Does "The Project Approach" Work?:
A Case Study Exploring Emergent Curriculum in an Inclusive Pre-K Setting

How does project based learning impact development across the cognitive, social, and
language developmental domains for children?

By Colleen Mason

Abstract:
        I was looking for a way to create a more cohesive and holistic learning environment and
curriculum for my PreK students that effectively combines content knowledge, academics and
student inquiry. I read about the Project Approach, and spent a year researching if this inquiry-
based approach to learning would support students literacy, cognitive and social-emotional

development in my inclusive SEI multi-aged urban classroom and provide the rigorous instruction required by the demands of the CCSS. Through this multi-phased approach, I would launch a topic idea and promote student discussion to find out their knowledge and interest level and then co-plan learning experiences, field visits and documentation that supported conversation, thinking and learning. In reflection and through data collection, I have found that my students this year have not only made academic progress on their reading foundational assessments, they have made progress in their reasoning skills, their flexibility in their approach to problem solving, their academic discourse, and their engagement and joy for learning. Based on these findings, I will continue using this approach, but am left wondering how to make the workload during the planning and gathering resources phase more manageable? How do I create classroom structures that promote the use of documentation and display more for students to learn from their peers in new and meaningful ways? How can I rework existing and required units of study that don't currently promote these same skills? How can I share my work more with the parents in my classroom and involve them even further in their child's learning? How can I share my research with my colleagues?

I. Introduction

I ended the 2014-2015 school year feeling disillusioned and disappointed with the work that I had done in terms of my teaching, planning and curriculum, but I couldn't quite figure out what the problem had been. When I looked at my end of the year assessments, my students had done fine, if not exceedingly well on their end of year benchmarks, but for some reason, I felt like I had let them down. I began teaching summer school, and launched the pre-written unit on the Ocean, and my summer school students immediately were so excited and started shouting out things they knew about ocean animals, connections and stories about times they had been to the ocean with their families, and questions they had about what learning we might be doing -- it was in that moment that I realized I could make a change in my practice.

I realized what I had been missing in my teaching the year before was a coherent focus on content and language development, in addition to skills-based teaching. In a recent study done by Miller & Almon, "a quarter of teachers surveyed reported that there is no time for free play in their kindergarten classrooms." (Ramani & Eason, 2015) This is also becoming a common problem in PreK classrooms as well, as the top-down push of getting more and more students ready for standardized testing creeps slowly into our classrooms. While this is often attributed to the Common Core State Standards, or in the PreK case - the Mass Curriculum Frameworks - having a clear understanding of what the standards say, and how students can demonstrate mastery and development towards the standards can prevent teachers from removing play-based or emergent learning. For example, one of the Mass PreK Standards is "RI.PK.3 I can represent or act out concepts learned from hearing an informational text read aloud (e.g., make a skyscraper out of blocks after listening to a book about cities)" which not only encourages dramatic play or block building, it requires that students are able to demonstrate this play skill as part of their core learning.

I had made the PreK mistake of sacrificing play for academics, and I couldn't believe I had become that teacher, especially given the unique dynamics of my classroom. I am highly

knowledgeable about the Common Core Standards and the required instructional shifts, and I know that play does not need to disappear from classrooms, but can have more rigorous components built in naturally. I knew that my classroom context played a factor. Because of the wide range of learners in my classroom, and many students who were far below proficiency when they entered my classroom in September 2014, I had panicked and pressured myself to move them to benchmark, which made me lose sight of the whole child and all of their developmental milestones and needs. I needed to re-find my teacher voice and re-assess how I plan for the students I have in front of me.

   I teach Pre-K Inclusion at the Lee Academy Pilot School in Dorchester, MA. Fortunately for me, I have a principal at the Lee Academy who trusts my decision making and allows me to explore and develop my own curricula as needed. In my classroom, I have 14 students - 6 boys and 8 girls. Within that, I have 4 three-year olds, 5 four-year olds and 5 five-year olds. Within that, I have 6 students with special needs who are on IEPs for a range of diagnoses - Autism, Developmental Delay, Communication Impairment or Motor Impairment. My students receive Speech, OT, and PT, as well as social emotional supports and play-based therapy for their different needs. Finally, within that, I have 3 students who speak English as a Second Language. Because of the mixed-age groupings, I have students who enter in K0 at 3 years old who stay with me for 2 school years. In the 2015-2016 school year, I had 7 students returning and 7 new students entering. I had students who could identify all 26 letters and were beginning to learn how to read, and I had students who were not able to identify any letters - even the ones in their name.

  In my culturally and academically diverse classroom, the range of learners is wide and vast, and I needed an approach that would fit all my students, and not be a one-size fits all curriculum. I needed to find an approach to teaching that would benefit all of these students, without sacrificing the oral vocabulary enrichment that students need to be successful in reading later on, or that students need to grow socially-emotionally. I thought back to a few years before when my mentor teacher had been researching The Project Approach, and how she had defined it as an inquiry based planning approach that involved students as co-designers of the curriculum. I also began researching other curricula to use for my instruction, as the OWL and Building Block curriculums BPS uses for PreK are great, but with so many students who loop, I need to supplement with different units so they are receiving access to new information.

  It was also important to me during my research to define the type of play that I believe is beneficial for students. There is a difference between free play, which is completely child centered and allows for children to manipulate their understanding of the world around them, and guided play, which is still child-centered but involves a careful relationship between the teacher and student where the teacher is guiding students understanding and extending their thinking and questioning and reasoning abilities. (Singer, Golinkoff, & Hirsh-Pasek, 2006).

  In July 2015, I began a year-long journey of evaluating my practice as an educator and strengthening my teaching. I started by looking at the EngageNY curriculum for PreK, and while I found many elements of it rigorous and theme based, it's still very academically focused, too teacher scripted, and doesn't incorporate much play into their ELA and Math units. I knew I would be supplementing all year, going off script and changing lessons, so I didn't feel that committing to that curriculum was going to match my teaching style. I researched a lot about the

Reggio Emilia approach to teaching (Edwards, 1998), but it requires so many resources, supplies and teacher support that I don't have access too, so it wouldn't be a practical approach. I began reading "Engaging Children's Minds: The Project Approach" by Lilian G. Katz, Sylvia C. Chard and Yvonne Kogan, and it immediately struck a chord with me. In the introduction chapter, the authors describe the project approach by saying:

> As a way of learning, the project approach emphasizes children's active participation in the planning, development, and assessment of their own work; children are encouraged to take initiative and responsibility for the work undertaken, and it increases as children get older. (p. 8)

In that one sentence, I knew I had found what I was looking for. An approach to planning that incorporated student voice, student engagement and student involvement, but also required students to develop their understanding of what it means to be an inquisitive student, and allows students to engage in a variety of cognitively demanding tasks along the way. The rest of the chapter just kept getting better - highlighting benefits for students with special needs, benefits to students social-emotional learning and how the Project Approach prepares students to be members of a democratic society. "The project approach is grounded in collaboration, communication and an assumption that children are competent," (Harte, 2010, p.16), which aligns with my personal philosophy around inclusion - that all children, regardless of their diverse learning backgrounds and needs, are entitled to a high quality education and the belief that they can achieve at high levels. As a skeptical consumer of information though, I realized that I needed to research more and try it out for myself. It's easy to say that the Project Approach does all these wonderful things, but can it do those wonderful things in my unique setting? This book was written about work in North Carolina and in Mexico City, but can this work in Boston schools with high-need students? I began planning my first project, using the book as a manual.

II. What is a Project?

The Project Approach authors define a project as "an extended in-depth investigation or study of a particular topic -- uncovering as well as covering the subject of the study." In order to ensure that students are fully engaging with a topic, inquiring about a topic, and developing research skills, the Project Approach is divided into three phases. Phase 1 is the planning stage, where the initial topic idea is developed by teachers and students in collaboration and a personal exchange of ideas and background knowledge occurs. During Phase 1 the teacher is finding out what students already know about a topic and what they are interested in finding out. "In the first phase, the teacher may select a topic based on the interests of a child with a disability. This will help connect the child to the class and provide him other opportunities to be in a leadership role." (Harte, 2010, p. 17) Incorporating student voice and student decision making into planning allows for all students to feel included, important and is beneficial for their social emotional development and their engagement. Phase 2 is when the project and the research is in motion, and students are going on field visits, meeting with experts, collecting and analyzing data, developing new vocabulary about a topic and building their observation and communication skills. Phase 2 requires that students learn by playing, through construction play, dramatic play, and play integrated with literacy and math concepts. Finally, Phase 3 is the culmination of the project and students are using their data and documentation to present information to other

classmates, teachers, students in the school or families. Throughout all three phases, teachers are serving as a facilitator of learning rather than providing direct instruction, and students are practicing writing, drawing, painting, acting and any other way of representing and modeling the information they are acquiring about a topic. (Katz, Chard & Kogan, 2010).

III. My Personal Inquiry

In order to ensure that using this approach was beneficial for my students, I began a research project that involved collecting data and artifacts about my students' progress in academics and their social emotional development, and I framed my project by answering the question:

How does project based learning impact development across the cognitive, social, and language developmental domains for children?

I originally thought I wanted to focus my data collection on a target group of students, the students who had been with me in 2014-2015 and were with me again this year, but upon further reflection of the data, I realized that my students' development in the Project Approach really requires looking at how they interact with one another and how they learn from their peers. That's part of the Project Approach - how students use each other's displays for further advancement of their content knowledge. I realized I was going to have to collect data from them all in various contexts.

Students

Avery - boy, 5 years old, Gen Ed, Spanish ELL, hispanic

Bria - girl, 3 years old, Gen Ed, Black

Elena - girl, 4 years old, Gen Ed, White

Julia - girl, 3 years old, Autism, Vietnamese ELL

Keion - boy, 5 years old, IEP for developmental delays, being evaluated for ADHD, born prematurely at 26 weeks at 1 lb 6 oz and spent over a year in the NICU, black.

Kyle - boy, 4 years old, developmental delay, black

Mabel - girl, 3 years old, gen ed, white

Maryum - girl, 3 years old, gen ed, mixed ethnicity

Miguel - boy, 4 years old, IEP for developmental delay, Spanish ELL

Nate - boy, 4 years old, gen ed, hispanic, Spanish ELL

Nelise - girl, 5 years old, IEP For developmental delay

Patience - girl, 5 years old, Gen ed, black

Sanii - girl, 4 years old, Gen ed, black

Teddy - boy, 5 years old, gen ed, white

Data Collection

In order to really know whether the Project Approach is an effective style of educating my diverse population of students, I collected baseline data using various formal and informal assessments in reading, writing, math and I also used a social-emotional screener.

PALS

The PALS is a pre-literacy screening developed by the University of Virginia that assesses children's pre-reading foundational skills. More specifically, it assesses Uppercase Letter Identification, Lowercase Letter Identification, Letter Sound Identification, Beginning Sound Awareness, Nursery Rhymes, Name Writing, Rhyming, and Print Concepts.

EVT

Oral vocabulary and language development is critical in the urban classroom as first grade reading scores as a predictor of later reading scores (Juel, 1988) and reading is impacted by the amount of words in a student's vocabulary and "By age 4, the average child in a welfare family might have 13 million fewer words of cumulative experience than the average child in a working-class family" (Hart & Risley, 1995). The EVT is an expressive vocabulary assessment in which the student is shown a picture and asked to label it. As the test gets harder, students are asked to provide a synonym, or provide a label for a group of objects, provide an adverb or adjective for a picture or provide an antonym. Based on the amount of pictures a child was able to accurately provide an answer for and their chronological age, children are assigned an age-normed percentile that they are currently falling into. The average range for a student's vocabulary is 35%-75% on this assessment.

Storytelling

Storytelling demonstrates students pre-writing skills of craft and voice. Students are asked to tell a story with a beginning, middle and end, and these stories will be used for story acting, so students begin to also consider character traits, words or actions that they would like to see come to life during our daily acting. Students come and dictate a story to me and I write it down in a special journal we use only for their stories. During this process, students are watching me physically take their words and put them into writing, and it strengthens their understanding that print carries meaning, and that their ideas can be said orally or through the use of the written language.

Oral Transcripts

I collected transcripts of students engaged in conversation about a story throughout my research to listen in on how students are engaging with complex text, how their language is developing, and how they are able to prompt one another for thinking and use their peers as resources for learning.

Writing Samples

I keep writing portfolios for my students, so I have been frequently analyzing their growth in terms of oral storytelling which is collected through dictation, illustration, and their writing mechanics.

Math Interview

For their cognitive domain, I collected their Math assessment scores, and especially focused on the questions that require children to show evidence of reasoning. "Guided play can also encourage learning of mathematical and spatial skills" so I also collected work samples and anecdotal records, and looked for a problem solving assessment that looks at children's creativity in solving complex situations. (Singer, Golinkoff, & Hirsh-Pasek, 2006, p. 107)

IV. Preliminary Planning and Selection of the Topic

The first unit I wanted to plan was for the end of September - after school routines were learned, school rules were set, and expectations were clear. Since it was so close to the beginning of the year, and my students were young and many were new to school, I started with a topic that egocentric three, four and five-year olds would enjoy. "All About Me" To begin planning, the Project Approach has teachers make a topic web for themselves to think about every possible avenue students might take when a new idea is proposed so I began thinking about everything students might be interested in learning about themselves.

I also knew that I wanted to ensure that all of my projects were aligned to the Massachusetts Curriculum Frameworks, so I took sticky-notes and if there was a clear connection between a proposed topic of study and a PreK standard, I identified it. For example, in All About Me, I anticipated students wanting to talk about how old they are or how many people are in their family. Those understandings have a clear link to the PreK Math Counting and Cardinality standards. After I made my rough, ugly paper version, I cleaned it up and made a Google Doc version that I would continually refer back to and adapt as I thought of new ideas kids might be interested in.
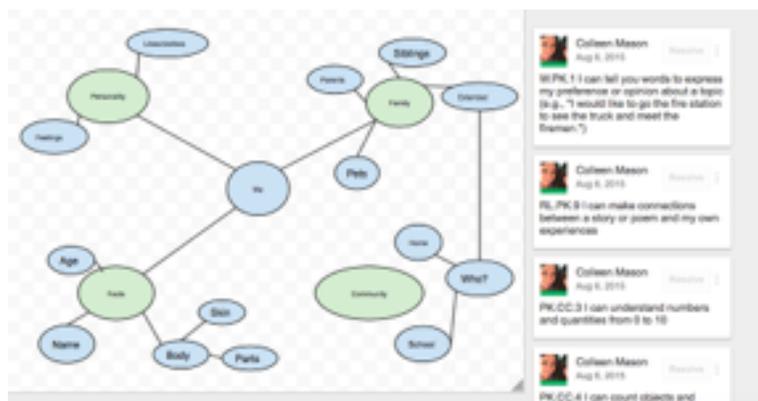
V. Phase 1

Phase 1 is when the project idea is launched with students and "includes introducing and clarifying the topic and subtopics to be investigated, sharing experiences and knowledge related to it, and specifying the list of questions the investigation will attempt to answer."(Katz, Chard &
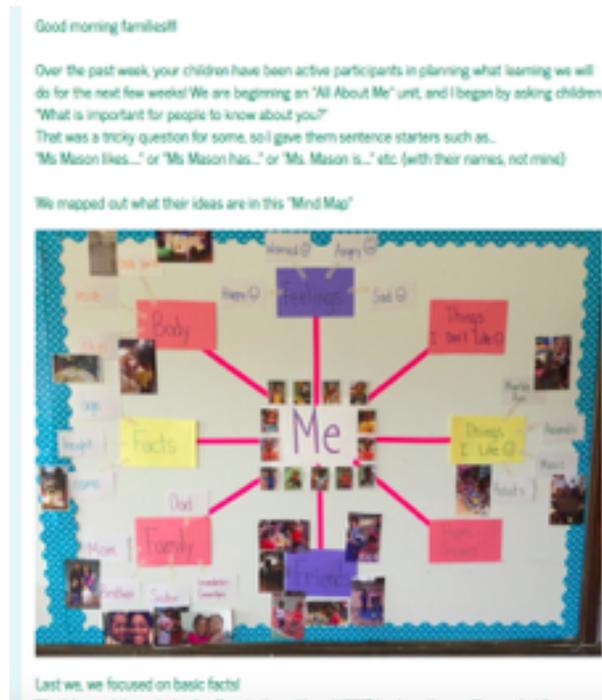
Kogan, 2014, p. 67) It also leads to the development of self-efficacy, as students are taking control of their own learning and determining the course of study.

Discussion

Once I had a plan for what I thought students would be interested in learning about. I gathered students into a whole group setting on the rug, and I said "It's the beginning of the year, and we have so much to learn about one another! What do you want your friends to know about you?" As I asked them that, I wrote "*Me"* in a circle in the middle of a big piece of chart paper. At this point in the year, many of my students were still very young, and had a hard time coming up with ideas about what they wanted to communicate, so it was definitely a conversation that was led by the older students in my room. They came up with suggestions such as "I have a brother," or "My name is Teddy." As they were coming up with ideas, I grouped them into categories for the students that had aligned similarly to the categories I had thought about previously, such as "Likes/Dislikes" "Important people" "Feelings" "Body Parts" and "Facts" Once Nelise said that she wanted people to know "Sanii is my best friend" many other students followed suit and wanted to tell me about people that they are close to, whether it was their mom and dad, their brother or sister, or their teachers and friends. We grouped that into a category called "Important people" which was not necessarily a category I had considered them being interested in. This process of coming up with topics of discussion and research gave me insight into how my students come up with names and categories and what their language and cognitive development leads them to find salient. It also gave me insight into their understanding of the relationship between objects, concepts, and ideas and how ideas can impact further thinking. I had thought more broadly about their role in their community, but I realized that these students were still so young and had limited life experience because of their age, and that it was going to be my role to provide that for them.

Display

I took their web, cleaned it up, and made a giant visual of their web on our bulletin board to use for the launching point of documentation and I shared the information with families on my classroom website to tell them about my approach to planning curriculum, and their students interest. I put their class picture up around the word me, and added to the display as the weeks went on and our inquiry project took flight.

Good morning families!!

Over the past week, your children have been active participants in planning what learning we will do for the next few weeks! We are beginning an "All About Me" unit, and I began by asking children "What is important for people to know about you?"
That was a tricky question for some, so I gave them sentence starters such as...
"Ms Mason likes..." or "Ms Mason has..." or "Ms. Mason is..." etc. (with their names, not mine)

We mapped out what their ideas are in this "Mind Map"

Last we, we focused on basic facts!

Throughout the first phase of our All About Me project, my students engaged in a variety of discussions that promoted their knowledge, wonderings and questions. Our district required every school to choose an instructional focus this year that teachers would be committed to improving their practice around, and our school chose Accountable Talk. Throughout the structure of the Project Approach, I noticed many students engaged in higher level talk skills for PreK, such as building on to or challenging another student's idea or supporting their own ideas with evidence, as a direct result of the content and the inquiry stance required. In October, at the beginning of the school year, my students were already developing this ability to ask students for more information. For example, whenever a student stated a preference such as Kyle saying "I like firetrucks", Keion would ask "Why?" Or "That's your favorite thing because _____" They are mirroring sentence frames that I use as an educator, and prompting one another's thinking.

However, I also noted that this topic is limited in terms of research capabilities or student formation of ideas and for planning learning experiences. We did writing activities about who was in our family, or math activities about how many people were in our family or how old they were, but I jumped ship on this project as interest waned, and interest waned pretty quickly. "If frequency and quality of play have declined to a low level, ask the children whether they are ready to dismantle the project or set it aside in some special way," and as much as students love talking about themselves, the activities you can plan are not very engaging beyond creating a basic understanding of each other. (Katz, Chard & Kogan, 2014, p. 94).

VI. Preliminary Planning and Selection of the Topic (Again)

What I noticed from the All About Me unit was that students were really interested in learning about how they operate within their world. They talked a lot about their homes, their families and places they liked to go with their families, so we shifted the All About Me unit and

turned it into more of a Community unit. I again went through the process of pre-anticipating what I thought students would be interested in learning about and aligned a content map to the Massachusetts PreK standards. I also began to realize that the Project Approach is messy and began thinking of strategies to help myself become more organized in my planning and assessment.

VII. Phase 1 (Again)

During Morning Meeting one Monday morning, I informed students that we would be going on a field trip to a farm at the end of the week to pick pumpkins and learn about farm life, growing vegetables, and see farm animals. I told the students that they would be allowed to get a pumpkin to take back to school and we could do some science experiments with them. They were more interested in the concept of food at the farm, and Kyle asked if we would be allowed to take vegetables back too. I said that if we wanted to get vegetables we would have to pay for them, but I was certainly willing to do that. Maryum, told us that her dad is a chef and he has lots of vegetables at his grocery store.

This felt like the perfect opportunity to launch the new project I had been toying with in my mind. I took their ideas about the farm and the grocery store and asked "Where does our food come from? Where do we go in Dorchester to buy food?" Keion said we could go to a pizza shop and Miguel said we could go to a fancy restaurant. I drew Dorchester in a circle in the middle of a piece of chart paper, and said, "In Dorchester, we can get food from restaurants, pizza shops, or grocery stores! It sounds like you all are very interested in learning about places in Dorchester. What else do you want to learn about Dorchester?" From there, students making a list of places in the community they enjoy - playgrounds they like to go to, clothing stores they shop at, and Boston Bowl. Avery shifted the entire conversation. He wanted to know "Where do people live? Do people live in buildings?" We stopped and thought about that for a minute, and I pressed for more information. "Are you interested in learning about different kinds of buildings people live in? Or are you interested finding out if everyone lives in buildings?" Avery said he was interested in learning about everything about buildings. From there, the conversation shifted from listing places to thinking critically and asking questions about their environment. The conversation changed from saying "I like Chuck-E-Cheese" to saying "Is there a Chuck-E-Cheese in Dorchester?" "Is there a candy store in Dorchester?"

Teddy, a particularly precocious child, asked "How tall is the Hancock Building?" I thought I was being a good teacher by clarifying for him that the Hancock Building is in Downtown Boston and not Dorchester, to which he corrected me and said "Well, Dorchester is in Boston, so aren't we kind of learning about Boston too?" From that small interaction, I was able to ascertain that Teddy not only has a pretty well developed understanding of his community, he also is beginning to understand and develop his geographical awareness. We added Boston to the middle of our concept map. The conversation continued and varied from student to student whether they were listing or questioning.

VIII. Phase 2

Phase 2 is when the project is fully in action and the "main thrust of the second phase of a project is research, which is seeking answers to the questions formulated at the end of Phase 1." (Katz, Chard & Kogan, 2014, p. 79) Throughout the entire second phase, students are researching and obtaining data in varied ways, either by going on field visits or having expert speakers come to the classroom, or having carefully designed activities in the classroom which will promote their learning and concept development. Students are also learning by reading informational texts during this period and are learning from one another through the oral sharing of ideas and the use of documentation.

Fieldwork

One of the ways to engage students in collecting and obtaining data about a given topic is through field work. Field visits in the Project Approach are different than field trips, because rather than visiting a location for fun, field visits require that students are collecting data for a particular purpose and documenting their findings while they are at the site. While studying Dorchester, our local community, we had many opportunities to go on field visits, such as the library, two different grocery stores, our school garden and a farm.

The first field visit we went on was slightly outside of our direct community, at Ward's Berry Farm in Sharon, MA.

During this visit, students were considering the farm as a source of food, and during the field visit, they were looking for examples of vegetables growing in the community. Before the trip, we listed some animals we thought we might see at the farm and the food items we thought you might be able to acquire. Because this was my first "field visit" rather than a "field trip," I focused data collection on oral and visual noticings rather than drawing and recording, because of my own unfamiliarity and lack of practice with having students sit and engage in observational drawing. During our hay ride, the farmers stopped at each new aisle and showed students the vegetables that they were growing and gave me one of each vegetable to bring back to the classroom. We ended our trip by picking a pumpkin and bringing it back on the hayride and returning to the bus. When we returned, we checked the list we had made prior to visiting to check for accuracy and clarify learning. Students drew direct comparisons to our school garden, in which we are also growing vegetables, and we were able to discuss while you will not find a farm in Dorchester similar to the one we went to, you can find gardens that are growing similar vegetables.

Our second field visit was to the grocery store, America's Food Basket. The purpose of this visit was again to consider our food source, but we focused on the difference between getting food at a farm and at a grocery store. For example, students noticed that at the grocery store, you had to put your food in the basket to carry around, the food came in boxes, and you had to pay for it at a cash register, but in contrast, at the farm, the farmer put your food in the tractor. Similarly, students noticed that you could buy vegetables at each location, and at the time of our visit - you could also purchase a pumpkin, although the students noted that on the farm field trip they didn't have to pay for their pumpkins

Finally, we visited a second grocery store, The Daily Table. My student Maryum's dad is the executive chef at the Daily Table, and invited us to come see the differences between his grocery store and a traditional grocery store. The biggest difference the students noticed was that in this grocery store, there was also a kitchen in which chefs were cooking the food that they were going to sell on the shelves.

Investigations/Activities

During Phase 2, we are also working on doing investigations about the topic within the classroom setting. I planned activities for block building, dramatic play, writing, and math that would help students establish their understanding of "community" and how we relate with our world. In the block area, students were building different structures and creating visual representations of the world around them. They were creating block structures that represented the library, or creating the hay bails from the farm visit and the different pens for the animals, and creating tall towers that represented the skyscrapers they see in Boston. During this activity, it was an easy and organic place to incorporate writing and labeling skills by giving students index cards and asking them to label their towers. Students were collaborating to ensure that they were on the same page about what they were building and "establishing a shared goal during cooperative peer interactions requires sophisticated social and cognitive skills. Children must initially communicate to each other their intentions to work together toward a common goal, and both children must mutually agree to do so." (Ramani & Brownell, 2014).

In dramatic play, I had originally set up a farm stand/grocery store so students could re-enact our field visits and negotiate their understanding of these locations. However, when Elena broke her leg, we quickly changed the focus of our dramatic play center to the doctor's office and incorporated X-rays, casts, bandages and other medical instruments so students could develop their common understanding of how doctors play a vital role in our community and in our health.

To answer Teddy's question of how tall the Hancock building is, I printed pictures of different skyscrapers in Boston (The Hancock building, the Prudential building, 111 Huntington

Ave) to scale, and students measured each building using non-standard units of measurement such as Unifix cubes, animal counters, or inch tiles. Many students who, at this point in the year, had typically struggled with mathematical reasoning were all of a sudden engaged in conversation about taller, shorter, higher, longer, bigger, smaller, and were comparing the sizes of playground structures, buildings in the Boston skyline, and students heights. It was clear from these experiences that children were using each other as peer resources and developing their cognitive skills in a more advanced way because of the use of their more skilled peers. (Vgotsky, 1978) Not only were students developing their math skills, they were also discussing their ideas of what happens inside these buildings and why they need to be so big.

Visiting experts

There were certain community helpers or places that were not in walking distance for us to do a field visit of. My students were extremely interested in learning more information about EMTs, police officers, firefighters and all the people in our community who help keep us safe. My cousin is an EMT and brought his ambulance to school one day for students to explore.

My students were fascinated by his work, and asked many questions such as "How do you take care of people?" "Why do you use the sirens?" and "Do you sleep in the bed in the back?" The students explored the ambulance and the equipment in the back of the van, and when we returned to the classroom, they worked on large-scale representational drawings of the ambulance.

Another teacher in the school has two uncles who are police officers, and they brought a police cruiser to school and participated in a Q&A session with my students. Similar to the interview of the EMT, my students were not only interested in learning about the work of a police officer, but about police officers personal lives. My students were negotiating their understanding of how police officers are people in the community, and while they work a unique,

exciting and dangerous job, they also live similar lives to students. Students were developing their questioning and reasoning skills during this interaction. At the end of this visit, students again drew large scale representational drawings of the police cruiser.
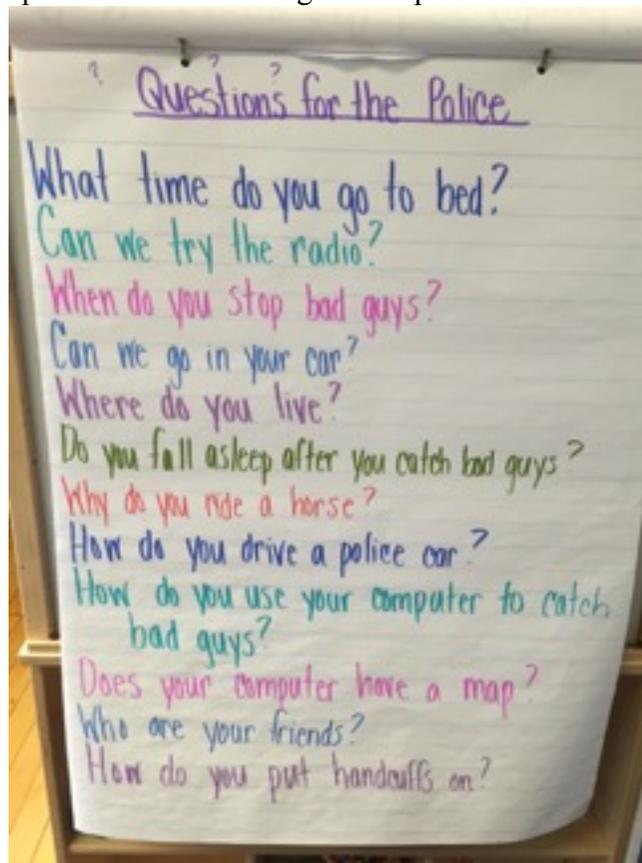
We also had a visit from Bria's uncle, a high school senior at the time who was being actively recruited by college football teams. He came to talk to the kids about how sports are beneficial in so many ways, but students also need to focus on their academics and working hard in school so they can have a job when they grow up and to be successful. He brought his football helmet, equipment for students to run practice drills in the classroom, and brought them outside to the playground to toss a football around. This visit provided students with a unique opportunity to experience guided play outside of the classroom, and engage in rule-based outdoor collaborative play.

Display

Throughout this entire unit, students were learning academic vocabulary, questioning and reasoning skills, observational drawing, comparison of numbers and foundational writing, reading and math skills. In order to capture all of their learning, I created various displays of their work across the room which would promote continued learning and understanding of the community topic. Students used their large-scale representational drawings of the police car and ambulance to transform shoe boxes and Amazon boxes into different emergency response vehicles. Because they had their drawings to refer back too, many of which were labeled,

students were able to remember the vocabulary and the structures of the vehicles such as cab, sirens, radio, oxygen tank, computer, and more.

IX. Phase 3 Culminating Event

Phase 3 of the Project Approach focuses on how to conclude a project with students. Compiling children's work into a classroom book, creating a bulletin board, or hosting a family engagement/school wide event were all suggestions on how to allow children to explain the knowledge they now have and serve as experts about their topic.

We were now experts on the Dorchester Area, and students began to think of how to use their visual representations of fire trucks, ambulances, police cars, grocery stores, doctor's offices and the library. They had drawings in their journals, their cardboard box emergency response vehicles with labeled parts, and books of photos of them on their field visits to refer to when thinking about a large-scale project that would represent all of their learning.

We read a nonfiction book about cities one day and there was a page that showed a map. My students were very excited about this idea, so I put a few pieces of poster board on the rug in the block area and stepped back to see what would emerge. Teddy, Mabel, Patience and Sanii were immediately interested in creating a map of Dorchester, and sat together to discuss how they wanted to begin their project. Below is a transcript of their discussion:

Patience: I want to draw my house.
Teddy: Where is your house?
Patience: It's near the grocery store.

Sanii: My house is near the grocery store too, but it's not near your house.
Teddy: My house is close to the school
Mabel: My house is close to the school too!
Teddy: I'm going to draw the school.
Patience: Across the street, I'm going to draw the playground
Sanii: Wait, we need the street. Can I draw the street?
Mabel: What can I draw?
Teddy: Want to draw Tech Boston?
Mabel: Ok!

They continued engaging in conversation like this for the next 45 minutes, and over the course of
the rest of the week, while they added the library, the grocery stores, our school garden, and their
individual houses. Sanii called over other friends, "Elena, come draw your house!" and they
asked each other probing questions to figure out where they should draw their homes. Patience
had a clipboard where she wrote everyone's name, and made sure that every student had a
chance to draw their house in the map. Teddy made sure that every new building was connected
by a road "just like it was in the map in the book!" Students labeled their houses with their
names and since it was only November, and not all the three and four-year-olds had perfected
their name writing yet, I also gave them a small picture of themselves to glue on too. Keion
asked if we could put the pictures from our field trip on our map too, and the other kids were
excited.

When the map was complete, I asked them what they wanted to do with it. Avery said he wanted to play with it, and when I asked him what he meant, he said he wanted to drive cars on it. Kyle wanted to build houses on it with blocks. They ended up deciding that they could both at the same time, and for successful collaborative play "both children must contribute to the definition of the goal in order for play to start and continue, they must either possess or create a shared understanding of the parameters involved in maintaining the play, and they must work together on the process of the play." (Ramani & Brownell, 2010, p.99) so we left it in on the floor of the block area for a week before we hung it in the hallway on our bulletin board to show other students in the building.

X. Conclusion & Reflection

From anecdotal records and observations, I had an inkling that the project approach was working. I had high levels of engagement, and students were more talkative, alive, and excited about learning then I had ever seen before. Research done by Donegan et. al in 2005 found that "the factors that promoted meaningful engagement were a) familiarity and interest in the topic, b) comfort with the size and composition of the small group and c) open ended and child-centered activities with multiple media to meet varying developmental levels." (p.42). Throughout all of our projects, students were able to work collaboratively in small groups with a variety of materials and resources, and it was clear that our engagement levels were impacted as such. For example, last year, Keion was a student who had many behavior problems. He would frequently annoy his friends intentionally and didn't seem interested in stories. While he does have ADHD, in reflection, I knew that providing such a heavy academic workload in Pre-K that required a lot of sitting and attending was not the healthy learning environment that he needed. Now that we had the Project Approach in motion that requires guided play and learning academic skills in a meaningful context, I noticed that while Keion is still hyperactive and impulsive, his desire to learn is so much stronger and he tries much harder to attend, even when it's especially difficult for him. Nate is another student who has academic difficulties, but his comprehension skills are so high because he is so engaged in read-alouds about our project topics, and loves to write about, observe and explore the world around him. The mindset of my

students has developed in such that they take a learner's stance on everything and approach problems with flexibility and perseverance.

Recently, a student named Xaydin has joined our classroom. Xaydin was moved because he was exhibiting violent behaviors in his previous classroom and trying to hurt his classmates and teachers. Xaydin has also experienced a significant amount of trauma in his home life, suffers from lead poisoning, and is undergoing a psychological evaluation, with suspected ADHD and learning disabilities. I happily welcome all children into my classroom, but I wasn't sure how to prepare my other students to give the level of social and emotional support that he would need. At the time of writing this paper, Xaydin had only been with us for two weeks, but my students welcomed him with open arms. Rather than backing away from Xaydin or being afraid that he might have an outburst, my students inquired about why he was with us. They accepted my response that he was with us to learn how to be a safe, respectful and responsible friend, and then they started to ask Xaydin a hundred questions to get to know him. When he broke his arm at home over the weekend, my students had many questions about his ambulance trip to the emergency room. "Did you see Ms. Mason's cousin? Did you get an X-Ray? Was the doctor nice? Did you have to get a shot?" Rather than seeing Xaydin as a student in crisis, my students saw him as a new source of information about the world and have internalized the idea that people carry knowledge, and every person carries a different set of knowledge based on their own experiences. People have incredible value, and my students treat them as such.

Learning qualities such as passion, engagement and determination are qualities that were hard to measure, so I looked to collect some qualitative data that would show whether my students were learning the Common Core State Standards that they are expected to have mastered before Kindergarten. Boston is a data-driven district, even at the PreK level, so I do want to ensure that I am providing my students with both a growth mindset focused learning environment, but a rigorous learning environment that promotes academic advancement. After the All About Me unit and the Community unit, I did a mini unit on Animals Preparing for Winter where we studied local birds and squirrels, and when we returned from vacation in January, we began an Ocean/Aquarium unit. By February, my students had completed four projects and acquired the subsequent knowledge.

PALS

Test Component	2014-2015 February Scores % At/Above Benchmark	2015-2016 February Scores	Reflection
Name Writing	100%	93%	The only student who hasn't met benchmark on this measure yet is Julia, a brand new 3-year-old who started school in December of this year.

Uppercase Letter ID	83%	100%	Students are using their letters for a more meaningful purpose this year, which may explain the increase in scores this year. During the assessments, students were relating the letters to things we had studied thus far. For example, during letter sounds, Kyle was using his knowledge of the word "Firetruck" and "Police" to identify the letter sounds that F & P make.
Lowercase Letter ID	67%	100%	
Letter Sound ID	66%	86%	
Beginning Sound Awareness	83%	86%	No significant change.
Print Concepts	67%	79%	Students are using texts as researchers this year, looking for information to report to their peers about, and gathering information from the captions. Students are also applying their knowledge of print to their writing, creating their own resource books and nonfiction texts about our field visits, their favorite ocean animals and facts about them, or writing their own Folktales and Fairytales. That has helped give Print Concepts context and made students excited to engage with text.
Rhyming	83%	79%	This is the only area where we see a significant skill decrease. This could

Nursery Rhymes	100%	85%	be for two reasons - 1) because I haven't taught the same nursery rhymes that are on the PALS yet at this point in this year, because they didn't tie into the units of study we were engaged in. For example, it wouldn't have made sense in November when we were learning about our community to sing "I have a little turtle, who lives in a box, he swims in the water and he climbs on the _____(rocks)___" However, during our Things That Grow unit which will take place in May, that poem will make more sense. For next year, I should research more rhyming poems that relate to the topic we are studying to embed this skill into their learning, the same way I was able to do with letters and beginning sound awareness.

Evidence:

						2015-2016			Room: All				Teachers: All			
						Phonolgical Awareness Literacy Screening (PALS) - Part 1										
		Student Information				F	W	S	F	W	S	F	W	S	F	W	S
Last Name	First Name	D.O.B.	Grade	Race	Sped Svc	ELD LEVEL	Name Wrtg	Name Wrtg	Name Wrtg	Upp. Ltrs	Upp. Ltrs	Upp. Ltrs	Low Ltrs	Low Ltrs	Low Ltrs	Ltr Snds	Ltr Snds	Ltr Snds
Whitson	Avery		K1	Hispanic	Y		6	7		11	18		6	18		7	13	
Tomlinson	Bria		K0	Black			3	7		1	17		1	11		0	14	
Merksamer	Elena		K0	White			4	7		19	26		9	24		2	18	
Richardson	Kalon		K1	Black	Y		5	7		16	26		16	22		1	18	
Simon	Kyle		K1	Black			5	7		15	23		15	21		8	18	
Luu	Julia		K0				a	3		a	21		a	25		a	0	
Haley	Mabel		K0	White			1	6		15	24		5	23		0	15	
Samad	Maryum		K0	Black	Y		3	6		10	21		5	19		3	16	
Pimantal Tej	Miguel		K1	Hispanic	Y		6	7		26	26		24	24		21	26	
Feliciano	Nathaniel		K1	Hispanic			2	7		2	17		0	15		0	0	
Young	Nelise		K1	Black	Y		5	7		5	21		10	18		7	13	
Loving	Patience		K1	Native American			7	7		26	26		24	26		19	26	
Banks	Sanii		K1	Black			7	7		26	26		25	26		24	26	
Gormley	Theodore		K1	White			6	7		26	26		24	26		13	25	

EVT

EVT	2014-2015 February Scores %	2015-2016 February Scores %	Reflection
Above	50	71	While the EVT is an assessment that is hard to use for instructional purposes, it's a measure I find extremely important because of the implications of vocabulary development for students. Because of the research into the vocabulary gap, I hold myself and my students to a higher standard in the area of vocabulary development in order to prepare them for greater success in the coming years. For me, it's not enough for students to be At benchmark by the end of the year, which was why last year, when 42% of students were only at benchmark at this point in the year, I realized that my academic heavy instruction was failing them. Knowing the statistics, I knew I needed a more content-embedded holistic approach, and it's clear from this year's data, that the Project Approach has been beneficial for vocabulary development. From field visits, visiting experts, varied opportunities to read and engage with topics, students are on target for later reading success.
At	42	29	
Below	8	0	

Student Information							EVT		
							F	W	S
Last Name	First Name	D.O.B.	Grade	Race	Sped Svc	ELD LEVEL	Percentile	Percentile	Percentiles
Whitson	Avery		K1	Hispanic	Y		42	39	
Tomlinson	Bria		K0	Black			95	98	
Merksamer	Elena		K0	White			96	99	
Richardson	Keion		K1	Black	Y		21	58	
Simon	Kyle		K1	Black			53	91	
Luu	Julia		K0	Vietnamese	Y		a	61	
Haley	Mabel		K0	White			97	99	
Samad	Maryum		K0	Other			88	98	
Pimentel Tejeda	Miguel		K1	Hispanic	Y		75	99	
Feliciano	Nathaniel		K1	Hispanic			42	90	
Young	Nelise		K1	Black	Y		34	53	
Loving	Patience		K1	Native American			68	91	
Banks	Sanil		K1	Black			96	96	
Gormley	Theodore		K1	White			99.4	99	
						Total possible:	100		

Writing Samples

| Mabel - October	Mabel - April
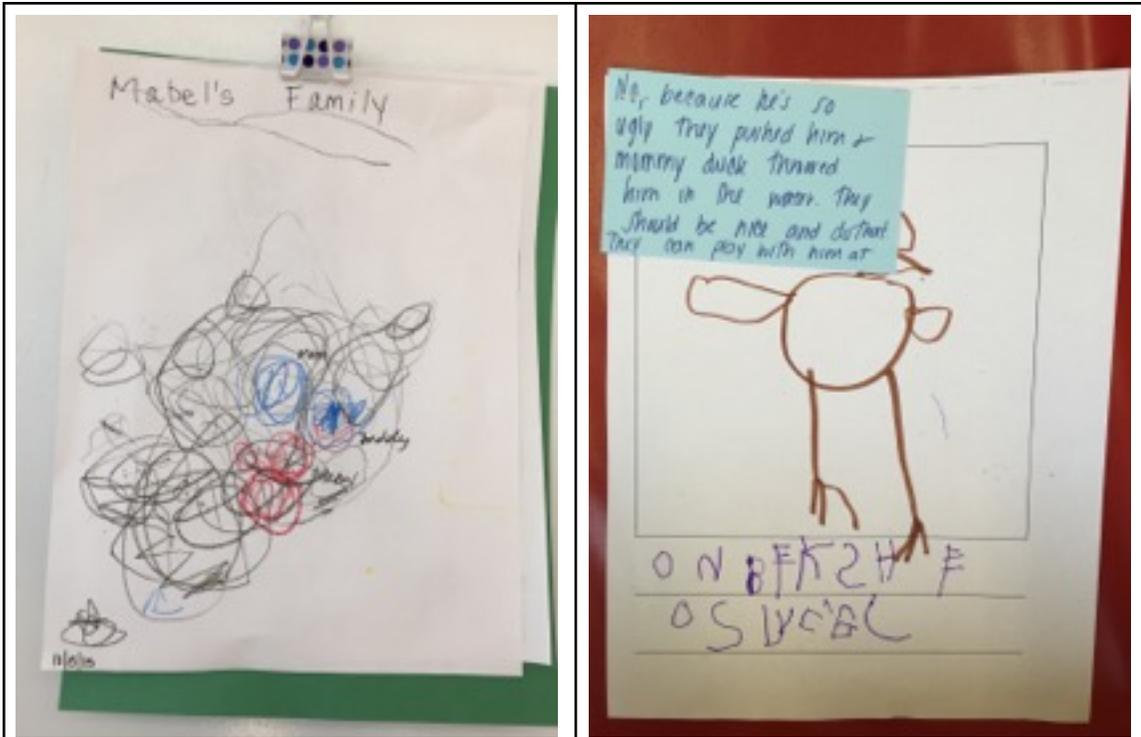
Reflection

Mabel writes every single day, and wants to tell you about everything she has learned through pictures and words. She will spend hours sketching maps, drawing the playground, observing plant life, drawing ocean scenes, or observing exactly how many gills are on our classroom pet, Nemo. In the October writing sample, Mabel was asked to draw a picture of her family. As the year progressed and after our work with argumentative writing through the use of Folktales and Fairy Tales, Mabel was asked to respond to the Ugly Duckling and answer "Should the animals have treated the ugly duckling differently?" Mabel has gone from scribbling to intentional and representational illustrations. She has also begun phonetically spelling. Her February writing says "ON BEKS HE SO UCGL" which was her attempt at "No, because he is so ugly." Her voice is developing as well and in this example, her oral language has expanded from labeling her drawings "Mommy, Daddy, Mabel" to presenting a clear and logical argument and supporting it with evidence from the text. "No, because he's so ugly. They pushed him and Mommy Duck throwed him in the water. They should be nice and not do that. They can play with him at the farm." Mabel is a three-year-old student, but has grown exponentially in her writing and reasoning because of continued opportunities to write for an authentic purpose.

| Nelise - October	Nelise - April
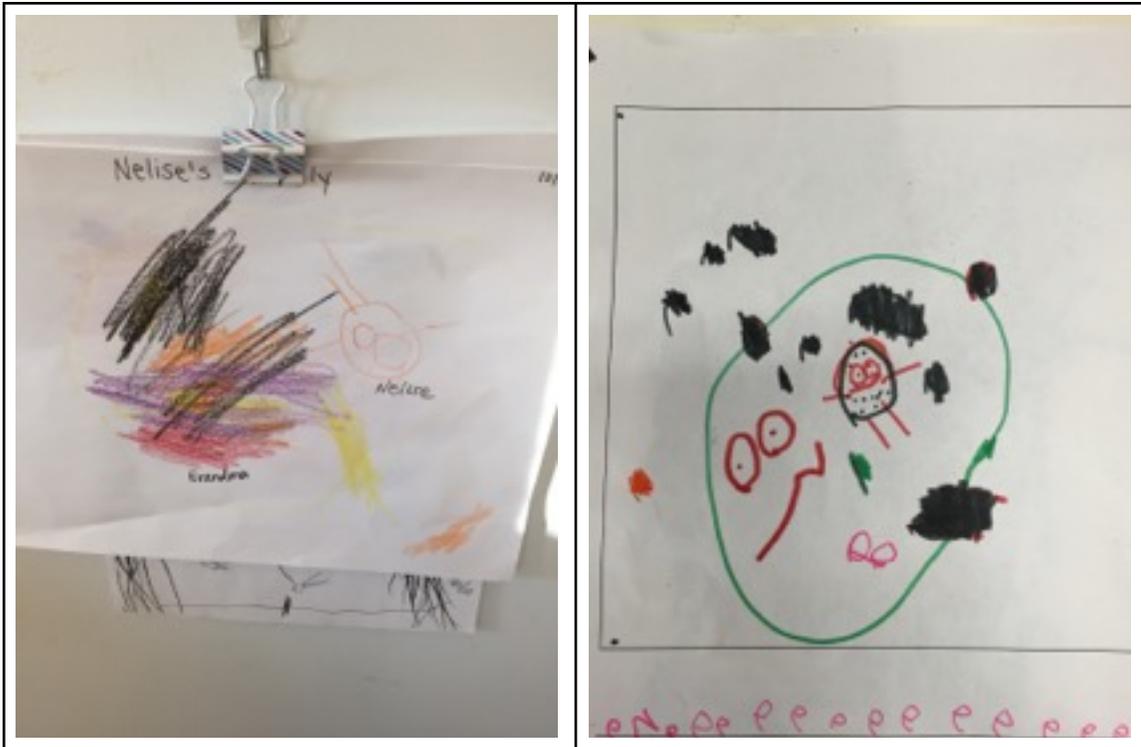
Reflection

Similar to Mabel, in Nelise's October writing she was asked to draw a picture of her family and in April's writing she was asked to respond to a piece of literature and provide an argument. This time, Nelise was responding to the original Anansi story. In that story, Anansi has six sons, and they all work together to rescue Anansi after he gets eaten by a fish. Anansi finds the moon and tries to decide which son deserves the moon as a reward for his help, but eventually can't decide and puts the moon up in the sky. I asked students to tell me which son they thought deserved the moon. In Nelise's drawing, you can see Anansi the spider in the belly of the great big fish. Orally, Nelise told me that she thinks Game Skinner deserves the moon because he was the son who cut the fish open and got Anansi out. There are noticeable improvements in Nelise's illustrations, and Nelise has also begun experimenting with letters and has entered the stage of creating random strings of letters to represent her understandings. She still has the tendency to revert back to scribbling when she's unsure of how to draw something perfectly, but her excitement about the topics we have been studying has helped Nelise take bigger risks in her learning.

| Teddy - October | Teddy - April |
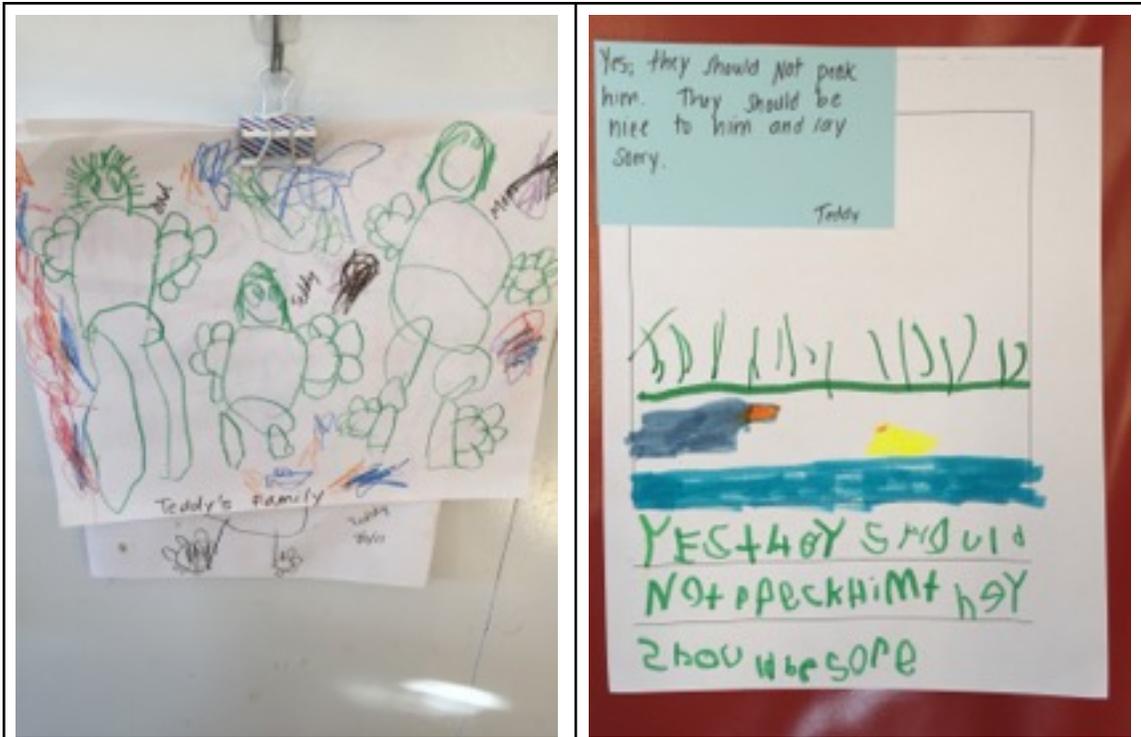
Reflection

Teddy is a student who clearly entered with advanced writing and drawing skills for a 4-year-old. In his October family drawing, you can see detailed bodies with heads, hair, eyes, mouths, hands, and legs. As the year progressed, Teddy frequently engaged in writing to teach other students. Teddy is a natural born leader who has great communication abilities. He always wants to tell you the new information that he has learned and he wants you to know immediately. Writing has been a tool for him to get his ideas onto paper so he can share them with the whole class during Closing Circle. The other students are inspired by Teddy's work, and he's willing to sit with them and coach them on the use of color, or phonetic writing, or how to draw specific animals. In Teddy's April writing sample, you can see his use of conventional spelling, sight words and phonics to talk about the Ugly Duckling and support his argument with evidence from the text.

Storytelling

Kyle:

Fall	Spring
There was a red Marshall and he shoots fire up. After he shoots fire all the water comes out. There's a lot of Marshalls and a lot of sky. The end.	Once upon a time, I was on a mission and Avery and Teddy was on the mission too. We shoot bad guys and we get the bad guys. Me, Avery and Teddy were good guys. Jordan Lee was chasing me. He chased me 100 times. I run faster than him. And he was on ice and it was too slippery and he fell and had to go to the doctor and then I lost Avery and Teddy. The End.

Reflection
Kyle has developed storytelling abilities that include a clear beginning, middle and end of a story and he is infusing vocabulary learned from various projects into his story. This higher vocabulary and more complex sentence structure has led to more engaging stories, and they are easier to act out during story acting and make sense to his peers.

Math

Student: Keion

Question:	September Response	May Response	Reflection
Numeral Recognition Recognize 0-5 Recognize 0-10	1-5	Identified all numbers	Because of the Project Approach, our classroom has become a democratic community, where we often vote on issues that are raised or
Ordering Numbers Order 0-5 Order 0-10	1-5	Ordered 0-5 and 0-10 easily	

Matching Comparer *Show three cubes of one color, and six cubes of another color.* "Are there the same number of cubes in each group or does one group have more?"	"The purple group has more." (couldn't expand)	"The yellow group is little and has less, and the purple group is big. You could add more to the yellow group to make it even if you wanted to, but right now its smaller"	topics we want to learn about. As a result, my students higher level math skills - Matching Comparer, Mental Number Line and Place Value Comparer - have skyrocketed. Keion, a student who has struggled with his ability to communicate his understandings about math has developed strong academic discourse skills and mental reasoning, as evidenced by his responses on the May math assessment.
Mental Number Line to 10 Which number is before 5? Which number is after 8?	3 (incorrect) 9 (correct)	4 is before 5 9 is after 8	
Place Value Comparer What number is bigger? 4 or 8? How do you know? ___ What number is smaller? 11 or 4 How do you know?	"8 is bigger." "4 is smaller"	8 is bigger because 8 looks this this (shows me wide arms) and 4 looks like this (shows me small arms) 4 is smaller because 4 is a little line of dinosaurs and 11 would be a big line of dinosaurs	

Further Work & Wonderings

Over the past two years, I have been teaching a graduate course in partnership with TeachPlus & UMass Boston. In the past, I have focused on the implications of the shifts of Common Core for Early Childhood, but the most recent time I taught the course, I infused Project Approach as the vehicle for cognitively demanding tasks and guided play. My inquiry project allowed to me to provide better professional development opportunities for other teachers in the district and I look forward to being able to continue to share my findings. I am left wondering, how can I better share my research with other teachers in my own building? I led my team in developing content-embedded units for the Ocean, Folktales and Fairytales and will soon lead with Things that Grow, but I have not yet discussed my findings or my research that informed my use of Project Approach. I am also left wondering about how my students families perceive their child's education. Do parents understand the difference between a guided-play rich

learning environment versus an academic heavy program? I am also wondering how to reduce the workload from the teacher planning. Does it get easier the second time you teach a unit? There's a lot of planning that you can't do until children have expressed an interest, and then a lot to get done in a short amount of time. Once you've had a few groups of children pass through and found similar common interests, I wonder if the work gets easier. What's the best way to assess students using the Project Approach? I will continue to inquire about how to continue to provide these high quality learning experiences while also making the teacher work more efficient as I continue to implement the approach.

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