

## Training Pre-service Teacher Candidates to Critically Observe Children:

A multimodal approach

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While few educators would devalue the significance of observing children as an authentic form of assessment, the ability to objectively discern what data should be collected on children as they work and play is one that requires a wide range of specific skills. Looking carefully and critically at a young child in light of all of the developmental domains requires not only knowledge of the developmental benchmarks, but also the ability to synthesize that understanding with the information provided during the inquiry in a natural setting. This article chronicles one teacher educator's attempt to cultivate such skills in her pre-service teacher candidates during the course of a one-semester class using several multimodal activities and assignments.

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“Kidwatching” is a term coined by Kenneth and Yetta Goodman and put forth as an alternative to formal and standardized testing (Goodman, 1978). It was later popularized and defined as the exercise of “watching kids with a knowledgeable head” (Goodman, 1985, p. 9), a practice in which teachers observe students in a naturalistic setting, paying particular attention to how they engage with one another, how they learn, and what they do to explore their ideas and their environments. As part of the kidwatching process, teachers take anecdotal notes and then examine those notes to see how and when children are engaging in learning. After this review, teachers use these data to determine effective instructional strategies and appropriate pedagogies, as well as provide evidence of progress in all of the developmental areas. The kidwatching strategy is based on a “seek to understand stance” that attempts to look at “life, literacy, and learning through the children’s eyes” (Mills, 2005, p.2) and results in teachers discovering how their students are learning and selecting the most effective pedagogies for each pupil. Teaching educators how to observe and record the behavior of young children has taken the form of books, workshops, and programs designed to equip teachers with the skills necessary to become scientific inquirers in the classroom (Cohen, Stern, and Balaban, 1997).

While few educators would debate the importance of observing children as an authentic form of assessment and as a means to planning for instruction, the ability to objectively discern what data should be collected on children as they work and play is not an easy one. Looking carefully and critically at a young child in light of all of the developmental domains requires, as

Goodman (1985) indicated “a knowledgeable head” (p. 9) including an understanding of the developmental benchmarks, an ability to interpret the data collected, and a perspective that incorporates a holistic perspective. As Cohen, Stern, and Balaban (1983) have indicated:

There are reasons for a child’s behavior, of course, plenty of them. Sometimes it is hard to decide which is the most likely of several possible reasons for the same kind of behavior! But while every bit of behavior is caused by something, We must sadly admit that what that something is for the particular child, who is the enigma, is often a mystery. That is why as teachers we must gather good clues that will lead to understanding. Only by learning to see children as they are, and *especially as they see themselves* will we get our clues. It is not as simple as it sounds (p.12).

The development of observation skills, then, is a difficult one, even for practicing and veteran educators. Thus, the process of teaching these skills to pre-service teacher candidates is, perhaps, even more challenging. In order to bridge this learning gap, a multimodal approach is one that was adopted in the course chronicled here. Rooted in the theory of social semiotics, sign systems (or symbols) are those ways in which all humans mediate meaning for themselves and express that meaning or understanding to another person (Halliday, 1975). These signs, inclusive of art, music, drama, mathematics, graphic representations, and digital literacies—constitute the means, manner, tools, and techniques utilized for the purpose of communicating, interpreting, and expressing our understanding. By allowing pre-service teacher candidates to utilize and explore a wide range of modes, I, as the course instructor, allow my students to make meaningful connections with the content and encourage the socially situated aspect of learning in my

classroom. As Maxine Green (1995) has asserted, students can be “empowered” as active reflective learners by teachers if, by pedagogical planning and classroom design, we ‘tap into the full range of human intelligence” and enable and encourage students to develop and utilize “a number of languages...and not verbal or mathematical languages alone” (p.57).

The following sections delineate the in-class activities and assignments in a semester-long course on Child Development encourage students to move outside of a traditional written product to explore and express their understanding of the content.

### **Introduction to Child Development Coursework: Background**

The Introduction to Child Development class is a survey course designed to introduce pre-service teacher candidates to the growth and development of children prenatally through age 8. The course is a challenging one in that it is content-heavy, covering all of the developmental domains including physical, fine and gross motor, cognitive and language, and social and emotional development. During the semester-long course, students are exposed to a plethora of developmental theories, and are encouraged to explore the influences of both nature and nurture on all of the developmental domains.

In this course, students are exposed to a wide range of unfamiliar vocabulary and concepts. Concurrently, the pre-service teacher candidates are expected to apply this new knowledge to their clinical observations of one child outside of the context of the course. The pre-service teacher candidates, many of whom have limited access to and experience with young children, are expected to learn what constitutes “normal” development in young children and discern to what degree and in what domains that child is developing according to the specified benchmarks. The learning objectives of this course indicate that, at the conclusion of the class,

the pre-service teacher candidates will be able to 1) describe the stages, sequences, and milestones of children's growth and development in all of the domains; and 2) recognize variations of typical and atypical developmental characteristics of young children. As a means to determine whether or not students have met the learning outcomes, they are required to write three synthesis papers.

As the course instructor, my hope is that, in addition to these stated learning outcomes, pre-service teacher candidates taking this course will be able to apply their new understanding of development and the observational techniques they learn to the students that will eventually be in their charge. This is to say that, in addition to "memorizing" the content for the course, I want the students to be prepared to critically observe and make connections. The result of this process is three synthesis papers that represent the pre-service teacher candidates' findings on the development of their selected child in three areas, including physical and motor development; language and cognitive development; and social and emotional development. In order to meet my expectations for these papers, students needed to accomplish four discrete but overlapping tasks: 1) master the content presented in class; 2) take clear and objective observational field notes while watching their child in naturalistic settings; 3) apply concepts learned in class to these field notes; 4) write cohesive papers that explicated the synthesis of these two things.

The focus of this article is not to delve into the specifics germane to writing synthesis papers; instead, my purpose is to explicate the activities and assignments which lead to the pre-service teacher candidates' ability to not only write organized and cohesive synthetic analyses of student performance, but also make meaningful connections to the real-life educational experiences and pedagogical practices.

### **Introduction to Child Development: Scaffolding the experience**

I begin the course by breaking down the semester into four distinct sections: general developmental theories (weeks 1-3); physical and motor development of young children (weeks 4-6); language and cognitive development (weeks 7-10); social and emotional development (11-14). Each section of the semester is replete with PowerPoints and lecture materials that cover the information appropriate to each topic, and the pre-service teacher candidates' understanding of each section is assessed by a quiz or quizzes. This dissemination of information is useful in and of itself and provides me with feedback regarding their mastery of the material in a traditional sense, but tells me little about the pre-service teacher candidates' ability to utilize that information in educational contexts.

It has been my experience that pre-service teacher candidates in this course either “get it,” i.e. they understand how to synthesize the information into a comprehensive analysis, or they do not. There appears to be nothing in between. Furthermore, the ability to write an organized, cogent, cohesive paper does not appear to be the primary issue. Instead, the problem seems to be more clearly indicated in the pre-service teacher candidates' understanding how to apply concepts covered in class (theory) to the activity at hand (practice). I want the pre-service teacher candidates to take notes on what they see their target child doing, but this sounds easier than it actually is. As an educator, one is expected to “kidwatch” on a daily basis and is further required to utilize the information gleaned from observing children in the classroom to determine whether or not the children are progressing adequately and developing in all areas. But observing children and taking notes on what they see children doing actually sounds easier than it is. Pre-service teacher candidates don't always know “what they are looking for” during observations and may miss tell-tale signs of developmental progress. Even if pre-service teacher candidates take notes, they may then find it difficult to make connections between what they “see” and what that sign

“tells them” about how the child is doing in the developmental domain. Thus, as a class, we spend considerable amount of time in class doing activities that help the pre-service teacher candidates make meaningful connections of the course content to the child they are observing outside of class

One of the first in-class activities is a *practice observation with a T-chart assignment*. This occurs during the second section of the course (usually around week four), after my students have been exposed to the basic developmental theories and we are entering a discussion of physical and motor development. Each pre-service teacher candidate is asked to make a T-chart in their notebooks. A T-chart is a type of graphic organizer that looks exactly like its name. A large “T” is drawn on paper, and is utilized to list and examine two facets of a topic (e.g., pros and cons; facts vs. opinion; advantages vs. disadvantages). The T-chart employed for our purpose is one in which the students are asked to write “objective observations” on the left and “subjective reflections” on the right so as to graphically organize their thoughts about a specific “kidwatching” event. A YouTube video is then shown in class that illustrates children playing, learning, or interacting in their natural settings so as to practice “kidwatching” observational practices.

In this 2-minute video clip (<http://www.youtube.com/watch?v=p1R2vha7Ytc>), for example, there are two children, one female approximately two years and one male approximately six months old who are “playing” at home with one another. I ask the candidates to choose one of the two children on which to focus and to write down everything that their focal child says or does, to the best of their ability, on the left side of their chart. After we have watched the clip at least twice, I then ask the students to contribute some of their findings to larger T-charts I have created on butcher paper taped to the board. During this whole group

activity, we spend a great deal of time reinforcing the concept of “objectivity” in observations. I also advise the pre-service teacher candidates that it is wise to collect as much data as possible during each observational period, no matter how long or how brief it is and regardless of what developmental domains they are focusing on.

After we fill the left side of both charts, we then spend class time looking at what these objective notes might “mean” in a more subjective way. For example, in the aforementioned clip, the six month old is sitting up on the floor unsupported, but has both hands extended outward on each side of his body as he bobbles slightly forward and backward. We talk about the developmental milestone of “sitting up unsupported” as appropriate for a six month old, but consider how the child’s arms are being used to create balance and the fact that such a behavior might indicate that this is a newly-acquired skill. This type of commentary is then indicated on the right side of the T-chart under “subjective reflections.” As an entire class, we go through every objective note and write a subjective reflection for ONE of the two children presented in the video. The pre-service candidates are then asked to copy the T-chart of the second child in their notebooks and complete the reflective side independently. In the next class period, we again come together and discuss their findings. (See Figures 1 and 2 for examples of student-completed T-charts).



AA (girl)	Objective observations	Reflections
demonstrating	<ul style="list-style-type: none"> <li>- playing w/ tea set</li> <li>- Showing little bro how to hold tea cup</li> <li>- "no, no you're going to spill it"</li> <li>- organizing tea set</li> <li>- pretending to drink tea/ pour tea</li> <li>- "Yummy yummy in my tummy" (AA)</li> <li>- responds to mom</li> <li>- happy when her brother holds the cup right</li> <li>- kisses brother</li> <li>- sits with legs crossed</li> </ul>	<ul style="list-style-type: none"> <li>- being patient/giving instructions seems advanced for a 2-year-old (AA)</li> <li>- developing good language skills (complete sentences)</li> <li>- developing good fine motor skills</li> <li>- the way she responds to humor &amp; commands shows that she is developing well</li> </ul>
	<ul style="list-style-type: none"> <li>- used both hands</li> <li>- responded to verbal commands</li> <li>- full sentences</li> <li>- recognized humor</li> <li>- unrestricted movement</li> <li>- imaginative (AA)</li> <li>- gave instructions/ acted motherly/patient</li> <li>- eye contact w/ mom</li> <li>- palmer/pincher grasp</li> </ul>	<ul style="list-style-type: none"> <li>- above average verbal + cognitive</li> <li>- average physical/fine motor</li> <li>- above average play skills/social</li> <li>- she has been taught "tea time"</li> <li>- average eye contact</li> <li>- above average "correcting"</li> <li>- above average "solitary"/"parallel" play</li> <li>- average responding to verbal commands (receptive language)</li> <li>- average humor skills</li> <li>- above average social/emotional skills</li> </ul>

Figure 1. Sample of completed T-chart

(Little Boy) 1-27-2017

OBJECTIVE OBSERVATIONS	REFLECTIONS
<ul style="list-style-type: none"> <li>- looks to be about 16 months old</li> <li>- able to sit up</li> <li>- looking around</li> <li>- put toys in his mouth</li> <li>- copying how to drink tea</li> <li>- lots of noises</li> <li>- watching the young girl</li> <li>- understands concept of kissing</li> <li>- Not able to hold the tea cup the correct way</li> <li>- able to mimic young girl</li> </ul>	<ul style="list-style-type: none"> <li>* The little boy is developing at a pretty normal rate</li> <li>* fine motor skills could be considered advanced</li> <li>* he was pretty quiet → could be delayed with noise making</li> <li>* could be behind with social development → communicated well with older sister</li> </ul>
<ul style="list-style-type: none"> <li>- recognizes mom's voice</li> <li>- only moved upper body, lower body stood still</li> <li>- difficulty gripping cup</li> <li>- repetitive motions</li> <li>- "palmar grasp"</li> </ul>	<p><b>SOCIAL:</b> average</p> <p><b>EMOTIONAL:</b> above average</p> <p><b>GROSS:</b> No way of knowing</p> <p><b>FINE:</b> Average</p> <p><b>LANGUAGE:</b> A little below average</p> <p><b>COGNITIVE:</b> Average</p> <p><b>★ write observation notes like this!</b></p>

Figure 2. Sample of completed T-chart

The second in-class activity is when the large butcher paper T-charts are used again the following week as we begin to discuss the developmental domains and what skills are encapsulated in each. Despite the traditional lectures that cover content in the book, many pre-service teacher candidates do not necessarily understand what is meant by “physical” development, for example, when applied to children in a naturalistic setting; candidates often equate it primarily with weight, height, and the presence or absence of observable physical impairments. Using the items listed on the left side of the T-chart helps us discuss other considerations of “physical” development, such as balance, coordination, hand and finger grasps, etc. Likewise, candidates also think superficially about “cognitive” development, and define it simply as learning subject area content in formal educational settings, but do not consider skills such as short- and long-term memory, language, problem solving, critical thinking, abstract thinking, imagination, etc. In order to ensure that the pre-service teacher candidates think deeply about each of the domains and understand the connections that can be made between the domains and the behavior of their targeted child, as a class, we go through every line item on the two T-charts, discussing what developmental domains are represented by the skills indicated.

As useful as these activities are in introducing students to the process of collecting observational data in naturalistic settings and beginning the process of analyzing the data, students often struggle when left to do so independently for their synthesis papers. I have found from teaching the course many times that there are students who will procrastinate in doing the observations, or who will fail to embrace the process of reflecting on the data collected prior to attempting to write their papers. I have also, unfortunately, encountered a few incidents in which pre-service teacher candidates did not secure a child to observe outside of class and attempted to write the three synthesis papers using video clips similar to the ones used during in-class

activities. As a result of these experiences and after having engaged in a week-long professional development workshop on technology in the summer of 2015, I added an assignment in the Fall 2015 semester, which has quickly become one of the pre-service teacher candidates' favorites: *the video assignment*. Not only does this activity allow students to creatively and graphically present their findings in an alternative way, it increases the level of candidate accountability.

At the end of each of the last three sections of the course (physical/motor; cognitive/language; social/emotional), pre-service teacher candidates are expected to bring, on three designated date(s), still shots and video clips of the child they are observing to class. These photos and videos are expected to graphically represent the domain currently under study and to provide evidence of what relative strengths and weaknesses their target child has in that domain. Class time is spent in small groups, organized by the approximate ages of the target children under study, and the pre-service teacher candidates are encouraged to share and discuss the photos and videos that they have captured. Students have indicated that this activity allowed them to “talk about real life” and that it made connections to what they would encounter with young children “in the real world.” At the end of the semester, these graphic representations are expected to be organized into a 2-3 minute video, using Animoto (or another comparable platform) that includes captions and music and illustrates the pre-service teacher candidates findings about the overall development of their target child from a holistic perspective. (An example is included here: <https://animoto.com/play/ieVBtkWjwG3epRCMvon5JQ?autostart=1> ). Pre-service teacher candidates are encouraged (but not required) to share their completed videos in class toward the end of the term; they are, however, required to send the videos to me via email. Because the project requirements (collecting the still shots and videos) are staggered over the course of the entire semester and only the culminating presentation is required at the end,

most candidates report that the video assignment is a fun and stress-free assignment that allows them to look back at what they have learned about their target child.

Another recently-added assignment to the course is the *theme box project*. While the synthesis papers and video assignment assist me in assessing the pre-service teacher candidates' level of understanding of developmental theory and observational practice, the theme box project allows the candidates to make connections to classroom praxis. For this project, pre-service teacher candidates are expected to look at all they have learned about their target child from a holistic perspective, and to design an educational tool for the child's use. Specifically, the candidates are asked to obtain and decorate a small "toy" chest that holds five items that can be used *by* the child or *with* the child for the purpose of developing skills in each of the domains. The box is required to be themed (e.g., bears, trains, *Frozen*, superheroes, etc.) and the five items should be consistent with that theme. The purpose of the items contained within the box is to practice, extend, or encourage development in the physical/motor, social/emotional, cognitive/language areas. In addition to an inclusion of these items, a type-written paper that explains what each item is, how it is used, and what area(s) of development are represented by each item is included.

The theme box project has been a welcome addition to the course. The first time it was utilized was in Spring 2016. I was personally amazed at the creativity and commitment of my pre-service teacher candidates, who clearly had learned not only about the development of their target child, but also their child's interests. During the in-class presentations of the theme boxes, candidates regularly indicated that they chose the theme based on what their child "liked" or "what motivated" him/her. One pre-service teacher candidate, for example, had observed a two year old female who always wanted to be outside, so she utilized a sand bucket as her "box,"

decorated with the words, “Fun in the Sun.” Items included a homemade memory card game of age-appropriate pictures that represented the out-of-doors (e.g., beach ball, sunshine, sandbox, trees) for social and cognitive development; a jump rope for physical, gross motor, and social development; sidewalk chalk for fine motor and cognitive development; a picture book entitled *A Sunny Day for Friends* for emotional, social, and language development; and a homemade insect collector for social and cognitive development. The boxes themselves represented a wide range of interests and level of involvement with the students—from decorated shoe boxes with lids to baskets, buckets, and even a hand-made wooden “pirate chest.” Through this project, the pre-service teacher candidates exemplified not only their understanding of what their target child enjoyed, but also what skills and activities were age- and developmentally- appropriate. While some pre-service teacher candidates purchased an item or two for their theme boxes, a vast majority of them created the materials themselves (see Figure 3 for a visual example of a completed project).



*Figure 3.* Completed theme box project

Pre-service teacher candidates' course evaluations and exiting commentary indicated that they appreciated this activity. One candidate indicated: "I...liked the fact that we had to do a theme box. It really gets you thinking about what you can use for children in each area to help them succeed." Another candidate stated that the video and theme box activities "gave me a chance to show what I know in a creative way" since she felt that her "writing skills are not what they should be" and that writing the synthesis papers "was not only difficult but not a true" representation of what she knows. Furthermore, candidates indicated that the in-class activities and assignments, in combination with the synthesis papers helped drive home the idea that "child observations are important for their growth and development" and helped them "learn why kids

think and act the way they do and how important it is to know the child and go above and beyond to teach and protect them.”

### **Discussion**

All of this is not to minimize the significance of the synthesis papers. I view the added in-class activities and outside assignments as a scaffold to the writing of the papers, and I have expended a great deal of time and energy designing and writing rubrics that will better guide students in the development of cohesive and well-organized papers that put forth the pre-service teacher candidates’ understanding of their target child in a more traditional way. Additionally, it should be mentioned here that class time is spent in peer review processes for the purpose of revising and editing each of the three drafts, and I set aside office time for the purpose of meeting with individual students.

That said, I emphasize that, while these multimodal projects were originally conceived as a support to the more traditional writing assignment, they also serve their own purpose, distinct and separate from the written products. Too often, learning environments devalue and discourage the use of alternative sign systems, subrogating activities such as video-making or project-development as somehow “less than” the written products or more traditional literacy activities. Existing research on popular culture and media texts suggests that students will continue to use a wide range of sources (television, movies, the internet, music, video, etc.) as sources of information and knowledge, and should be encouraged to also use the same type of sign systems as means for expressing personal understanding of the content. (Moje, Dillon, & O’Brien, 2000).

Because the development of observation skills in pre-service teacher candidates is a daunting task and requires a wide range of discrete, but overlapping skills, the multimodal approach adopted in the course chronicled here allowed candidates to explore and extend their



skills. Meaningful connections with the content and a clear representation of understanding was encouraged by allowing the candidates to read, write, organize, illustrate, represent, and present their burgeoning kidwatching skills and observational techniques in many varying ways.

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