the school yoga project

Yoga as a Tool for Social Emotional Learning:
Evaluating the School Yoga Project Curriculum

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Background

School age children are prime candidates for what developmental psychologists call whole-child interventions, applications that develop physical, social, emotional, and cognitive skills. Social emotional learning (SEL) interventions integrate these developmental realms, fostering a child's capacity for self-understanding and self-regulation in order to achieve positive goals for herself and her community.

Informed by SEL theory, Little Flower Yoga has developed its School Yoga Project (SYP) curriculum to provide an engaging set of activities that are designed to encourage children to connect to their bodies, to the sensations they produce, and to the emotions that arise from these sensations. By observing internal changes while following external instruction in a social context, children may develop their capacity for intrinsically motivated self-regulation.

Research & Evaluation

Content analysis of SYP's teacher survey database is being employed as an evaluative tool to unpack and interpret SEL components of the program's curriculum. The database compiles responses to a standardized survey asking teachers to report their experiences teaching the curriculum. Teachers complete the surveys freeform, responding to open-ended prompts to describe each lesson's activities.

Systematic thematic analysis should reveal consistencies and discrepancies across teachers and schools, creating a data-backed framework to describe how teachers use the curriculum, how closely their teaching objectives mirror SYP program goals, and what outcomes are evidenced in the children's behavior.

Database

> 600 class entries	**24** New York City schools
21 yoga teachers	**18** months of data collection
Live document	Participants continually growing

Zones of Activity

5 Elements of The School Yoga Project

1 Connect
2 Breathe
3 Move
4 Focus
5 Relax

Preliminary Results

Analysis of the teacher survey database is currently on-going. The figures below describe some of the initial findings, the nature of the data, and how it is being organized. This reporting is based on **803** observations, **12%** of which have been multiply coded.
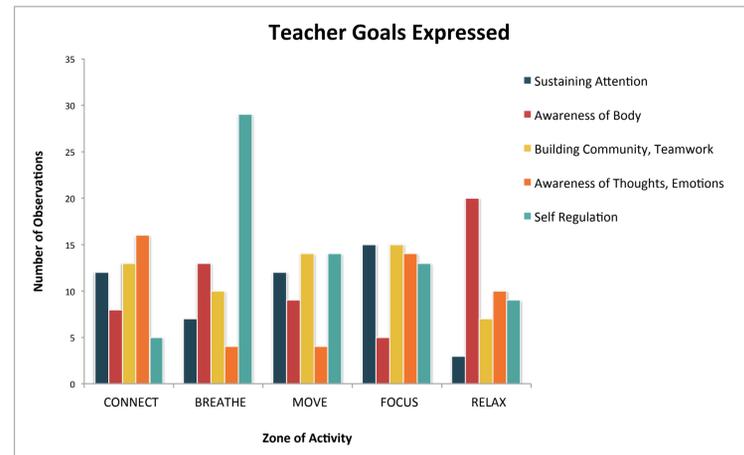

Teacher Goals Expressed

- Sustaining Attention
- Awareness of Body
- Building Community, Teamwork
- Awareness of Thoughts, Emotions
- Self Regulation

Figure 1 shows teacher goals by category with observations tallied across teachers and organized by SYP curriculum activity zones. Dramatic spikes show the most frequent teacher goal in the *Breathe* zone was inducing self-regulation and the most frequent teacher goal in the *Relax* zone was creating awareness of bodily sensations.
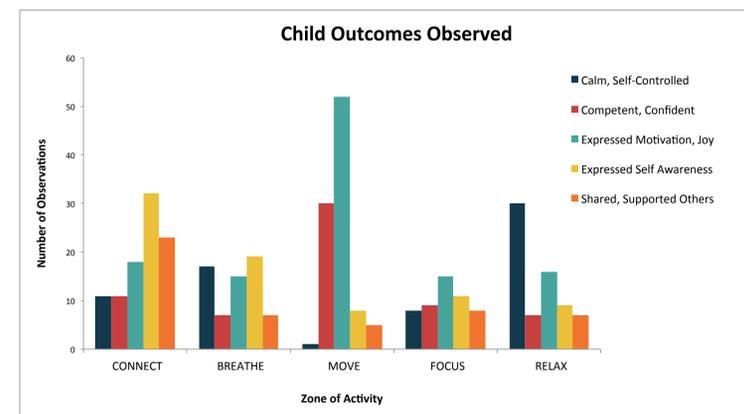

Child Outcomes Observed

- Calm, Self-Controlled
- Competent, Confident
- Expressed Motivation, Joy
- Expressed Self Awareness
- Shared, Supported Others

Figure 2 shows outcomes in children's behavior aggregated across teachers and organized by SYP curriculum activity zones. Parallel peaks in motivation/joy and competence/confidence are shown in the *Move* activities, along with increased levels of calm/self-control in the *Relax* zone, and awareness of self and others during the *Connect* activities.
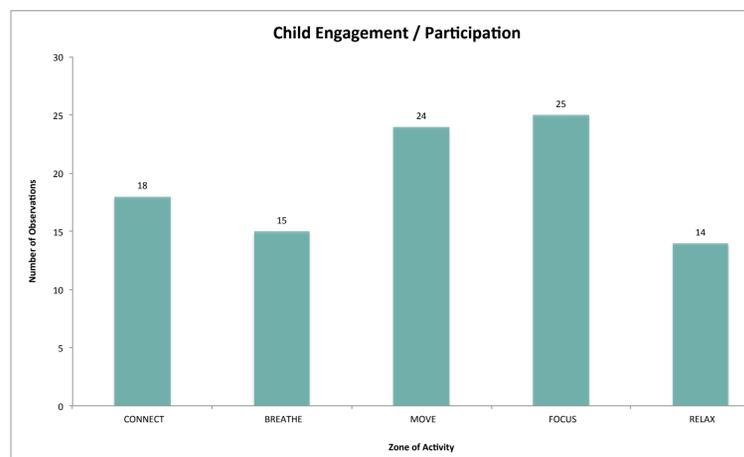

Child Engagement / Participation

Figure 3 shows the number of teacher observations of student engagement, absorption in an activity, or attentiveness. Relative to the other categories of observed student behavior, SYP yoga teachers indicate a strong and consistent level of student participation across all five zones of activity.

Methodology

Using a grounded theory approach, the content of the database was analyzed to identify themes in the responses of yoga instructors to a structured survey about their teaching experiences.

Open coding identified four categories in the data:

- *Activity* – what was taught
- *Technique* – how it was taught
- *Teacher Goals* – why it was taught
- *Child Outcomes* – how students responded

On-going sampling and a constant comparative method continue to articulate codes and sub-codes within these categories.

The coding process was used to transform qualitative responses into quantitative data, permitting a broader application of analytical techniques to locate patterns in the data that may be more transparent and quantifiable when looked at through a numerical lens.

The coding system has been developed to look deeply into the teachers' descriptions of their class experiences and determine whether the intentions of the curriculum are being implemented and how the results align with SEL standards.

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The School Yoga Project database coding and interpretation: April 20, 2014, Colin Pearsall

Social emotional learning (SEL) theory posits that a child's capacity for self-understanding and self-regulation is a gateway to achieving personal goals and participating in the community.

This research takes the reporting of SYP yoga teachers and interprets their classroom experience in terms of SEL theory. Using the teachers' own words is a valid and revealing way to understand their goals and observations in teaching yoga to children.

In order to objectively interpret the teachers' subjective impressions, a methodology was needed to standardize the reporting data. So, an original coding system was developed to categorize teacher feedback according to SEL objectives and outcomes.

SEL theory provided an objective, systematic schema to interpret the dataset. In other words, instead of using SYP standards to evaluate the teacher commentary, the unique coding system takes an independent filter (SEL theory) and sifts the teacher comments according to predetermined, externally developed criteria.

In addition to categorizing the teacher observations, the codes also translate qualitative comments into quantitative data. This reduces a large volume of text into numbers that can be counted and analyzed for all teachers and all classes.   The source material (more than 600 entries from 21 teachers in 24 schools) makes the dataset valuable in terms of variation and depth.

The dataset is still being coded. Only about 50% of the entries have been included in the current analysis. Among the preliminary findings, there are a few interesting trends that stand out.

1) Figure 1 shows an analysis of Teacher Goals. The right side of the chart shows a breakdown of teacher goals according to relevant SEL criteria. The bars on the chart tally the number of times teachers expressed these goals during each section of the SYP curriculum (Zones of Activity labeled across the bottom of the chart). You can see that there is a peak in "Self Regulation" during the "Breathe" activities and a similar peak in "Awareness of Body" in the "Relax" activities. These aberrations (spikes) indicate that across schools and across classes, teachers were more uniform in their goals in these two areas. A diversity of teachers were a) consistently using the breath to teach students self-regulation and b) consistently bringing student attention to their bodies in order to induce relaxation. These patterns are in-line with SYP curriculum objectives.

2) Figure 2 shows an analysis of Child Outcomes Observed. The right side of this chart shows a breakdown of SEL behavior objectives. The bars on the chart tally the number of times teachers observed these behaviors during each activity section. The most noticeable peaks in behavior can be seen in the "Move" activities where children expressed a great amount of joy, motivation, confidence, and competence. These spikes demonstrate how much children enjoy the movement activities and how their sense of confidence and achievement are boosted by physical challenges. Other data peaks include student awareness of self and others during the "Connect" activities, and their sense of calm and self-control during "Relax" activities. Interestingly, these data reveal the impact of the social and emotional components in the "Connect" activity zone. Taken together with the "Move" outcome data, a preliminary case can be made for how SYP is successfully merging physical, emotional, and social development in its curriculum.

3) Figure 3 indicates a more generalized interpretation of the curriculum. The bars in each Zone of Activity indicate the level of student engagement in each section based on number of mentions across teachers, schools, and classes. Looking at the curriculum by activity, the highest rate of participation (25) is seen in the Focus zone and the lowest total (14) is noted in the Relax zone. What is interesting is that entire range of participation levels is not very wide. This can be interpreted to show that, while there is some fluctuation in participation levels based on activity, all of the activities seem to achieve a relatively high degree of engagement (i.e., there are no single digit numbers in any activity zone and no extreme peaks from one zone to the next).

I still need to tally and analyze the remaining 50% of the data.   Based on statistical expectations, the trends seen in this sample would likely be mirrored by more data but new indications are also likely to emerge once the full set is finished. In summary, this initial data analysis indicates three meaningful findings:

1) The kids like the program and are actively participating in all sections (Figure 3).
2) The teachers are generally using the activities to achieve the desired results; the curriculum is being implemented as designed (Figures 1 and 2).
3) The SYP curriculum incorporates and embodies the techniques and objectives of SEL theory as demonstrated by the success of applying this independent coding system to analyze the existing database.

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