	22	10	22	20

TABLE 6
GENDER OF STUDENT RESPONDENTS BY SURVEY (%)

SURVEY/GENDER	MALE	FEMALE
Grades K-2 Pre-Yoga Instruction	45	55
Grades K-2 Post-Yoga Instruction	44	56
Grades 3-5 Pre-Yoga Instruction	39	61
Grades 3-5 Post-Yoga Instruction	37	63

TABLE 7

Race of Student Respondents by Survey – unavailable in this version of study

DEMOGRAPHIC DATA OF TEACHER RESPONDERS (TABLES 8-13)

Teacher responders were overwhelmingly female (87%) and white (75%). (No teacher responders were African-American, Asian or Native-American.) Most (63%) had been teachers for 1 to 9 years, while the remainder had a minimum of 16 years of teaching experience. A majority (63%) had some active engagement with yoga personally.

TABLE 8
YEARS OF TEACHING (%)

1-3	4-9	10-15	16-20	20+
38	25	0	13	25

TABLE 9
HIGHEST EARNED DEGREE (%)

BACHELOR	BACHELOR+	MASTERS	MASTERS+	DOCTORATE
25	38	0	38	0

TABLE 10
GENDER OF TEACHER RESPONDENTS (%)

MALE	FEMALE
13	87

TABLE 11
RACE OF TEACHER RESPONDENTS (%)

WHITE	AFRICAN-AMERICAN	HISPANIC	ASIAN	NATIVE-AMERICAN	OTHER
75	0	13	0	0	12

TABLE 12
YEARS OF ACTIVE ENGAGEMENT WITH YOGA (%)

0	1-2	3-4	5-6	7-8	9+
38	25	25	0	0	12

TABLE 13
PRIOR YOGA EXERCISE IN CLASSROOM WITH STUDENTS PRIOR TO OFFICIAL START (%)

NEVER	ONCE PER WEEK	TWICE PER WEEK	DAILY
0	25	38	37

DEMOGRAPHIC DATA OF PARENT/GUARDIAN RESPONDERS (TABLES 14-18)

Parent/guardian responders were mostly white (80%) females (83%). Thirteen percent have annual family incomes up to \$30,000 and 54% reported annual family income over \$75,000.

Their previous experience with yoga was limited. In fact, 69% had no previous experience and 89% had fewer than two years of experience. Their children, as reported by 90% of the parents/guardians, had no or minimal prior experience with yoga.

TABLE 14
PARENT'S/GUARDIAN'S PREVIOUS
EXPERIENCE WITH YOGA IN YEARS (%)

0	1	2	3	4	5	6	7	8	9	10
69	20	5	3	0	0	0	0	0	0	3

TABLE 15
STUDENTS' PREVIOUS EXPERIENCE WITH YOGA PRIOR TO
THE OFFICIAL START AS REPORTED BY PARENT/GUARDIAN (%)

NONE	MINIMAL	SOME	EXTENSIVE
77	13	10	0

TABLE 16
GENDER OF PARENT/GUARDIAN RESPONDENTS (%)

MALE	FEMALE
17	83

TABLE 17
RACE OF PARENT/GUARDIAN RESPONDENTS (%)

WHITE	AFRICAN-AMERICAN	HISPANIC	ASIAN	NATIVE-AMERICAN	OTHER
80	2	3	11	0	3

TABLE 18
ANNUAL FAMILY INCOME OF PARENT/GUARDIAN RESPONDENTS (%)

0-\$10,000	\$10,000-25,000	\$25,000-35,000	\$35,000-50,000	\$50,000-75,000	\$75,000-100,000	\$100,000+
4	9	2	9	22	24	30

EFFECT OF YOGA INSTRUCTION ON ACADEMIC ACHIEVEMENT, GENERAL HEALTH, PERSONAL ATTRIBUTES AND RELATIONSHIPS

Tables 19-21 display the results of responses from teachers, parents/guardians, and students.

Teacher responders unanimously (100%) agreed on the positive effects of yoga. Parents/guardians responders, while not unanimous, were also overwhelmingly positive. Positive effect responses across all categories were over 90%. Their reflections are impressive.

Responses by students were similar. Positive effect responses were in a range between 75% and 93% across all categories. Again these overwhelming positive reactions are noteworthy.

TABLE 19
THE EFFECT OF YOGA INSTRUCTION ON STUDENTS BY CATEGORIES ACCORDING TO TEACHER RESPONDERS (%)

	ACADEMIC ACHIEVEMENT		GENERAL HEALTH		PERSONAL ATTRIBUTES		RELATIONSHIPS	
	+	-	+	-	+	-	+	-
EFFECT	+	-	+	-	+	-	+	-
%	100	0	100	0	100	0	100	0

TABLE 20
THE EFFECT OF YOGA INSTRUCTION ON STUDENTS BY CATEGORIES ACCORDING TO PARENT/GUARDIAN RESPONDERS (%)

	ACADEMIC ACHIEVEMENT		GENERAL HEALTH		PERSONAL ATTRIBUTES		RELATIONSHIPS	
	+	-	+	-	+	-	+	-
EFFECT	+	-	+	-	+	-	+	-
%	90	10	94	6	90	10	94	6

TABLE 21
THE EFFECT OF YOGA INSTRUCTION ON STUDENTS
BY CATEGORIES ACCORDING TO K-2 RESPONDERS (%)

EFFECT	ACADEMIC ACHIEVEMENT		GENERAL HEALTH		PERSONAL ATTRIBUTES		RELATIONSHIPS	
	+	-	+	-	+	-	+	-
PRE (%)	77	23	76	24	85	15	87	13
POST (%)	80	20	87	13	79	21	86	14

TABLE 22
THE EFFECT OF YOGA INSTRUCTION ON STUDENTS
BY CATEGORIES ACCORDING TO 3-5 RESPONDERS (%)

EFFECT	ACADEMIC ACHIEVEMENT		GENERAL HEALTH		PERSONAL ATTRIBUTES		RELATIONSHIPS	
	+	-	+	-	+	-	+	-
PRE (%)	77	23	84	16	82	18	87	13
POST (%)	75	25	85	15	77	23	93	7

In some cases, positive effect responses by students decreased when comparing pre and post yoga data in Tables 21 and 22. This phenomenon is probably due to the fact that different students completed the pre survey and post survey. The differential is statistically insignificant.

NARRATIVE RESPONSES FROM STUDENTS, TEACHERS AND PARENTS/GUARDIANS TO OPEN-ENDED QUESTIONS

All legible responses to the open-ended questions are listed below. Each bullet point is a different responder. Narrative responses are generally positive across all responder groups.

K-2 STUDENTS

Note: Because some children in this age range are unable to write, their comments were written by their teacher. Most spelling and grammatical errors have been corrected.

Open-Ended Question Prompt: *What changes have occurred in your grades, behavior, concentration, self-confidence and attitude since you started yoga? Please provide specific examples.*

- My posture is better.

- I like to do the poses.
- I concentrate more.
- I like the snake pose. I like to ssssss. Yoga is fun and it feels good. I use to fall asleep. Now that I'm 6, I just close my eyes and rest. Sometimes I do yoga at home with my sister. We play down dog down and bark, and my mom says "I thought yoga was quiet time" and we keep barking and barking.
- Yoga helps me feel better.
- It helps me by making me happy and proud and strong!
- I do think yoga has changed my behavior.
- I don't know how yoga helped me.
- I'm better able to concentrate. Better doing my work.
- I think yoga is good because it helps me learn a lot and be healthy.
- I have good grades in school and feel happy when I am in school.
- Help me lose wait [weight].
- Yoga makes me healthy and be strong.
- Yoga makes me feel good about myself. Yoga makes me feel happy and strong.
- Yoga did not help me!
- The flamingo - it is fun to stand on one leg - I like flamingo. Yoga just is fun and relaxing. I like getting the mats out and I even feel asleep.
- I don't see any changes.
- I like the pose because I get strong. It makes me feel happy.
- Lion - bears. I like to roar and it is cool to do that.
- The shake like Jell-O because I like to move around and I like the lemon and I like to wiggle my toes. I like the music. I listen to music at bedtime too.
- It was the breath in, breathe out because it helped me feel better.
- I'm better to calm down. I make me focus. I feel healthy. I feel ok. I feel excited. I feel happy. I feel better. I feel strong.
- I feel no changes.
- I like the lemon toes because I like to drink lemonade when it is hot and wiggle my toes. Yoga is just fun. I like helping my teacher get the mats out and sometimes I help pass out the ducks to put on tummies.
- My behavior has changed.
- No, I am not better.
- The mountain - all you have to do is stand still. Yoga makes me feel good and nice and happy.
- Quiet time and yoga makes me happy. I like the flamingo pose the best.
- The turtle pose. When I say "hello."
- Yoga it likes calms me down and I like the breath s-ahh, it feels good.
- I pay better attention at school when I do yoga and that is nice. I like all the poses. The quiet time makes my brain rest and it feels good.
- I like the butterfly pose and the story.
- Yoga helped me calm down.
- It made me strong.
- I wasn't here that day.
- Yoga makes me feel better and strong.
- Yoga makes me get energy.
- I can calm down and make energy.
- I'm better

- It helps me calm down when I have anger.
- Yoga makes me feel relaxed and it feels good.

3-5 STUDENTS

Open-Ended Question Prompt: *What changes have occurred in your grades, behavior, concentration, self-confidence and attitude since you started yoga? Please provide specific examples.*

- I have become more calm, confident and kind since we have done yoga. Yoga helps me concentrate and it makes me calm. I feel really good after yoga. I really like yoga!
- I think behavior in the class has changed. It has improved after yoga because we are calm, relaxed and ready to learn.
- When I do yoga it makes me calm down and I like it.
- Nothing that I can think of at this moment. But maybe later I can think of something. Also sometimes yoga is relaxing.
- In yoga my grades have gone a little bit better. My behavior changed in a good way. I'm still struggling with my concentration. I don't usually give myself confidence. My attitude has been better with yoga.
- Nothing has changed since I have done yoga that is why I put disagree for all of the yoga questions.
- Nothing has changed because of yoga.
- It has helped me concentrate and pay more attention.
- My grades have risen slightly. I hardly ever get in trouble. I concentrate the same and my self-confidence is high and my attitude is normal.
- I don't think it really changed because I hardly did it.
- Nothing has really changed except that I can concentrate a lot better.
- None
- I have become more confident.
- My problem solving has improved a lot.
- I feel that the class is calm because yoga calms people down.
- I don't just, out of the blue, scream at someone, I stay calm. I am getting better grades and I participate more. It helps me when my teacher made a yoga zone in our room because I can go there during free time and silent reading time to relax and get to know myself and it helps me lower my stress level and I am strong and confident.
- I have got better marks and I am more flexible to do things and I feel better about myself and I can do more things!!!

<u>Before</u>	<u>After</u>
Glum	Happy
Not Flexible	Flexible
Can't think	Can think

- Nothing
- Well my class hasn't been doing that much yoga, but I guess I could say I did change a little. It has made me calmer and less stressed. I wasn't that stressed, but it has made me a little less stressed. I like doing yoga, but it hasn't changed my grades. I feel I am getting somewhat stronger about myself. I hope I will continue doing yoga, because it is really fun!

- Not much, but I do feel better and more relaxed if I do yoga. It kind of helps me out during hard times.
- Not many changes have occurred since taking yoga. However, I do feel more relaxed. Also, I feel like it's easier to study.
- I have noticed absolutely no changes at all! I actually found yoga a waste of time.
- Nothing has changed.
- I have strongly improved my self-confidence to take tests and get good grades since yoga.
- My grades are a little better. Yoga helped me a little in school.
- Yoga helps me concentrate a lot and it makes me feel better about myself and my attitude is fine.
- Nothing has changed.
- No, nothing has changed.
- I have not changed.
- No, I don't think any of this has changed about me.
- I think it got a bit better but still we need more practice because yoga makes me really sleepy and then I don't pay attention. I always have confidence in myself at school. I liked it better before we did yoga.
- I'm more calm. I'm not as stressed when finals/tests come.
- Nothing really has changed.
- The changes I made are in my behavior and self-confidence. Instead of being not so confident in myself, after yoga, I feel like I can do anything.
- My behavior has changed a lot because I use to be a snobby brat. Now, just a little. My self-confidence is much worse. My grades are really the same because I don't show much effort.
- When I started yoga my grade in Spanish has improved. I have also been doing good in gym.
- Honestly, yoga hasn't done anything for me. It doesn't relax me, make me feel stronger or anything. I just enjoy doing yoga. It hasn't helped me.
- I am calm. I am relaxed. I can take a test without being nervous.
- It made me more calm and happy and now I do it before competitions and it makes me feel strong and happy. After learning yoga, I started to encourage my parents and my friends to do it. It brought down their stress levels and made them very calm.
- A little bit because some of the boys did not change. I don't really know about other people but I started liking yoga and teaching it to my mom. When I am tired in class, I really like doing yoga especially outside. My classmates laugh in yoga but after, it seems they calmed down and enjoyed it. I know I did. I would actually like to do more yoga in class!
- When I get stressed out, I right away find a quiet spot and listen to music and then do yoga. It has also made me more calmer and more patient. In school. I find that I am paying attention more and also raising my hand. Yoga has really not changed my life but it has helped my personality. I feel my confident about myself.
- No, nothing happened.
- Nothing has changed.
- I concentrated more at class time. My grades have been improving and I am nice to friends, family and other people around me. I'm very confident about myself. I am proud of myself.
- I think before yoga, the class felt worse than before yoga. Nothing has changed in my grades because I am a good student. I think yoga has helped everyone concentrate.

- Usually, when we have yoga, I get excited and jumpy. Yoga makes me feel confident but I get very excited and it doesn't let me concentrate better. Yoga makes me feel jumpy and excited because when I do yoga it makes me feel like I'm going to laugh because I get twisted.
- Yoga has changed my behavior and my attitude and my concentration on the carpet. I like yoga.
- Nothing has really changed except that is a little bit easier to concentrate. Yoga is sometimes fun and relaxing. I don't really think much has changed for me. It might have changed for other students but not much for me.
- I think the class is better since we started doing yoga.
- It has felt more calm. I also think people are more relaxed, good behavior, not really getting into trouble like before.
- I think yoga made my classroom a better place because before when we did community circle, I said I think it wasn't a very good classroom but after we started yoga, I thought this is a way better classroom and I like it because before people were restless. I think yoga has made my classroom a better place.
- The changes that have occurred are: I have gotten better grades, I have concentrated better on my work, and I feel more confidence. I changed from a B to an A. I have gotten my work done faster. I have gotten more self-confidence that before. I really like yoga.
- Nothing has changed.
- I feel more calm since I started yoga.
- I feel more relaxed.
- The energy is higher. Some people who could not concentrate can.
- In my behavior, I have been more calm than I usually am after doing yoga. I feel less stress during the day after doing yoga.
- Sometimes, we behave better and sometimes not.
- When I started yoga, I thought it was not fun at all because whenever I do a stretch, I always crack something. My behavior is pretty good. But I laugh when somebody laughs. My grades did not change. This year I think nothing has changed.
- I mostly feel relaxed, more confident.
- I feel more relaxed because I like the eagle pose.
- Nothing has really changed except I feel more relaxed when I get out of yoga. I also feel more patient.
- In our school, we don't have grades. I think I have been behaving normally. I always concentrate in the work I do. I think I do stuff well and my attitude is happy.
- My behavior is better and more calm. My self-confidence is much better. I concentrate better and that helps me to my work. My attitude with my classmates is much better but the behavior with my mom, dad and sisters hasn't changed much.
- When I didn't do yoga my grades were low. Now that I'm doing it my grades are getting higher.
- The thing that changed is that my behavior is better than before and my grades are better.

TEACHERS

Open-Ended Question Prompt: *Have you observed significant changes in your students' academic achievement, behavior, self-confidence, stress level, and/or concentration since they began participating in yoga? Please share with us some specific examples of the changes that occurred.*

- Yoga really helped those children that were at risk - emotionally, behavior-wise, ADHD, low academic. It seemed to really help them calm down!
- I used the breathing -"take 5" - for the end of the year assessment I had to do and it really helped the children relax and I think it brought the scores up. At the Kindergarten level, not a lot of testing, but enough to stress the children and the teacher.
- I was a bit amazed how much the children took home [yoga]. Several said that they have to have quiet music and they do the lemon toes and breathe at bedtime.
- You forgot an important section - teacher's stress load! Yoga helped me be a better teacher as it helped calm me down and it helped me have more patience. On the days we did yoga, I always had a better day and it encouraged me to join a yoga class on Saturday mornings.
- They are excited to begin the day now because they enjoy movement. They are proud of their accomplishments.
- The students love the YogaKids program. They ask all the time if we are doing yoga today. It is such a great way to bond with the students. I also use it when there is some negative energy (i.e. fighting, stress) in the room. It is extremely helpful in letting it go. I am very impressed with the effects.
- I found that my students became very relaxed and focused after a session of yoga.
- I noticed that students were able to use the calming exercises when they needed to relax. Before tests, exercises helped students to concentrate and lower stress.
- I have been using yoga in the classroom for two years as an instructional tool. I have noticed that the students enjoy yoga since it brings movement and something different to class. They all respond very positively to yoga in our Spanish class. Some students view it as "play time" and don't always pay attention to learning Spanish in the activities, which can be frustrating. Since this "official" study was limited to six weeks, I feel the results are more limited. Given a longer period of time, I think you would see even better results.

PARENTS/GUARDIANS

Open-Ended Session Prompt: *Have you observed significant changes in your child's academic achievement, behavior, self-confidence, stress level, and/or concentration since he or she began participating in yoga? Please share with us some specific examples of the changes that occurred in your son or daughter.*

- I feel this helped him to deal more with stress. Helping him to deal with that problem also caused a positive effect on his attitude and he was able to focus better.
- Both my girls enjoyed yoga but really were not exposed to it that long.
- My daughter does dance lessons and when she did her recital, she was scared and nervous. She and three of the girls from her class started doing the yoga stuff and stretching and breathing and it calmed them down before the recital. Sometimes she tells her little brother to do some yoga stuff when he is being difficult.
- I do not know of any changes.
- My child enjoys the yoga positions and often shares them with our family. She has used the bunny breathing to relax at home and seems to find yoga a very enjoyable experience.

- She was scared when we had a tornado whistle go off. She was downstairs and while waiting she suggested we use breathing exercises to calm down.
- No, I didn't even know she was taking yoga. She is a positive child but I don't know how much of this can be attributed to yoga.
- I haven't noticed any changes in our child.
- I have not noticed any changes of significance and, if I did, how would I know if there were attributable to yoga when there are so many other outside influences at this point in his life.
- No, I have not observed any significant changes in classroom performance since she began yoga.
- Unfortunately, my child did not tell me when his yoga lessons started or ended, therefore, I was unaware of the time I needed to observe him. Needless to say, I did not notice any changes at all. I did ask him (after I received this survey) how he felt. He said after the class he was more relaxed but was back to his normal self a little while later.
- I have not noticed any change since the beginning of yoga. No impact on my child whatsoever.
- No changes.
- I have not observed any changes in my child's behavior, etc. Nothing stands out.
- Yes, I have. My child is more neat and relaxed and her concentration skills have grown stronger.
- Since the period my child participated in yoga was short (only six lessons), I hardly saw any significant changes in her.
- When he does yoga, his self-confidence improves. He becomes healthier and his attitude and posture changes.
- There have been no significant changes, however, she has been doing her homework more consistently and she attributes this to being more relaxed. She finds the breathing helpful.
- Her participation in the course was not long enough to create any specific changes. This was not a year-long commitment, only six weeks, one day per week.
- I observed that my son was always calmer and kinder after yoga. He was more helpful at home after some breathing.
- I did not see any changes in my child's behavior. It did help him with some flexibility and he did enjoy it.
- She enjoyed it. Thank you for offering it.
- It didn't seem to help my son academically.
- Nothing specific. She just seems more aware of the relationship that yoga has on all areas of her life, including mine.
- Not really. She never told me when yoga started and I really didn't see a lot of change. I saw a little change in her behavior and grades lately.
- I have observed no significant effects. In fact, until this survey, I was not aware that my son had been exposed to yoga in school.
- She always is happy and she shares yoga poses with me. After yoga, she doesn't have any stress and has better concentration. I'm very glad that she is learning yoga.
- In the beginning of the year, he told me school was too hard. He looked forward to the weekends and did not like Mondays. As the year went on, he would come home and get right to his homework. I had to remind him to study for tests, but as time went on, he would study on his own. His grades improved and I could give him a little space and treat him like a teenager instead of an elementary school student.

- She has had significant change in her academic achievement. This is the first year that she has done this well in school.

MAJOR CONCLUSION

The survey data included numerical representations of the effect of yoga on student achievement and related behaviors. Additional useful data emanated from the responders' open-ended responses. All responses were consistently positive.

While numerous conclusions evolve, the major research question posed in this study has been answered in the affirmative. Yoga has a significant positive effect on the academic achievement, general health, personal attributes and relationships of students in Kindergarten through 5th grade.

POSTSCRIPT

The researchers thank everyone who significantly contributed to this study. This research was possible because of their assistance, cooperation, kindness, compassion, professionalism and their overwhelming passion for yoga.

----- END OF 1st RESEARCH DOC -----