Connection of Classroom Observations and Theories: A Reflection on the Relationship of

Theories within the School Environment

Caleb Wilson

Cornell College

"I wish knowledge could be just plugged into my brain," exclaimed Seamus, a fourth grader with curly light-brown hair, glasses, and a smile that lit up the maroon hallway we walked down together.

"Why is that?" I asked.

"It would save so much time," he answered, turning the corner towards the library.

"What would you do with all that free time?"

"I don't know. I could play more Minecraft and hang out. If knowledge was given to us at birth, we would save so much time. I think I would design a military weapon or something!" He skipped ahead and I chuckled as we made our way by the first grade classrooms, passing rows of crafts created by the students. Although I expected the classic tiled floors of Washington Elementary, the famous paintings, and the Mount Vernon Mustangs signs that lined the walls, I was surprised to not feel like a giant amongst dwarfs. When I visited my own elementary school five years ago, I felt out of place while nostalgically walking past the miniature lockers, the drinking fountains, and the tables and chairs in the building where I set the foundations for my learning and spent endless hours playing. However, at Washington Elementary, I didn't feel so out of place. As a prospective teacher, I comfortably cruised down the narrow, busy, festive hallways with the fourth grade students of Mrs. Thede's class, strolling by a very welcoming office, and a lunchroom with rows of the same tables I sat on as a kid. I glanced in on a tidy, well-lit gymnasium, and we turned towards the library where students were having their picture taken by friendly photographers. "You should take Seamus' picture for him," joked Avery, a bright, shy girl who I spent much of the day with.

"Yeah!" Seamus laughed, handing me his forms and peeling the name tag from my chest. We did look eerily alike, but after the shenanigans finished, he took his picture, and we made our way to class.

As we walked to Mrs. Thede's room, I traveled through time, beginning in first grade. Passing the "10 Things about Me" signs or the "Get to Know…" posters, I could see the growth and cognitive development of each grade level. The earlier posters, written in adorably messy handwriting, displayed basic facts, while those on the other end of the hallway showed more developed, mature, and original statements. At the final classroom of L-shaped hallway, right next to the glass doors that led to the beautiful new playground, Mrs. Thede had hung pictures of her students, and below the picture each student had written responses to what they liked to do and their what they thought were their favorite things. I turned left and entered the classroom, and my eyes immediately drowned in the posters that covered the walls. Signs, calendars, and banners overwhelmed the room, and as I took a deep breath I smelled the sterileness of a recently cleaned room mixed with the musty energy of a fourth grader, and I smiled looking at the tiny tables and chairs. I perused around the pods of desks to the back corner of the classroom, where a cheerful boy bounced on a yoga ball. I later learned that the table I sat at belonged to Ean, and due to his extra energy, his table allowed him to participate in class without disturbing his peers.

Throughout the day, Mrs. Thede allowed her students to move around the classroom, and for activities during Spanish and read-aloud, we moved to the carpeted area, complete with a whiteboard and rocking chair. I noticed that classroom duties were never specified; instead, each student owned responsibility for their own books, folders, and handouts, which remained

uncluttered at their desks. The classroom felt neat, welcoming, and accommodating for all

students, and I soon found myself in the easy ebb and flow designed by Mrs. Thede. Each subject

lasted about thirty minutes, giving the kids enough time to experience the topic, but also

provided the novelty effect that kept students engaged.

In transition between each subject or new parts of the day, Mrs. Thede expected the kids

to be silently reading at their desks, and during activities students promised to be quiet and

attentive during instruction. This idea of absolute silence bothered me; very little interaction or

free socializing took place. Chapter five of *How the Brain Learns*, written by David Sousa

(2011), stresses the importance of spoken language at all ages, but most specifically at an early

age where neurons readily make connections in the brain to increase understanding. Sousa

explains that "schools are largely responsible for enhancing the spoken language of children and

teaching them to read. How quickly and successfully the brain learns is greatly influenced by the

spoken language competence the child has developed" (Sousa, 2011, p. 188). Learning language,

Sousa describes, begins at birth through the understanding of phonemes, units of sound, that

make of the syllables of a word (Sousa, 2011, p. 188).

Using this foundation of sound, children begin to recognize individual words, and then by

age three are able to construct coherent sentences (Sousa, 2011, p. 188-189). Although studies

show that "the brain's ability to acquire spoken language is at its peak in the early years," parents

and teachers should continuously create an environment where talking, singing, reading, and

interacting to allow for cognitive development. As important as language is in learning, I was

surprised to see the lack of talking, sharing of ideas, or debate throughout the day. The class

culture created by the teacher obviously had bonded the kids, but I wished for more time to kids to freely talk with one another. However, Mrs. Thede has designed a room for students to feel comfortable and respected by her, and in turn they admired their teacher.

Mrs. Thede clearly cared for her students, and by creating a room and making connections that fostered comfort and safety, I observed that the kids were able to thrive under her guidance. For example, softhearted Avery needed continuous check-ins throughout the day, and each hour she filled out a quick questionnaire to express how she felt. This system, designed by Mrs. Thede, allowed non-verbal communication between teacher and student, making sure that Avery received the attention she needed to do her best. The respect Mrs. Thede showed her students was also reciprocated. Laughing at jokes, quiet during instructions, serious during activities, and silly during breaks, students followed Mrs. Thede's lead, matching the mood created by their teacher. Students clearly felt comfortable following the teacher's example, and trusted that Mrs. Thede wanted the best for them. I never heard any disagreement or resistance to the teacher's directions, allowing for a smooth flowing day. I saw this same mutual respect while shadowing Leo, a cool, intelligent, and caring seventh grader at Mount Vernon Middle School. Unlike the elementary school, Leo had a different teacher for each subject, but the admiration and courtesy for the teachers remained. The results of this positive relationship showed in the learner data collected by Leo's elective teacher, Mrs. Scearce.

Last year, the Mount Vernon Middle School added an elective class titled ELP, a course designed for advanced students, like Leo, and allowed them to enroll in online high school courses. The director of these operations, Mrs. Scearce (2016), relies heavily on learner data to

analyze her instruction and to make changes to the classroom, and although she does not directly

teach the classes, she controls the logistics, providing a space and the tools for students to

complete their courses. When I asked her to tell me more about the class, she explained that the

kids enrolled in ELP already had the educational talents and gifts, and that, because of a survey

before the year started, the class itself was very individualist based. Mrs. Scearce told me that

she must remain flexible and open to change; superb communication, she continued, is essential

to the function of the class. Mrs. Scearce said that this marked only the second year of the

program, and many bugs existed that could potentially ruin the class. Self reflection and

meaningful feedback from her students allowed for the class to continue; without the students

explaining their needs and desires, such as a certain software for a computer program, for higher

level classes, ELP would not survive at the school. Mrs. Scearce served as the liaison between

the online programs and the middle school kids, and through her experiences in this position she

was learning just as much as the students in her room. Mrs. Scearce let go of any past bias or

preconceived notions, allowing her interaction with students and the feedback she received to

structure her course.

Sitting in the back corner of her class at the end of the school day, I reflected on what I

experienced through my observations and the connections I consciously made to what I learned

in my own classroom. The readings, discussions, and theories lit up like a bulb when I saw the

link between what we learned in class and what I saw, and I was surprised on how obviousness

of those connections. Due to the behaviorist nature of Mrs. Thede's fourth grade classroom,

elements of Alfie Kohn's theories like rewards and production were clearly identified. According

to Piaget's stages of development, students in Mrs. Thede's class fell into the concrete

operational stage and displayed strengths in classification and an overcoming of their egocentric

views. Finally, examples of Vygotsky's ideas on "private speech," group work, and scaffolding

could be seen, but many aspects of his theory was suppressed by the classroom's behaviorist

structure.

Alfie Kohn's theories could be clearly observed in the 4th grade classroom, and because

of the school system's history of internalized behaviorism, I saw a continuation of what Kohn

warned against in the classroom. American schools settled into a post-modern style of thought

during the industrial and scientific revolution, causing a change in the purpose of education.

Instead of preparing kids for agricultural-type lives, society shifted towards factory job

development (Reynolds, 2005, p. 3). This system, created by Frederick Taylor, transformed

schools into production lines, where the end product became the focus, not the process of

reaching the end. Like most jobs and careers, completing this process effectively meant a reward.

Pop behaviorism, the centerpiece of Alfie Kohn's theory, has become so deep-rooted into our

culture, particularly in our schools, that we fail to notice how it has negatively changed our

students. Kohn (1993) explains that the "core of pop behaviorism is 'Do this and you'll get that'.

The idea is that the best way to accomplish something is to provide a reward to people when they

act the way we want them to." (p. 3).

Also called the Granny Rule (you cannot eat dessert until you've eaten your peas), pop

behaviorism revolves around giving rewards for completing tasks. Kohn (1993) argues that

rewards like praise, grades, or snacks are not the problem, but how those rewards serve as an

incentive, combined with the intrinsic nature of pop behaviorism, causes classrooms to function

through rewards (p. 4). "To induce students to learn, we present stickers, stars, certificates,

awards, trophies, membership in elite societies, and above all, grades" (p. 11) Kohn describes,

and I believe that this notion extends to elementary schools where good behavior and results are

honored rigorously. Due to this promise of rewards for actions, students have unintentionally

become obsessed with the final product, not the process to achieve it. While observing Mrs.

Thede's fourth grade classroom, I saw clear examples of pop behaviorism and the internalization

of the reward system throughout Washington Elementary.

Meeting expectations- standards designed by teachers and administrators- at Washington

Elementary is managed with tickets awarded to students, the currency that kids crave and

teachers give almost carelessly. After a few hours in the school, I immediately realized how high

esteemed these tickets were held. Students, I noticed, never asked for tickets, they just assumed

that they would receive them for listening to directions or meeting the expectations of the

teacher. Every positive act, such as being quiet when listening to directions or clearing off desks,

was followed by a ticket, which could be cast as a vote to a prize of a fishing trip, bingo at

Hallmark, or homemade ice cream. Like Kohn explains in his article, the reward itself should not

be criticized. Fishing, bingo, and ice cream are great, class-bonding, fun activities, are not the

problem, but that dangling these rewards in the faces of students serves as the school system's

only solution to maintaining good behavior means a serious, internalized issue exists.

On the other end of the spectrum, poor behavior at Washington Elementary meant

punishment, and punishment meant loss of glorious, precious, can't-get-enough recess time.

While I observed students in a social studies class, a group of boys squirmed and gossiped in the back while the teacher explained the meaning of the "executive office." Their rudeness needed to be addressed, I understood, but when she threatened to take minutes from their recess, I struggled to stifle a wave of fury. Recess only lasted twenty-five minutes, and the teacher wanted to take away more time from the small portion of the day that allowed kids to freely explore, interact, and play in a safe environment as punishment for not following directions. In *How the Brain Learns*, David Sousa (2011) stress the crucialness of recess, saying that given all we know how about how motor movement and exercise promote brain activity, "it seems counterproductive for elementary schools to be reducing or eliminating the time for daily recess" (Sousa, 2011, p. 239).

Through interviews with principals, Sousa explains that recess is being cut for three reasons: First, to keep up with the trend of "school productivity and accountability" time is taken away from recess and given to class time (Sousa, 2011, p. 239). Secondly, more class time for standardized and high-stakes testing means a loss of recess time, completing neglecting the clear importance of movement and brain stimulation. Finally, recess, principals claim, is too much of a legal issue. Limiting the time for something harmful to occur decreases the possibilities of injuries, bullying, or other altercations (Sousa, 2011, p. 239). Though these reasons are all valid, it proves our American school system's obsession with standardized testing. Schools care so much about the test that we are willing to take away time for kids to play outside. I was appalled by the school's close-mindedness, and felt frustrated when the teacher threatened to take that precious recess time away.

Since the industrial revolution, or school systems have depended on, as Alfie Kohn coins, pop behaviorism, and it has become so intrinsic that teachers and students fail to recognize the dangers of such a reward-heavy structure. With Kohn's theory in my mind, I began to inspect how students in Mrs. Thede's class approached learning tasks through Jean Piaget's theory on cognitive development.

Piaget's theories of child development can be used to tailor curriculum that promotes and expands student learning. Instead of learning about our environment through lecture or by simply watching a video, Piaget claims that students should interact with physical objects, using all the senses to create schemes, or organized mental processes that help make sense of the world. Creating concrete experiences with our environment, Piaget says, creates the foundation for future learning and the ability to think abstractly. This understanding of the physical world can be furthered by developing social experiences, which "allows learners to test their schemes against those of others" (Eggen, Kauchak, 2013, p. 37), connecting back to Sousa's notion of the importance of language. When students question and then arrive to a conclusion about their environment, they reach equilibrium, a state Piaget describes as an ability to describe one's surroundings due to an comprehension of that environment (Eggen, Kauchak, 2013, p. 35). With these ideas about experiences serving as the foundation for his theory, Piaget created four stages of development to illustrate cognition from birth through adulthood.

Piaget's stages of schema and cognition evolution begin at the sensorimotor stage, which lasts between birth and two years. Here, kids engage motor skills to explore, question, and understand their world. Grabbing, chewing, and rubbing, kids begin to develop ideas on the

physical aspects of their surroundings. As they grow between ages two and seven, children enter

what Piaget labels as the preoperational stage, where huge leaps in language allows kids to

describe and label experiences. Furthermore, ideas like conservation, centration (focusing on the

obvious aspect of an object), and egocentrism change the way children interact with their

environment (Eggen, Kauchak, 2013, p. 39). At Washington Elementary School I observed,

students leaving the preoperational stage and entering Piaget's next level, concrete operational.

As children overcome their egocentrism, they begin to think at a higher level while using

concrete materials. At this stage, students employ their pre-built foundation of their physical

world, and start to expose signs of abstract thinking. Classifying and making connections

between two ideas push students to form more complex ideas; furthermore, children perform

more effectively with groups, bridging back to the part of Piaget's theory that says social

interaction increases the expansion of schemes. In Mrs. Thede's fourth grade class, students

clearly expressed traits of Piaget's concrete operational stage. During the spelling portion of the

day, students categorized long and short voweled words into two piles. They employed tests and

experiences previously learned in school to classify a word like "bait" from "grass," and I

watched as kids mouthed out the words slowly, expressing every syllable of the word, or asking

their tablemates for help. The students already knew the words and their meaning, and they knew

how to sound out the words and use techniques to differentiate between a long and short vowel.

Now, they applied their past experiences to categorize the words, combining two learned skills

together. Though this activity fit perfectly into Piaget's concrete operational stage, the teacher

never took advantage of digging deeper into the topic, furthering the scheme's development. The

students followed the directions, but were not asked to reflect on the process. How did you categorize the two words? What words were harder than others? Did you use any tricks to help you? The teacher missed an opportunity to push her students into a deeper level of thinking, a dropped chance to prepare her students for the next stage of cognition, formal operational.

Piaget's final stage ranges between ages eleven through adulthood. Unlike the previous stage, children, who are entering puberty and growing into teenagers, have the cognitive abilities to think abstractly. Students in this stage can think about topics beyond the physical world in front of them, allowing them to systematically solve problems that don't involve concrete objects. In relation to Bloom's Taxonomy, a series of questions that build upon one another to develop higher, more complex thinking, students should be asked to analyze, evaluate, and create original solutions to problems (Sousa, 2011, p. 263). I observed this stage in Mount Vernon Middle School as I shadowed Leo through his classes, recess, and interactions with his peers. In math class, the students were asked to solve "mental math" problems. Read out loud by a peer, the problems were not provided in a physical form, only verbally, and students worked through the problems in their head. This pushed students to reach back into their memories to find the solution, then required them to solve the problems abstractly, working through concepts and holding ideas in place to find an answer. In history class, the teacher asked students to compare and contrast two different countries' laws, testing the students ability to think about two individual ideas from an era that they never physically experienced, then asking them to juxtapose. This final stage is built upon all the previous stages, and although the goal for many

teachers is to prepare students for the highest order of thinking, Piaget's theory is often applied

incorrectly in the classroom.

According to an article by Daniels Denise and Lee Shumow (2003), Piaget's theory is

often mistakenly applied by teachers who learned the theory in their college education courses.

They classify or limit their students by labeling them into one of Piaget's stages of development,

which are based on an age range, only trusting them to be as cognitively capable as the theory

indicates. If used correctly, Piaget's theory actually contradicts the limitation of the stages,

explaining that teachers should provide as many different experiences as possible to allow

students to assimilate, using past schemes to interpret new ones, or accommodate, creating or

changing new schemes to understand new experiences. Piaget stress that no matter at what stage,

students should be able to explore, question, and test the physical world (Eggen, Kauchak, 2013,

p. 36). Lev Vygotsky, another leader in the cognition of children, believes many of the same

components. Vygotsky supports the notion that effective mental processes are based on strong,

concrete experiences, and that knowledge should be discovered by a student, not provided by a

teacher. However, he differs from Piaget in a few essential ways, which can be seen in the

classrooms I observed.

Vygotsky's sociocultural theory of cognitive development, based on interaction and

communication with others, appeared in glimpses in the 4th grade classroom I spent the day in,

as well as Mount Vernon Middle School. Although Piaget and Vygotsky share similar aspects,

such as the importance of physical experiences, they differ in the significance of social

interaction. Piaget emphasizes a focus on the individual, allowing children to solve the problem

by themselves, while Vygotsky stresses the necessity on group work. This notion of relying on others to further cognition sets the foundation of Vygotsky's theory. In an example given by Eggen and Kauchak (2013) about two children learning to read, the authors write that, "the interactions were between the children, and a *more knowledgeable other*, and as a result, the children developed understanding that they wouldn't have been able to acquire on their own" (Eggen, Kauchak, 2013, p. 46). The interaction and cognitive development occurred, according to Vygotsky, due to a combination of cognitive tools -numbers, languages, and symbols- and physical tools. These tools were then internalized into children's cognition and schemes in conjunction with "society-based ideas" (Eggen, Kauchak, 2013, p. 46), or cultural notions that play a role in the way we live and learn.

Furthermore, I observed in Mrs. Thede's fourth grade class certain aspects of Vygotsky's sociocultural theory of cognitive development, but was disappointed to see a lack of group work. The teacher rarely required students to solve or analyze problems with their peers. Instead, students completed tasks quietly by themselves at their desks, and although they played, talked, and learned as a class, they never experienced debating or helping one another. The questions asked typically required only a quick, one word answer, making group work unnecessary to the completion of a task. Bothered by a lack of one of Vygotsky's most essential points, I wished that the teacher asked students to work in groups to solve problems, and then had them present their group's solution to the rest of the class.

In the middle school, however, I observed cases of Vygotsky in Leo's engaging, energetic, and cognitively-complex science and history classes. During science, pairs worked

together to analyze a plant specimen from Ink Pond, bouncing ideas off one another and asking

each other for help to overcome issues while trying to complete the lab. The class functioned as a

whole to reach the final answer. In history, students compared and contrasted past laws from

different countries in groups of four, analyzing the readings from four individual perspectives.

Their separate schemes and past experiences were brought together to form a new take on the

assignment, and any preconceived ideas were tested against one another. In a divided world

where face-to-face interaction is losing to online communication, working together with each

other is essential to our success as a species, but we must first create a foundation of cooperation

in the classroom.

In order to learn from our peers or a more knowledgeable adult, however, Vygotsky says

students must be in the zone of proximal development. Here, students learning in school,

children exploring their environments, or even adults trying to fathom the world, are not able to

comprehend subjects or tasks by themselves, but can reach an understanding when aided by an

experienced other. The answers aren't given directly, however; instead, teachers provide

stepping stones and pushes in the right direction, or what Vygotsky calls "scaffolding," to allow

students to discover an answer on their own, which develops stronger schemes and experiences

(Eggen, Kauchak, 2013, p. 48).

The last aspect of Vygotsky's theory is called private speech, or "internal...self talk that

guides thinking and action" (Eggen, Kauchak, 2013, p. 47). Talking to one's self to solve

problems is important for metacognition because it gives students the ability to learn how to

describe their cognition process, pushing them to reflect on the steps they took, and allowing

them to reach back to previous schemes and apply past experiences. For an example, during the

spelling section of fourth grader's morning, I watched students tap their pencils, scrunch their

faces, and mutter the words out-loud as they categorized short and long vowels. Hearing the

word whispered, or going through the motions of speaking the word and drawing out parts of the

vowel helped them complete the assignment. Applied correctly, Vygotsky's theories creates a

sense of community and reliance that strengthens both cognitive and social skills.

During my days of observation at Washington Elementary and Mount Vernon Middle

School, I noticed not only the theories describing the visible learning process of students and

teachers, but the internal growth of the children as they experienced the world autonomously and

collectively as well. Theories of Dweck and different mindsets, Erikson's definitions of identity

and crises, Bronfenbrenner's model of systems, and Bandura's view of social cognition

development all play a role in the way kids grow inside and outside of the classroom.

Learning rarely comes easily, effortlessly, or consistently. Students, regardless of grade

or development, must put time and energy into their learning, making a conscious decision to

reach out and grasp the material. However, it is clear that each student has a different motivation

and style of learning. A social psychologist and a professor at Stanford, Carol Dweck studies

how children learn in the classroom, but more importantly, "what students believe about their

own intelligence" (Dweck, 2007, p. 6). Dweck's theory revolves around what students believe

about the process itself, and how they as students approach a new concept or difficult project.

Through her studies and research, she identified two different styles or methods of thinking. The

first style, a fixed mindset, has slowly crept into our society due to a change in our school

systems, and I would argue that a majority of today's students label themselves as having this

style of learning. In this form of motivation, students follow the cardinal rule "look smart at all

costs" (Dweck, 2007, p. 7), focusing only on covering up any weaknesses or failures in their

learning in order to appear intelligent. Afraid to make mistakes, students with a fixed mindset

would rather never challenge themselves to keep a flawless resume than to try and fail.

Furthermore, the act of "trying," according to the fixed mindset student, is a sign of deficiency

and unintelligence (Dweck, 2007, p. 7). For an example, a student who struggled through a

homework assignment or studied diligently for a test would be putting forth effort, and to

someone with a fixed mindset, would not qualify as smart. A growth mindset student, however,

would contradict that opinion.

A growth mindset student in that same example would argue that the student applying

effort and taking on challenges will have a better learning experience, and later down the road,

more knowledge. Dweck explains that "students with a growth mindset believe that their abilities

can be developed, and so their major goal is to learn" (Dweck, 2007, p. 8.). Supportive of their

learning experience and willing to make mistakes, this type of student confidently approaches

challenges with the knowledge that the most essential part is the process of learning, not the

result itself. When a student who wrestles with a math test or cannot grasp a concept in history,

they do not fear looking weak or unintelligent. Instead, they willingly change their approach,

often to the sound of approval and praise from their teacher. Praise, Dweck argues, should be

given carefully by teachers. Parise is more effective when addressing the effort and the handling

of challenge, not to the final result. Students with a fixed mindset fear this praise because it

means that the teacher understands their possible weaknesses or lack of understand (Dweck, 2007, p. 8.), while students with a growth mindset appreciate the praise and confidently tackle future challenges. During my observations, I noticed a open mindedness from the students, but I believe that teachers failed to promote a growth mindset in their classrooms.

While I observed potential opportunities for teachers to establish a growth mindset environment where students felt comfortable making mistakes or reflecting on a weakness, the behaviorist nature of the classroom limited the chances to praise the effort of learning. The process, I noticed, was given merit; the middle school student Leo, who I shadowed, felt comfortable answering questions and never shied away from a task, even in his advanced ELP class. However, the result, the final product, the end goal, were the focus of his teacher's praise, not the process to reach the solution. Students never reflected on their effort or how they felt, and rarely expanded on an answer besides the one word or phrase the teacher requested. The schedule of the school day presented a great chance for students to explore a wide spectrum of topics and subjects, giving them many different tasks to face, but the teachers provided the students with no serious challenges. Teachers should not be afraid to push their students, asking them complex (not difficult) questions to promote a higher level of thinking all the while praising the effort of that learning, not the final product as is so often done. In order to employ this method as a teacher, however, they must know their students on a more personal level, understanding who they are as people and how they view themselves.

This notion of personality, or what Erik Erikson calls identity and self-concept, helps define how students learn and their ability to reflect on personal capabilities, including learning

and competence. People question their identity, the "self-construction of who they are," throughout their lives, asking themselves what they want from the world and the reason for their existence (Eggen, Kauchak, 2013, p. 78). The idea of identity combines with what Erikson calls self-concept, an internal assessment of a one's intelligence, physical abilities, and how they interact socially (Eggen, Kauchak, 2013, p. 78). Together, the fluctuation of identity and self-concept causes development, and furthermore, cognitive changes that affects learning. Erikson created a chart to track human identity and self-concept from birth into adulthood; labeled with a crisis, or two developmental options that each person experiences within a certain age range, Erikson believes that humans undergo an ultimatum decision that is influenced by their cognitive development.

At birth, babies undergo a trust versus mistrust crisis with their parents, testing the support of the adult figures in their lives. Then, they transition into an autonomy versus shame crisis in their toddler years as they explore the world freely or strictly. An emotional crisis of initiative versus guilt between ages three and six dictates a child's ability to explore and face new challenges, while between ages six and twelve kids develop a sense of competence or weakness through an industry versus inferiority crisis. The fifth crisis, experienced through ages twelve and eighteen, is identity versus confusion, questioning teenagers abilities to develop their identities in a safe environment as they make their way into the young adult years, where creating close relationships with peers is tested in a intimacy versus isolation crisis. In the generativity versus stagnation crisis, adults ponder if their contributions to future generations are positive and beneficial, or if their unproductivity is leading to self-loathing. In the final level of

Erikson's eight lifespan stages, old adults contemplate death through the achievements, or lack thereof, during their life in an integrity versus despair crisis (Eggen, Kauchak, 2013, p. 79). Though Erikson's theory lacks the same acceptance by today's psychologists, his stages can be clearly differentiated and observed, and I was surprised to find how well the kids I shadowed and spent the day with fit into Erikson's crises.

The students in Mrs. Thede's class were transitioning out of the initiative versus guilt crisis, and into the next crisis of industry versus inferiority. The students had clearly established a foundation in the previous stage; they were willingly exploring their environment and interacting with one another without fear or guilt, and were beginning to develop a sense of competence through successes. Ean, the bright, smiling boy I sat with during my observation, was being tested for his reading efficiency by reading out loud a section of story. Though Ean read strongly, this would be the stage where he might question his own competence and learning abilities.

The cool, highly intelligent seventh grader I shadowed, Leo, visible fit into Erikson's identity versus confusion crisis, and at the age of about fourteen he and his friends were already making decisions about their future. Sitting in the loud, bustling cafeteria filled with the sound of happy kids and the eating of food, I listened to Leo and his friends explain their college plans and their career possibilities. Leo knew he wanted to pursue computer science, and when his friends chimed in, they all presented reasonable job options, not the imaginative, ambitious careers of children. The identity development of the kids I spent the day with is furthered by the environment they were raised in, an environment that can be explained by Bronfenbrenner.

Similar to how identities or self-concepts construct a child's unique outlook of the world, their individual perspective is directly affected by observable and unobservable factors that shape the way a child behaves in the classroom. Every person, every child, every student, owns an intertwining web of relationships with their community, peers, family, and surrounding institutions that affect the way the grow. This web of systems can be explained through Bronfenbrenner's bioecological model of development, a theory created to explain both the internal and external factors that form an individual. The word bioecological can be split into two separate parts to define his theory; *bio* refers to genetic influences, such as temperament, body type, and health, while *ecological* represents the environmental factors like neighborhood or culture (Eggen, Kauchak, 2013, p. 67).

Bronfenbrenner's model describes the ecological, or the external, influences on an individual through a series of four systems that build upon and interact with each other. Surrounding the person first lies the microsystem, filled with peers, family, and schools, and neighborhoods, while the next ring, the mesosystem, is accountable for the interaction of those parts (Eggen, Kauchak, 2013, p. 68). "For example, parents and schools are two important elements of the microsystem, and effective schools promote high levels of parental involvement" (Eggen, Kauchak, 2013, p. 68). Each aspect of the mesosystem is intertwined like a spiderweb, affecting the individual's relationship with every part. Parents and teachers play a crucial role in one's development. As guiders, caregivers, protectors, and providers, parents have much influence in the creation of a child's environment. In the chapter written by Eggen and Kauchak (2013), the authors promote an authoritative parenting style in which parental figures "set high

expectations and are warm and responsive. They are firm, caring, and consistent...[and] explain reasons for rules." In turn, their children "tend to be mature, considerate, confident, secure, and successful in school" (p. 68). This form of parenting, the article describes, can be transferred into teaching. Like authoritative parents, teachers can model the same balance of high expectations and levels of warmth in order to promote a classroom that makes students feel safe, cared for, and responsible for their learning while following expectations. Parents and teachers play a role in the mesosystem, which is followed by the exosystem.

The exosystem, the next ring in Bronfenbrenner's model, describes the social influences that shape the the previous rings. These influences include, parent's jobs, their income, or school systems; furthermore, they can either strengthen or weaken the relationships within the mesosystem. Finally, the macrosystem, which describes the culture in which the individual is a part, affects social norms or beliefs that one might inherit (Eggen, Kauchak, 2013, p. 68). I observed this model, which shows the interwoven systems that shape and develop a child, within the classrooms, and I noticed how similar each student's ecological model were in the schools.

Though unique in physical form, preferences, and temperament, the students I spent the day with, in particular the seventh graders, all shared comparable systems. Mount Vernon Middle School sits in the center of the neighborhood, surrounded by a close community of houses, stores, and churches. Students are able to walk from their homes to school, and I noticed that Leo and his friends most spent of their free time together. Because of how small the Mount Vernon community is, I noticed that the students were influenced by the area's culture in similar ways. Students, regardless of gender, wore the almost the exact same clothing style, athletic

shorts and tee shirts, while making the same jokes from various YouTube videos repeatedly.

Furthermore, from what I observed, the children all came from similar socioeconomic systems,

and I did not observe much diversity in the classroom. Although this lack of diversity affected

the types of views and perspectives given during class, students still experienced American

education's definition of "learning."

Alfred Bandura's social cognitive development theory contradicts our modern school

system's definition of learning, and if it was today's description of acquiring knowledge, the

structures of our schools would be completely different. Connecting back to Frederick Taylor's

scientific management theory that promotes a behaviorist classroom, today's schools remain

fixed on the end result, overwhelmingly pushing for an efficient, factory-like product while

ignoring the actual process to reach an answer or discovery. In a reading by Eggen and Kauchak

(2013), the authors write that a behaviorist views learning "as a change in observable behavior"

(p. 311), a change that can be visibly noticed in a student. For example, from a behaviorist

standpoint, watching a student adapt to a new style of note-taking that proved to be more

effective and in depth notes, one would say that the student "learned" a new approach to note

taking.

On the other hand, supporters of Bandura's social cognitive theory would argue that

learning occurs internally and is a "change of mental processes that creates the capacity to

demonstrate different behaviors" (Eggen, Kauchak, 2013, p. 311). This theory focuses on

reflection and metacognition, putting more focus on the process of reaching the end result, not

the actually product or answer itself. Students can not be lectured on how to behave and learn,

they must be shown or observe a behavioral change, seeing the reinforcements given for meeting

expectations first hand before copying the skill. The main component of the social cognitive

theory is modeling another person's behavior and actions, causing an internal examination and

change of behavior and learning (Eggen, Kauchak, 2013, p. 312). Significant to parents, coaches,

and teachers, modeling is critical to the positive development of children and students.

As influential figures with whom children spend a large portion of their day and year,

teachers set examples for not only academic skills like reading or math, but for traits like

kindness or respect as well (Eggen, Kauchak, 2013, p. 313). Students of all ages thrive off

watching older, esteemed role models perform skills before copying the skill themselves. They

see the benefits of reinforcements, or rewards, of writing an effective thesis, solving a long

division problem, or showing compassion, and wish to copy that positive behavior. In the

academic setting, teachers demonstrate cognitive modeling, "the process of performing a skill

combined with verbalizing the thinking behind the action" (Eggen, Kauchak, 2013, p. 313).

I observed this combination of showing and telling in Leo's science class, led by the

spunky, energetic, and memorable Mrs. Maurice, who circled her students around her as she

demonstrated that day's project. Students watched and listened as she explained how to take a

small piece of a greeny, gooey plant from Ink Pond and place it under the microscope. She then

described her internal monologue out loud, telling the class what she was looking for and how

she would represent her findings in her lab journal as she enhanced the viewfinder to see the

cells more clearly. After watching the demonstration, the students, myself included, went back to

the tables to model the process and discover for themselves the cell structures within the plant

leaf. Whether she intentional did it or not, Mrs. Maurice followed four distinguished steps to promote modeling in her classroom. First, she drew in her class's attention so they would follow her behavior, showing and explaining her process thoroughly and simply so they would be able to retain the memory. Next, the class reproduced and mimicked the action themselves, then recalled from memory the steps to complete the lab. Finally, the students felt motivated by the reinforcement, in this case, the learning of new knowledge or receiving a grade, to follow Mrs. Maurice's directions (Eggen, Kauchak, 2013, p. 316). In the end, this process taught the students more about the cells and internal workings of a plant and gave them further understanding of the functions of a telescope through an engaging, fun, hands on experience.

Mrs. Maurice would not have been able to walk into a classroom of students who she had not made connections with and expected the same results. In the first few weeks of school, a relationship formed between the students and teacher created an enjoyable atmosphere that promoted positive learning experiences. Eggen and Kauchak (2013) explain that a "model's effectiveness depends on three factors: Perceived similarity, perceived competence, and perceived status" (p. 31). The students followed Mrs. Maurice cognitive development modeling because they shared a connection through science, they viewed her as a smart, able, and credentialed adult, and her respected status as a teacher. Bandura's social cognitive theory serves as an example for classrooms to promote positive modeling and interactions to allow students to learn on a higher level.

Engaging, interactive, and intelligent teachers like Mrs. Maurice are examples of the future for our society's education system. Schools that overwhelmingly focus on preparation for

standardized testing and how to fill in a bubble do not adequately prepare children and young

adults for the world. Teachers who provide safe, comfortable environments for learning like Mrs.

Thede, or exciting, hands-on teachers like Mrs. Maurice lead the way for developing students

who have the ability to think at a higher level and solve complex questions. To prepare students

for a world full of deep-rooted and intricate issues, teachers must guide children to think

critically, reflecting on the process of reaching a solution and learning from their mistakes. In

chapter four of "How the Brain Learns" by David Sousa (20110, the author stress the importance

of making learned material relevant by transferring information between different subjects to

allow for more complex thinking (p. 149). For an example, creating statistics of a country's

population in math class can transfer into studying that same country's history and development

in a social studies class. A English teacher could then ask the class to examine readings, stories,

or poems from that country to learn more about the culture. Combining subject material and

making what topics students experience in classroom intertwined requires more effort on the

teacher's part and contradicts today's behaviorist style learning, but creates stronger, more

intelligent students. Reflecting back onto the classrooms I observed, I noticed that this change in

learning has the potential to occur, but our education system has to change immediately.

America's school system has internalized behaviorist thinking since the industrial

revolution, becoming so enveloped in it that we forget other ways of schooling possibilities. For

example, Waldorf schools create classrooms that promote hands on, as well as heads on,

experiences that push students to think critically to solve problems. Activities that allow for

motor skill development and expand on the arts in the classroom produce well-rounded students

who grow up in world not specialized in filling out a bubble on a test, but who are able to think and create on a much higher and complex level. I observed the potential for this kind of learning in the classrooms at Washington Elementary and Mount Vernon Middle School, but a few key barriers prevent students from this type of experience. Connecting to and Jean Piaget and Lev Vygotsky, we need to establish more of a connection with the physical world, and by lengthening recess, which would take away time from pointless, mind numbing lecture activities, children would be able to explore their environment thoroughly and learn more about the world in which they live. Furthermore, students are not "blank slates" to be written on by teachers. Students and teachers should work together to create a classroom the fits the student's style of learning and allows for them to test, question, and develop schemes about relevant material to prepare them for the future.

In response to Seamus, who claimed as we made our way to the library that he wished knowledge was just plugged into our brains at birth, I would smile and point out that knowledge is not given or earned. The answer to a question or the solution to an issue, though important, does not hold the same importance as the process employed to discover that final step. Metacognition can not be tested, it must be developed together with friendly, accepting peers and experienced, open-minded teachers who guide students on a path towards complex thinking in an environment that promotes meaningful experiences. This will be the future of education.

Works Cited

Daniels, D. H. & Shumow, L. (2003). Child development and classroom teaching: review of

the literature and implications for educating teachers. *Applied Developmental Psychology*

23, 495-526

Dweck, C. (2007). Boosting achievement with messages that motivate. *Education Canada*, 47,

6-10.

Eggen, P. & Kauchak, D. (2013). Bronfenbrenner's bioecological model of development. In

Educational psychology: Windows on classrooms. (pp 64-71). Boston, MA: Pearson.

Eggen, P. & Kauchak, D. (2013). Lev Vygotsky's sociocultural theory of cognitive

development.

In *Educational psychology: Windows on classrooms*. (pp 45-52). Boston, MA: Pearson.

Eggen, P. & Kauchak, D. (2013). Piaget's theory of cognitive development. In *Educational*

psychology: Windows on classrooms. (pp 34-44). Boston, MA: Pearson.

Eggen, P. & Kauchak, D. (2013). Social cognitive theory. In *Educational psychology: Windows*

on classrooms. (pp 310-324). Boston, MA: Pearson

Eggen, P. & Kauchak, D. (2013). The development of identity and self-concept. In *Educational*

psychology: Windows on classrooms. (pp 78-85). Boston, MA: Pearson

Kohn, A. (1993). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise,*

and other bribes. Boston: Houghton Mifflin.

Reynolds, S. (2005). *Learning is a Verb*. Scottsdale, AZ: Holcomb Hathaway.

Scearce, personal communication, September 15, 2016.

Sousa, D. (2011). *How the Brain Learns*. Fourth Edition. Thousand Oaks, CA: Corwin.