Chapter 12
Learning to See the Boa Constrictor Digesting the Elephant:

Pre-service Teachers Construct Perspectives of Language, Literacy, and Learning through Art

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Abstract In this chapter, the process of making meaning through arts learning is explored in the context of an elementary education methods course. Common theories-in-use are discussed alongside of current theory, research, and practice to facilitate new perspectives of language, literacy, learning, and art. Examples of learning experiences promoting pre-service teachers' abilities to teach art as a visual language to inform, express, narrate, and persuade are provided.

Keywords meaning making, early childhood, pre-service teachers, critical thinking, language, literacy, inform, express, narrate, persuade

> Once when I was six years old I saw a magnificent picture in a book, called *True Stories from Nature*, about the primeval forest. It was a picture of a boa constrictor in the act of swallowing an animal…In the book it said: "Boa constrictors swallow their prey whole, without chewing it. After that they are not able to move, and they sleep through the six months that they need for digestion." I pondered deeply, then, over the adventures of the jungle. And after some work with a colored pencil I succeeded in making my first drawing…I showed my masterpiece to the grown-ups, and asked them whether the drawing frightened them. But they answered: "Frighten? Why should any one be frightened by a hat?" My drawing was not a picture of a hat. It was a picture of a boa constrictor digesting an elephant. But since the grown-ups were not able to understand it, I made another drawing: I drew the inside of a boa constrictor, so that the grown-ups could see it clearly… The grown-ups' response, this time, was to advise me to lay aside my drawings of boa constrictors, whether from the inside or the outside, and devote myself instead to geography, history, arithmetic, and grammar. (de Saint Exupéry, 1943/1971, pp. 3-4)

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M. J. Narey (ed.), *Making Meaning*.

"Is it a hill?" "Maybe…a snail?" "…melting ice cream?" "A hat?" Like the grown-ups who Antoine de Saint Exupéry (1943/1971) describes at the start of his classic tale, *The Little Prince*, my students (early childhood and elementary education majors) fail to decipher the image that I have scanned from the book and projected on the screen. I shake my head, feigning a hint of professorial concern at their inability to understand the child's drawing, "Oh, my! It appears that we have some work ahead of us!"

On this first day of our university methods course, I am well aware that most of my students are somewhat disconcerted by this initial activity. Coupled with their dislike of not knowing the "right answer," pre-service teachers tend to be surprised that the subject of a child's drawing is an important topic for discussion. Most view the arts as a free-time activity, a release from the *real* thinking involved in the *important* subjects that they will teach. Expecting to come away from the course with some ideas to keep little hands busy or to give older children a break from the rigors of the school day, their conceptions of children's art are primarily limited to holiday decorations or colorful expressions of emotion, rather than products of inquiry that involve critical thinking and problem solving.

Presenting my students with the problem of identifying the subject of the child's first drawing from the illustration in de Saint Exupéry's (1943/1971) book, followed by a discussion of the opening text, has proven to be a provocative way to introduce the concept of art as a critical and creative thinking process that contributes to making meaning. The activity challenges my students' previous notions of children's art as we deconstruct the events: the child's encounter with the "magnificent picture in a book… of a boa constrictor swallowing an animal" (p. 3); followed by deep pondering of the text that leads him to wonder how a boa constrictor might digest a *really* huge creature; next, his drawing to help him understand how this amazing feat might look; his desire to share the awesomeness of the phenomenon he has depicted with the grown-ups, asking if "the drawing frightened them" (p. 4); and, finally, the grown-ups' responses to the child's image and the impact that this had upon the child. My students are drawn in to the meaning making underlying the image. Through our own search for meaning, the invisible has become visible.

It is a good beginning; yet, each semester, I wonder, "How might I help this particular group of students to better understand, appreciate, and learn to teach art as a meaning making process? How can reflection upon our own meaning making processes in this arts methods course extend and enhance our perspectives of teaching and learning in general? How might I bring my students to become teachers who are able to see boa constrictors digesting elephants instead of hats?"

Seeing Hats: A Metaphor for the Problem

The ability to look deeply, and to search beyond our initial assumptions, is as critical to the broader context of the classroom as it is to the art experience. Unfor-

tunately, there are too many in our early childhood education community who do not take time to look for the boa constrictors; who make hasty judgments; who label young children's abilities and behaviors with little thought or reflection. Conditioned by personal experience and culture, we see what we expect to see (Bolman & Deal, 1991). Typically, many of us do not subject our observations to an inquiry that may help us understand in a more complex manner what might lie beneath the surface of our immediate perception. Children who do not appear meet our expectations are labeled as "struggling learners" or "behavior problems" and we rush to correct the deficit, rather than take the time to look beyond the perceived deficiency to discover the children's abilities and strengths; abilities that often surpass our expectations, but remain unrecognized because they do not conform to our narrow perspectives for success.

> With limited information, we then interpret through our own perceptual lenses, and we make assumptions about what we observed, often without further discussion with others and with no attempt to confirm our interpretations. From these observations, we draw conclusions that affirm our assumptions. The actions we finally take, the decisions we make, reflect these conclusions. In brief, we see the world as we want to see it and act accordingly…As a result, the assumptions that we draw may not be accurate, and the decisions that we make may be flawed. (Osterman & Kottkamp, 2004, p. 30)

The adults in de Saint Exupéry's (1943/1971) story accept their initial perceptions without scrutiny, and thus fail to recognize the child's drawing as the visual traces of his critical thinking and problem solving, even when the child presents his second drawing "so that the grown-ups could see it clearly" (p. 4). This, in essence, becomes the metaphor for the problem that we face in early childhood teacher education: a large majority of our early childhood education community maintains unexamined assumptions about art, language, literacy, and learning, thus causing past patterns of practice to continue despite knowledge of theory, research, and practice that may contradict these beliefs. If we, as teacher educators, seek to interrupt these patterns, we must look beneath the surface of our own assumptions: focusing "not only on observable actions and outcomes but also on the unobservable—our thoughts and intentions, our feelings and the feelings of others" (Osterman & Kottkamp, 2004, p. 18).

The experiences described in this chapter are drawn from my observations and reflections as a teacher educator working with pre-service teachers enrolled in my art methods course and related field experiences. In most arts methods courses, education students typically learn about art materials, techniques, and processes, engage in hands-on assignments, and review current art education literature (Kalin & Kind, 2006). In these courses the pre-service teachers' learning may be targeted to, and assessed through, any number of observable actions and outcomes related to knowledge and technical skill. While these are important components of teaching and learning, and art making, for that matter, they are not likely to provide the understandings that will interrupt past patterns of practice regarding the arts in our classrooms. Therefore, in addition to addressing knowledge and technique, I attempt to seek out the larger issues that influence my students' learning, to attend to the cultures of our university and public school classrooms, to get a sense of the

whole. Eisner (1994) makes this stance clear as he relates teaching to the aesthetic principle of art wherein everything must work together:

> …everything matters…We need to pay attention to matters of mix…the intentions that give direction to the enterprise, the structure that supports it, the curriculum that provides its content, the teaching with which that content is mediated, and the evaluation system that enables us to monitor and improve its operation. (p. 11)

In this chapter, I provide examples of learning experiences that may be adapted to other teacher education settings (e.g., literacy and language arts courses, in-service professional development). However, rather than focus on the clearly observable (e.g., readings, rubrics), I have chosen to uncover the less visible meaning making underlying our work in the course. Extending the metaphor of *The Little Prince*, I offer the equivalent to the child's second drawing (i.e., showing the elephant inside the boa constrictor) to assist others in understanding that which is "invisible to the eye" (de Saint Exupéry, 1943/1971, p. 87). I begin by examining the common theories-in-use that work to influence pre-service teachers' understandings of art, language, literacy, and learning along with alternate perspectives from current theory, research, and practice. This is followed by my descriptions of learning experiences that demonstrate the link between visual and verbal languages/literacies and that reveal the critical/creative thinking that contributes to understanding. My discussion is enriched by two former students' personal stories of how they became teachers who see boa constrictor digesting elephants instead of hats.

Examining Theories-in-use: A Fertile Ground for Learning

Like the arts, teaching and learning is a reciprocal and interactive creative process of making sense of human experience:

> Authentic education is not carried on by "A" for "B" or by "A" about "B," but rather by "A" with "B," mediated by the world—a world which impresses and challenges both parties, giving rise to views or opinions about it. These views, impregnated with anxieties, doubts, hopes, or hopelessness, imply significant themes on the basis of which the program content of education can be built. (Freire, 2002, p. 93)

As a teacher educator, I need to understand, with my students, the views that challenge our individual perspectives of teaching and learning. An examination of classroom teachers' common theories-in-use provides a fertile ground for discussion and deeper understanding.

Common Theory-in-use: Art Is about Feeling, Not Thinking

Teachers frequently operate under the assumption that art is an emotional release that requires little thought, and, as such, many see it as an activity that serves to

provide students a break from the rigors of other subjects. Yet, almost anyone who has produced authentic work in the arts will agree with John Dewey's (1934/1980) position on art and intelligence:

> Any idea that ignores the necessary role of intelligence in production of works of art is based upon identification of thinking with use of one special kind of material, verbal signs and words. To think effectively in terms of relations of qualities is as severe a demand upon thought as to think in terms of symbols, verbal and mathematical. Indeed, since words are easily manipulated in mechanical ways, the production of a work of genuine art probably demands more intelligence than does most of the so-called thinking that goes on among those who pride themselves on being "intellectuals." (p. 46)

Part of the problem stems from the false separation that is made between affect and cognition. As Elliot Eisner (1994) points out, affect and cognition are processes that cannot exist, one from the other, but rather, "interpenetrate just as mass and weight do. They are part of the same reality in human experience" (p. 21). Arguing against the widely accepted notion of cognitive development offered by narrow, fact-oriented conceptualizations of knowledge and limited modes of teaching, he illustrates this interpenetration of cognition and affect: "Intellectual life is characterized by the absence of certainty, by the inclination to see things from more than one angle, by the thrill of the search more than the closure of the find" (p. 71). Underscoring that these are qualities inherent to work in the arts, Eisner contends that schools actually lead students away from the intellectual life by ignoring the arts. Rudolf Arnheim (1969/1997) explains further, "Thinking requires more than the formation and assignment of concepts. It calls for the unraveling of relations, for the disclosure of elusive structure. Image-making serves to make sense of the world" (p. 257). Karen Gallas (1994) extends the views of these theorists with her observations as a teacher and researcher in her own classroom:

> …the arts become a way of thinking about thinking…this way is very natural and accessible to children. The process and dynamics of the art experience best capture the way children make their world sensible from very early years on. What is unfortunate in American education, however, is that as soon as children enter school they are gradually taught that their natural way of understanding the world is not an important and valid way…(p. 116).

As these voices from theory, research and practice attest, art involves thinking *and* feeling.

Common Theory-in-use: Children should be Left Alone to Create

Holding to the image of an unkempt, paint-spattered artist wildly flinging brilliant splotches of color at a canvas, or that of a young child who is up to her elbows in finger paint, many early childhood teachers believe that art is freely expressing oneself with art materials. Unfortunately, this belief is reinforced by teacher-educators and textbooks that admonish teachers to not interfere in the child's artistic endeavors, but rather, advise teachers to merely provide an abundance of mate-

rials and leave the child alone to create (Bresler, 1993, 1994; Kindler, 1996). As a result, many teachers mistakenly take a hands-off position to children's art and this often extends to sheltering children from any external influence that they believe might inhibit artistic development. Thus, teachers refrain from presenting their own art, or the work of professional artists, for fear of frustrating the child who is often perceived by the teacher to be unable to sustain adult levels of concentration (Beetlestone, 1998), skill, or complexity of thought. Others, acting on the belief that art must be engaged in a solitary fashion, often prevent children from assisting each other (Kindler, 1996).

Theory, research, and practice offer contradictory perspectives. For instance, rather than advocating a hands-off approach to children's art learning, many scholars and researchers insist that teacher interaction, guidance, and instruction are essential (Frisch, 2006; Thompson, 1997). Further, as the wealth of examples from children attending the schools of Reggio Emilia (Edwards, Gandini, & Forman, 1998), or from the children in Karen Gallas' (1994) classroom demonstrates, when teachers interact with children and respond to their interests and ideas with thoughtful planning and support, children are capable of sustained and exceptionally complex artistic work. In these art-based learning spaces, children work in collaboration with teachers and peers to generate, critique, and build upon ideas. Unlike the mindless-messing-with-materials stereotype of free expression embraced by many classroom teachers, these examples show how very young children may achieve sophisticated levels of meaning making and underscore the need for teachers to take an active role in children's art learning.

Common Theory-in-use: Whatever Children Do in Art Is OK—There Is No Right Way

In a culture that is predicated on knowing the correct answers, art seems to be the one area that many teachers believe has no right answer. While this may be valid to the extent that there is no *one right way*, there are frequently many answers in art that are decidedly better than others. This becomes clear when art is viewed as problem-solving: there are many possible responses to a problem and some responses will be more effective than others based upon the desired purpose and the variables involved. Unfortunately, many teachers adopt an unconditional acceptance stance towards children's art and avoid any critique of children's work. Even when the child who is struggling to make a drawing "look right" initiates the request, a common response from the teacher is "just do your best, you can't really make a mistake in art." In part, this belief is due to the teacher's fear of inhibiting the child's free expression as just discussed, as well as the concern for the impact critique will have on the child's feelings of self-worth. Gilbert (1996) explains that in teachers' minds, acceptance of the artwork is equated with acceptance of the child. Yet, as she points out, to refrain from critique is an abdication of teachers'

responsibilities to help children learn. Children's work in art, as in any other subject area, requires diagnostic and formative assessment in order to appropriately determine the teaching strategies that the child needs for further development. Critique is not about criticizing or prescribing, but about facilitating dialogue regarding the artist's intent and the viewers' interpretations (Barrett, 1997; Beattie, 1997). To analytically respond to the child's work with worthwhile, formative feedback, is not a devaluation of the work, or the child, but rather is the teacher's responsibility as much as analyzing a child's reasoning to determine his/her difficulty in solving a math problem, or understanding a scientific concept.

Common Theory-in-use: Verbal Language Development Is More Important than Visual Language Development

Despite some early childhood educators' recognition of emergent literacy (i.e., reading and writing behaviors that precede formal literacy training), most have not re-envisioned their notions of literacy (Siegel, 2006). Language and literacy development remains focused upon written language, with emergent literacy seen as an early stage on the continuum, with non-verbal components like children's drawings or dramatic play only a means to a preferred verbal end. This view does not align with the present need to develop facility with a full range of multimodal texts in our current social, cultural, and economic worlds, or acknowledge the importance of valuing and supporting the various ways individuals make meaning.

Texts today are highly visual. Meaning is carried as much through graphics and images as it is through words. Teachers' perspectives of language and literacy development must take into account multimodal texts in both print (e.g., newspapers, magazines) and non-print form (e.g., film, video, and Internet websites). "As educators we need to determine the specific features of reading that occur and that are needed for the synchronous functioning of the modes of print, image, movement, colour, gesture, 3D objects, music and sound on a digital screen" (Walsh, 2006, p. 36).

Children make meaning in a variety of ways. Yet, as Robert Sternberg (1997) points out, our educational system is a closed system that privileges certain abilities over others, causing teachers to label children who possess the privileged abilities as intelligent, and those who do not as deficient. Sternberg argues that this practice results in a great loss of potential for both the child and our society, as the deficient-labeled students believe that they have nothing to offer and often give up. In a similar vein, Janet Olson (1992) argues that many students who are assigned to special education as "learning disabled" may be visual learners who "do not respond to the traditional verbal approach to learning" (p. 114). Levine (2002) encourages the abandonment of this deficit view of children's abilities, to instead "tolerate, educate, and celebrate all kinds of minds" (p. 307). Teachers must be open to the perspective that children with strong visual abilities are not necessarily

slow, but may merely think differently. Albert Einstein's (1963, cited in Adams, 1986) reliance on non-verbal thinking is widely known as he explains, "words do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought are certain signs and…images which can be 'voluntarily' reproduced and combined" (p. 36). When schools adopt curricula that include attention to children's multimodalities, "those youth who experience substantial success are the very ones who've been labeled 'struggling reader' or 'learning disabled'" (Siegel, 2006, p. 73). The children did not change, the teachers' perspectives of language and literacy changed. Rather than label children with strong visual language skills and weak verbal language skills as deficient, and those with strong verbal skills and weak visual language skills as advanced, we need to recognize the value of visual and verbal abilities equally.

Common Theory-in-use: Teaching Art Is the Art Teacher's Job

Most art specialists have had years of schooling in the arts. Typically, to be certified as an art teacher, candidates must earn a bachelors degree that includes numerous studio courses, along with courses in art history, pedagogy, and technology, plus a semester of student teaching. Although, this information is enlightening to some of my students who are often not aware that art teachers require higher education, for in-service teachers, it establishes an area of expertise that many feel is clearly beyond their grasp. Further, for many art teachers, their university studies were preceded by years of secondary school art classes and/or private lessons. It should not be surprising, then, that a large portion of early childhood and elementary teachers, who usually have taken only one art methods course in their teacher education program, feel inadequate when they are confronted with the expectation to include art in their curriculum (Thompson, 1997).

Beyond the issue of specialized schooling, this theory-in-use is most likely reinforced by several beliefs discussed previously. Revisiting the belief that art does not involve thinking, many teachers, consciously or unconsciously, privilege their work over that of the art teacher. While they may be quick to offer compliments regarding their art colleagues' efforts, the general classroom teachers readily accept typical hierarchical school practices of canceling the art class, rather than the math class, when an assembly, testing, or weather-related event shortens the school day, or the reassignment of the art teacher to a non-teaching responsibility (e.g. duties, coverage) more frequently than the non-arts faculty.

A related belief that art is a special talent also contributes to the theory-in-use that only the art specialist should teach art. In her study of elementary classroom teachers involved in an arts partnership, McKean (2001) found

> When the arts are viewed too much from the perspective of requiring special talents found only in certain few individuals, teachers acknowledge feelings of inadequacy and inaccessibility. For the teachers in this study, recurrent statements such as "I can't draw" or "I can't sing" reflected this sense of inadequacy and lack of talent that impeded their

> own experimentation within the art forms and their confidence in teaching the arts to their students. As one teacher said, " I can't teach what I can't do. If I had the talent to do it, I would." (p. 28)

Some might question if this rationale would be offered if the areas in which the teacher lacked talent were in math or spelling.

Common-Theories-in-Use: Other Influences

This discussion of classroom teachers' common theories-in-use must also acknowledge the role of art teachers and educational policies in contributing to the perpetuation of several of these beliefs. Due to their educational backgrounds and personal biases, many art teachers embrace these same narrow understandings of children's art that underlie the general classroom teachers' beliefs. Further, educational policy has had a particularly heavy-handed influence as the pressure of preparing for high-stakes tests steal time and attention from the arts.

Pre-Service Teacher Education: Constructing New Perspectives

Pre-service teachers need more than subject matter knowledge and pedagogical skills in order to teach well, and they require more than new concepts or fresh strategies in order to construct alternative perspectives of the classroom. Eisner (1994) points out that those of us who enter the field of education "have had years to internalize a set of expectations regarding what teachers do and what schools are like" (p. 6), therefore, "the most difficult task for educators may very well be relinquishing the yellow school bus mentality that conceives of both the purposes and the forms of schooling in terms conditioned by familiar and comfortable traditions" (p. 69). Understanding the common theories-in-use that influence pre-service teachers is critical to interrupting these patterns of practice. Unless teacher educators engage their students' initial understandings, new concepts may not be comprehended, or students will merely espouse them for the length of the course, but then revert to their earlier beliefs when the course is over (Hammerness, Darling-Hammond, & Bransford, 2005). When theory and research are juxtaposed against the reality of views and opinions encountered in the authentic contexts of classroom practice, pre-service teachers are empowered to question and construct their own perspectives, to make their own meanings.

It is equally important to open up the teacher education classroom for inquiry. In an ethnographic study of the process of learning to teach, Segall (2002) examined how the discourses and practices within a methods course helped construct prospective teachers' understandings and attitudes toward teaching. Rather than merely presenting teaching as "something to be practiced with some other bodies someplace else in the future" (p. 156), he proposes that teacher educators destabi-

lize the images of teaching that students bring to the program by bringing the analysis of teaching directly to the university classroom where students can experience the teaching/learning experience first hand. Segall maintains that if teacher educators want prospective teachers to become change agents, they must provide them the opportunity to begin by questioning their own learning experiences as students at the university. If we expect pre-service teachers to question their own practice to expand their perspectives of language, literacy, learning, and the arts, then we, as teacher educators must model this in the teacher education classroom.

The learning experiences that I describe in the following sections are framed in the larger context of inquiry into our beliefs, and our past and current experiences of practice, as we, teacher educator and pre-service teachers, construct broader perspectives of teaching, learning, and art. These experiences provide only a sample of our work within the course and should be viewed as threads woven into the fabric of this larger context. What is important in their selection for this chapter is not so much the content that is displayed, but rather the meaning making processes that these enable me to illustrate.

Learning Experiences in the Arts Methods Course

After establishing the perspective of the course with the experience based upon the excerpt from *The Little Prince* (discussed at the beginning of the chapter), we spend the remainder of the semester explicitly exploring how art as a visual language is used by adults and children to *inform, express, narrate*, and *persuade* and the implications this perspective has for teaching.

Introducing Art as Visual Language

In my art methods course, the students are introduced to the work of a wide range of theorists, researchers, and practitioners who view art as a language, from John Dewey's (1934/1980) classic, *Art as Experience*, to current scholars' explorations of multiliteracies. According to Dewey, "Because objects of art are expressive, they are a language. Rather they are many languages. For each art has its own medium and that medium is especially fitted for one kind of communication" (Dewey, 1934/1980, p. 106). He goes on to claim, "…art is the most effective mode of communication that exists" (p. 286). Building upon Dewey's work, over the past several decades Elliot Eisner has also advocated for the need to conceive of art as a language. In an early work, *Reading, the Arts, and the Creation of Meaning,* Eisner (1978) writes,

> We know most of what we know not in one way, but in a variety of ways. Each of our sensory modalities puts us in contact with the environment, and each modality enables us

> to create a knowledge system that we use to know and express our conceptions of reality. (p. 15)

Numerous other theorists (e.g., Arnheim, 1969/1997; Kress, 2003; Vygotsky, 1978) along with researchers and practitioners (e.g., Anning, 1999; Dyson 2003, 2004; Gallas, 1994; Heath & Wolf, 2005; Olson, 1992; Piro, 2002) continue to explore and advance this concept of art as language. Their works, and those of others, are offered to the students in the form of readings, case studies, and quotes interspersed throughout the course. Students also read the NCTE (National Council of Teachers of English, 2005) Guideline on multimodal litercacies that explicitly states that the arts should not be considered luxuries, but instead must be viewed as integral components of the interplay among meaning making systems that teachers and students need to learn and to critically use.

Establishing and Modeling a Meaning Making Perspective

If pre-service teachers are to understand art, teaching, and learning as making meaning processes, it is important for the teacher educator to establish and model this perspective throughout the course. As Freire (2002) contends,

> Education is suffering from narration sickness. The teacher talks about reality as if it were motionless, static, compartmentalized, and predictable… Instead of communicating, the teacher issues communiqués and makes deposits which the students patiently receive, memorize, and repeat. This is the "banking' concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits… Knowledge emerges only through invention and re-invention, through the restless, impatient continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other… The more students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world as transformers of that world. (pp. 71-73)

Therefore, concepts are not presented to my class as indisputable truths, but initially, are offered to the students as questions for their thoughtful examination. *Is art a language? Why might people consider art a language? What is language?* This questioning leads us to analyze the nature and purpose of language, and to identify the multiplicity of forms and the varying structures used. During the inquiry process, students recognize languages such as sign language, Morse code, and Braille, and discuss the concept of body language; they note the sensory aspects of various languages: aural, visual, tactile; they decide that language is a communication system that has rules for combining symbols or signs that may be heard, seen, and/or felt; and they recall from their English classes the varied purposes of language: *to inform, to express, to narrate,* or *to persuade*. Finally, most come to the conclusion that art *is* language.

As hooks (1989) suggests, teacher education needs to teach teachers to "talk back" to experiences, or what Schon (1983) calls a reflective conversation with the situation. By taking this problem-posing approach early in the course, I hope

to develop these pre-service teachers' abilities (and willingness) to take a thoughtful and questioning stance to teaching and learning, rather than passively take for granted whatever they are told, or what they initially perceive, as unexamined truth. Further, because they are actively engaged in constructing the foundation for their own knowledge through inquiry into the concepts, it is more likely that the students will internalize what they have discovered and better comprehend the concepts under study (Kukla, 2000).

Art as Visual Language to Inform

"Learning to slow down perception so that one can really see is as important in biology or literature as it is in the visual arts" (Eisner, 2006, p. 11). When the purpose of language is to inform, attention is given to carefully observing and authentically portraying the subject through precise descriptions of the sensory details. The ability to collect data through careful observation and accurate description is an important skill across the early childhood/elementary curriculum. The visual arts are a particularly effective means of developing this skill, and despite common-theories-in-use that underestimate young children's artistic abilities, classroom teachers can develop their students' *visual language to inform*.

Mini-action Action Research Assignment

In order for my arts methods students to begin to understand how they might best facilitate this development, a mini-action research project assignment is modeled in the university classroom and then implemented by the students with small groups of children at their professional development school field experience. The assignment was adapted from one designed and implemented by Gilbert (1998) in several studies of her education students' field experiences. It involves three strategies that the pre-service teachers test with three different groups of children:

1. Strategy A: Just tell children to draw a selected subject (animal, flowers).
2. Strategy B: Provide the selected subject, tell children to look carefully to draw.
3. Strategy C: Provide the selected subject, interact with children to focus observation and encourage rich description before telling them to draw, and then, reinforcing this during the drawing.

This assignment provides the pre-service teachers with some initial understandings of how they might best develop children's *visual language to inform* and, for some, as described in a pre-service teacher's story later in the chapter, it provides the first glimpse of the pedagogical aspects of teaching art.

Having dealt with the "how" through the mini-action research project, the next step is to understand the "why:" why would a general classroom teacher be concerned with developing children's *visual language to inform*? This understanding

is developed through art explorations that engage the pre-service teacher in authentic learning experiences applicable to the elementary curriculum.

Art Exploration: Coral Reef Fish

In this learning experience, the pre-service teachers gain first hand experience of why developing art as a *language to inform* is important to their work in the early childhood/elementary classroom. Like the other experiences described in this chapter, it is modeled in the university classroom as a problem to solve, then, after some introductory exercises and explanation, my students complete the majority of the work as an out-of-class assignment. Later, they incorporate understandings from the learning experience in the design of lessons that they then teach in their professional development school classrooms.

As described earlier, the concept of art as a *language to inform* draws heavily on the artists' research capabilities. Marshall (2007) elaborates further on how art functions as research:

> Clarity and meaning are engendered when ideas, concepts, or information is transformed into visual images, objects or visual experiences. This transformation…allows information to be seen differently in a fresh, more meaningful, personal, and experiential way …[and] produces new insights and learning. (p. 23)

During the Coral Reef Fish Art Exploration, students engage in visual and verbal research and visually share their findings. The comprehensive project consists of clearly delineated phases to be completed within specific time frames. This enables students' out-of-class work to be supported by brief clarifications and/or further in-class instruction, as well as individually through email and conferencing outside of class. To model the attention that the pre-service teachers might give to staging a learning experience, the university classroom is prepared to simulate an underwater environment with projections of coral reef fish on the walls and various props related to diving on hand. The problem is then presented to the students who are cast in the role of novice scientific illustrators and museum display designers: "select a coral reef fish for study and accurately communicate these observations in a color illustration and a three-dimensional model that will be exhibited in our university classroom to inform visitors of the physical appearance of the selected fish." Examples of scientific illustrations are presented and discussed, along with possible resources for the students' research of coral reef fish and issues for consideration when selecting images (e.g., clarity of image, available views, authenticity of source).

Phase One of the exploration requires both verbal (Fig. 12.1) and visual (Fig. 12.2) data collection. The visual data is critiqued by peers to assess the accuracy of the artist's depiction of observations of line, shape, color, and texture in the accompanying photograph. This important step serves to interrupt the pre-service teachers' previous understandings of practice by providing experience in establishing and employing purpose-based assessment criteria. Rather than perpetuate

the belief that there are no right answers in art, they learn that children's works of art may, and should be assessed on criteria related to purpose, which in the case of this particular illustration is to accurately depict the observable physical characteristics of the subject. Discussion also includes the purposes of assessment, which is not to assign a grade but to lead the artist to contemplate the need for corrections or revisions.

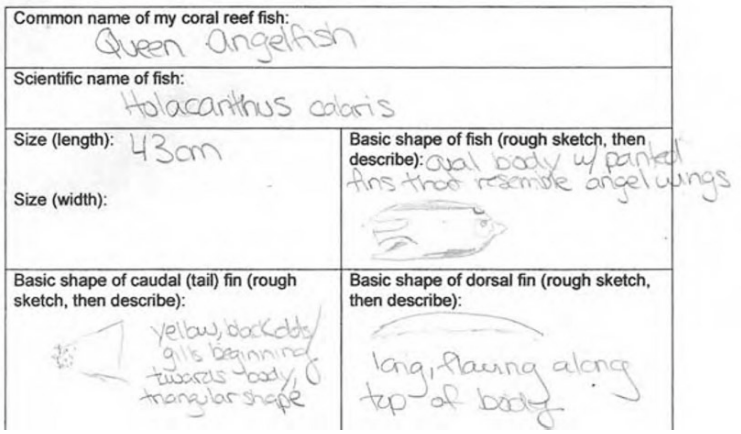

Fig. 12.1 Phase one verbal data collection: Pre-service teacher's data collection form.

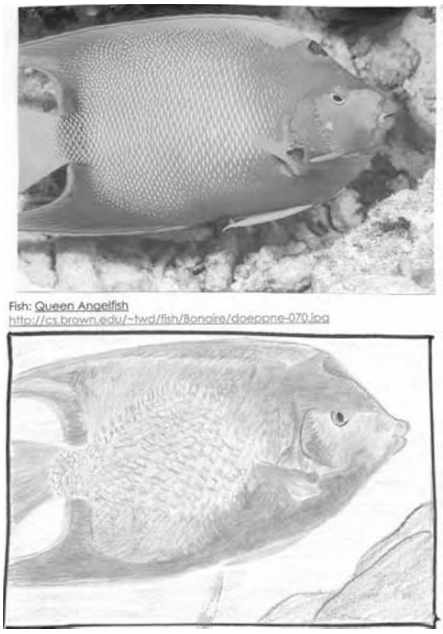

Fig. 12.2 Phase one visual data collection: A pre-service teacher's observational drawing.

The concept of critique as "informed criticism concerning their work from others…to enable them to secure a more sensitive and comprehensive grasp on what they have created" (Eisner, 2002, p. 49) is also important to my students' development as reflective professionals (Schon, 1983). Quality in art or in education is not achieved by perfecting a formula, but rather by examining what it is that we are doing and then imagining how we might do it better (Eisner, 2002).

Once the pre-service teachers have collected accurate data, they are ready to move on to Phase Two of the assignment. In this phase, they will experiment to discover what materials and techniques will best replicate the skin surface of the coral reef fish that they have selected. Through this process, students develop critical and creative thinking skills as they observe, analyze, imagine, experiment, and evaluate their experimental work.

They begin by verbally analyzing their visual observation (Fig. 12.3). This models for pre-service teacher a strategy for reinforcing use of descriptive language across the curriculum. Next, they generate and evaluate possible ideas for replicating the surface of the coral reef fish (Fig. 12.4), followed by testing the ideas and selecting the final materials and techniques to complete their model.

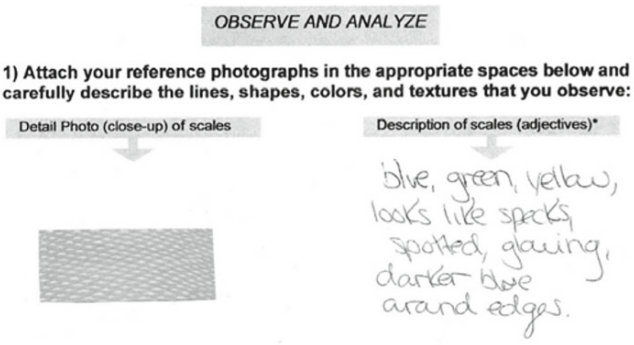

Fig. 12.3 Phase two analyses of data: Example of a pre-service teacher's verbal description.

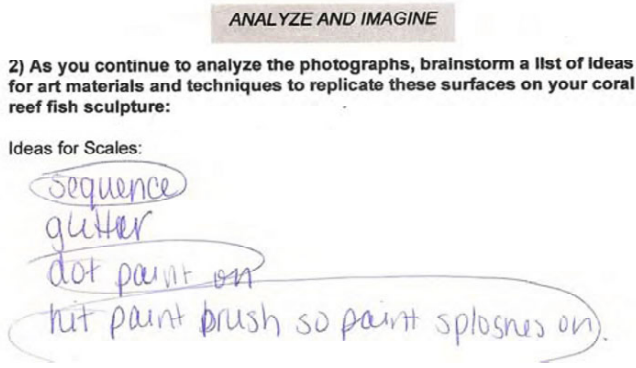

Fig. 12.4 Phase two analyses of data: A student's ideas for further experimentation.

In the third and final phase, the pre-service teachers are required to construct a three-dimensional model from the six-foot lengths of brown roll paper that are provided at the beginning of the project. The students are not provided with any step-by-step instructions for the construction of the model; instead, the problem is presented to the class for discussion of possible solutions. The students take these ideas and combine them with their earlier experiments to create the final work, then, they collaborate to showcase their work in the "museum" exhibit in our university classroom (Fig. 12.5).

Reflections

It is important to note that initially my students were less than enthusiastic with what became known as "The Fish Project." Many were intimidated by the open-ended nature of the work: used to recipe-like art projects, how-to-draw books, or step-by-step crafts kits, being required to observe, and to accurately render a subject in the two and three-dimensional formats seemed overwhelming. A number of my students, concerned about grades, worried that they did not possess the "talent" to successfully complete the project. Some complained that they were not going to be teaching art, so they did not understand why they needed to spend time on this kind of project. Anticipating these concerns, I had set up the course to allow them to question assignments, to express their needs, and to facilitate interaction among all of us, teacher and students working together, in order to make meaning of the learning experience. This allowed me to address the common theories-in-use in the authentic context of the teacher education classroom and their accompanying field experience in the professional development school.

Fig. 12.5. Students' *Exhibit of Coral Reef Fish* in the university classroom.

This "permission to question" the learning experience resulted in a more positive attitude as they moved forward. As demonstrated in their written reflections, by the end of the project many of the students had developed new perspectives regarding the arts, teaching, and learning. The following excerpts from several students' reflective statements demonstrate these new understandings:

"I realized that I had many more skills than I thought. I realized that it was not that I can't draw, I just had to practice looking more carefully!"

"At first I felt angry and overwhelmed because this was a lot of work and I did not really see the purpose of such a big project, but then the way we did it in phases, it made it more doable. Even if it wasn't step-by-step instructions, I could handle it, it made sense and it was better than instructions, because I had to really think on my own and I was really proud of the idea that I came up with to do the scales. I could see myself doing this in the classroom and I would make sure that I would do it in phases so my students won't be overwhelmed."

"I have learned a lot just in doing the preliminary activities. For instance, if I had not had to brainstorm and test out the ideas, I would have just done whatever first came to my mind. Since I tested my ideas and really brainstormed, I felt that I ended up with a much better solution."

"I have seen how art can actually teach other subjects. Art was what made me do all this research to accurately depict my fish, but I actually learned a lot of science content."

"I learned teamwork, because some of us got together to share supplies and ideas and I learned that working with others can help you achieve what first appears to be an unattainable product."

Not all students' reflections were positive. As one student wrote, "I thought that this project was very tedious. It would take up too much time and be too hard for children." To make the possible connections more explicit for these students, I followed up with a class debriefing where students shared how they adapted, or might adapt the project for various levels of learners.

The most interesting evidence of the learning prompted by "The Fish Project," came in the form of unsolicited reflection after the course was over. One student who had worked on her fish sculpture in her basement with some of her classmates stopped by the following semester to tell me, "Remember how I told you my kids drove us crazy while we were working on those fish? Well, my son was in the bookstore and he's yelling, 'Mom! Look, Carly's French Angelfish is on the cover of that book', and sure enough, it was a French Angelfish." Another example of learning that extended beyond the course came in a recent email:

> Dr. Narey--I thought you would like to know that over my honeymoon I was able to spot 10 of the fish that people created last semester. We went scuba diving in the Caribbean and I kept pointing out fish to my husband. I explained, once we surfaced, that the ones I pointed out were ones that were created in class and he got a kick out of it, I thought you would too. Hope you summer is going well! (Kerri, personal communication, June 10, 2008)

Art as Visual Language to Express

Many of the pre-service teachers enter the course with the belief that expression is the primary purpose of art. Yet, operating under the common-theory-in-use that expression means emotionally pounding clay, or spattering paint, they typically do not understand that expression requires further skills in visual literacy (i.e., the ability to "read" and "write" images). To a great extent, our work with expression relies on an understanding of semiotics (i.e., the study of signs), in that instead of using design elements (i.e., line, shape, color, texture) to describe observed visible physical properties of the subject matter, as we did in art as *visual language to inform*, we now draw upon these same elements to communicate emotional or conceptual qualities of the subject to be depicted. For instance, we begin this learning experience by exploring questions such as, "what color is anger?" and "what differences might there be between drawing a line to show agitation and a line to show rage?" This is followed by viewing and analyzing works of art that demonstrate visual language to express, such as Gaspare Diziani's drawing, *Flight into Egypt,* that communicates the urgency of a family fleeing for their safety with active, diagonal, scribbled lines, and Pablo Picasso's, *Old Guitarist*, that conveys the melancholy of an aged musician with colors of blues and grays and the drooping lines of the figure.

Art Exploration: Poetry Book

For the art exploration, students are given the problem of creating a book using poems they have written in their reading methods course. In this assignment, my students move beyond the notion that the only purpose of art is to illustrate text with representational imagery. Instead of a literal interpretation of the subject matter, each student is required to critically analyze and define the overall expressive quality that he/she intends to communicate. Next, students determine the lines, shapes, colors, and textures that communicate the identified quality. After some additional work with lettering and graphics, students create pages on which to layout the poems. In the example shown (Fig. 12.6), the student used diagonal lines of reds and oranges to express the explosive action that she identified as the essence of her poems. This is seen in both the surface composition and the ideogram technique (i.e., lines and shapes created with letters or words).

Reflections

Although my students seem surprised when our investigation into communicative aspects of design elements contradicts their beliefs about what is meant by expression, they readily grasp this new concept. Many are also able to make connections to their work in the field.

Fig. 12.6. Cover and page sample with ideogram from a pre-service teacher's poetry book.

Understandings of art *to express* were incorporated into discussions of book illustration with the children in their field experience classrooms as well as into other subject areas. One student used the art concept in a lesson in which the children designed mini-posters of science vocabulary. In her lesson plan reflection she wrote, "The children really showed their understanding of the science words by the way they used colors and lines to express the meaning. My mentor teacher loved this lesson so much she hung their work in the hall!" Further insights into the teaching and learning process came about several days later as the student related that another teacher in the building had attempted to replicate the activity in her classroom, but had not achieved the same results. Knowingly, my student informed me, "I think that teacher must have skipped the art parts [of the lesson] and just told the students to draw the vocabulary words… If you want students to understand how to express effectively, you have to *teach* them the art!"

Art as Visual Language to Narrate

Despite their familiarity with the adage, "every picture tells a story," most of my students have not considered how artists go about telling stories. We begin to explore art as a *language to narrate* by inquiring:

- What kinds of stories do artists tell? What kinds of stories do children tell?
- How do artists tell stories? How do child artists tell stories?
- How might we compare and contrast visual and verbal narrative texts?
- Are there texts that are both visual and verbal?
- What kinds of literacies are required to "read" and "write" each of these texts?

Next, we engage in activities that relate to my students' work in the field and that build upon the earlier course learning experiences, such as

- analyzing artwork from a variety of cultures to identify methods of sequencing, character and setting, and other elements, such as point of view, used by artists to tell stories (e.g., Lakota Winter Counts, Ancient Greek pottery, Bayeux Tapestry, paintings by Latina artist Carmen Lomas Garza, installations by Nam June Paik).
- dramatizing characters from fairy tales and legends in a variety of action poses, then observing and drawing the characters' facial expressions and figures (builds upon the visual language to inform experience).
- analyzing graphic novels, comic books, and comic strips for visual and verbal literacy elements and devices (builds upon visual language to inform and express experiences).

Art Exploration: Comic Book as an Instructional Material

In this assignment, my students are required to create a comic book that they can reproduce as an instructional material to help teach a social studies or science concept (e.g., Japanese tea ceremony or the water cycle). They draw upon the knowledge and skills learned at the beginning of the course as they research and collect visual data and develop the expressive qualities of their comic book images and text to effectively tell the story that explains the selected concept.

Reflection

The learning experiences for art as a *language to narrate* gave my students a better understanding of how to more effectively address the art component of traditional early childhood reading /language arts activities. Rather than follow the common practices of merely telling children to illustrate a story, or to draw a picture that the teacher then translates into a verbal sentence, many of my students commented that they now spent more time preparing the children for the visual aspects of these activities. Further, although my students demonstrated a growing understanding of art as a visual language for children's learning, most did not view it as a language for teaching. Therefore, the art exploration of creating a comic book to teach offered them a new perspective, as well as authentic purpose.

Art as Visual Language to Persuade

The overwhelming proliferation of multimodal texts encountered through television, Internet, billboards, and print-based media has generated increasing attention to the importance of media/visual literary. These texts exert a powerful influence upon children and adults not only in the promotion of products, but also in the ad-

vancement of beliefs and values (Barrett, 2003; Chung, 2005; Kilbourne, 2000). Those who are not visually literate are in the greatest danger of being manipulated by those who are (Chandler, 2002). Therefore, this final learning experience is a particularly important area for exploration. We begin with investigation of what it means to persuade, and the purposes and means of persuasion, followed by deconstructions of historic posters and contemporary print advertisements in terms of

- aesthetics: color, contrast, font, camera angle, etc.
- targeted audience: age, gender, etc.
- identification of persuasive technique: flattery, bribery, bandwagon, etc.
- denotation and connotation: explicit messages and implicit messages

Discussions of the implications of media influence in the contemporary commercial advertisements are connected to concerns that have potential relevance to my university students' personal experiences, such as body image or social status.

Art Exploration: Posters to Draw Attention to the Problem of Hunger

Noting that persuasion may be used for ideological (e.g., to encourage recycling) as well as commercial purposes, students are required to create a poster that draws attention to the problem of hunger that will be displayed at a campus fundraising event for a local food charity. Students must draw upon the knowledge and skills developed throughout the course, and critique the effectiveness of their work based upon new understandings of art as a *visual language to persuade*.

Reflection

Relating the implications of media influence to issues of body image and social status appeared to resonate with many of my students. Their discussions revealed a new awareness of an image's potential power to influence beliefs and actions. Several students became quite passionate about the teacher's responsibility to teach media literacy, and went on to design such lessons for the children in their field experience classrooms. One student confidentially shared that her friend suffered from an eating disorder and related that the second grade girls in her field experience classroom were already talking about weight and dieting.

Further, the students also realized art as language to persuade involves research into audience and content, and brings about subsequent learning in a variety of areas. For instance, researching facts for the awareness of hunger poster brought some students to understand the issue in relationship to students in their classroom. As one student reflected, "I guess I had always just thought of it (hunger) as something that happens in undeveloped countries…It really opened my eyes when we researched for our posters and I found out that 13 million children in the United States go to bed hungry! These could be my students…I've got to do something about this."

Pre-Service Teachers Make Meaning

When the course is over, I invite students to share their reflections of the course and their continued experiences of integrating art during their final student teaching semester. These reflections (along with the informal feedback of students who stop by to share stories) provide me with the opportunity to understand how some students perceive the arts beyond the time that they are enrolled in the course. The following stories were written by two of these former students.

Ms. Ammermann's Story

"We don't have time for art in the classroom!" That is all I heard during my pre-service teaching experience. Most of the cooperating teachers were not willing to give up "core curriculum" time for "art." I needed to find a way to teach my art lessons within that context.

Now I was not the average student. This was my second career. I took art many years ago. My early perception of art was "arts and crafts." I had no formal training in what I now consider "art." Most of my younger peers had similar experiences with little or no background in art. It was difficult for many of my peers and I to successfully plan a lesson for art that was both meaningful and educational with the little experience we had. My art class during my pre-service teacher training was quite a challenge. After all, what did I know about art?

One of the most valuable assignments for me during this our methods course was the mini-action research project. We placed a vase with flowers on a table and used three different strategies to teach three different groups of students (A, B, and C) to draw them. This was a great learning experience for me, not just in art, but across the general curriculum as well. This activity made me realize that as teachers, we need to challenge students' thinking in order for them to learn. In Groups A and B, nothing was learned. There was no dialogue, no instruction, and basically the children did not learn anything new. They drew from their past experience but gained no new knowledge. However, in Group C, the students learned to look at more detail with a little instruction. We as teachers have a great responsibility to challenge all learners and guide them in the learning process.

I also learned how to utilize the arts to address the varying abilities and learning modalities of the students. When students learned about different types of storms, we discussed the characteristics of a hurricane with damaging winds, rain, thunder and lightning and I introduced the Beaufort Wind Scale. This is a tool that meteorologists use to classify the wind and the damage it can cause. This is where I integrated art. The objective of the lesson was to have students observe and discuss the lines, shapes, and colors selected artists have used to depict different types of wind in works of art. Another objective of the lesson was for students to use the expressive qualities of line, shape, and color to depict a specific

wind speed (based upon science understandings) in a tempera painting. I introduced the students to several artists (e.g., Van Gogh, Yoshitaki, Hokusai) that portray wind in their paintings by displaying art panels that included these pictures. Prior to their creating their own wind painting, the students and I discussed the art panels in detail:

- *Can you "see" the wind in the paintings?*
- *How did the artist achieve the feeling of wind in each painting (i.e., color, texture, etc.)?*
- *How did the artist show the speed of the wind in each painting (i.e., landscape changes, etc.)*
- *What shapes did the artists use to create the wind?*
- *What colors were used to illustrate the wind?*

Then the students picked a number on the Beaufort scale (1-12) and had to create a painting based on the wind scale rating. I was amazed by the results. They truly understood the varied effects of different degrees of wind on the environment. This lesson had a profound affect on how I viewed art for all my lessons that followed. Art integration facilitated the students' learning. Art had a new meaning for me. It was not just painting and creating holiday crafts. Art was a tool that I used to expand students' understanding.

Pre-Service Teachers Make Meaning: Ms. Perry's Story

While reading a slow moving and detailed story by Beverly Cleary (1990) called Ramona and Her Father, I could sense that my third grade students were getting bored. So, after completing the first three chapters, I used important events and dialogue in the story to create a script. The script consisted of six scenes and I included a speaking part for each student. Because the students had not previously participated in this sort of activity, I wanted to be sure they did not feel pressured or uneasy. The assignment of roles was a group decision. My goal was for everyone to participate without feeling forced to do so or anxious about the task. Once the roles were assigned the students highlighted their lines, met with the rest of the cast in their scene, and immediately began rehearsing. I spent time with each group, working on positioning, gestures, entrances and exit, and props. The students considered studying their lines part of their homework!

On the day of the play, the students brought in props and costumes. The class was their own audience, and they we discussed how to behave as an audience. In between scenes, while the cast and props were changing, I spoke with the students to review what they just saw; what they remember happening next and any predictions they might have. This strengthened their comprehension. The play was delivered beautifully and the students had a great time doing it. After the next three chapters, I decided to write another script. The students were even more eager to

participate! When the book was finished, the class had collectively performed three plays.

The benefits that came from doing the plays are immeasurable. The students' comprehension levels skyrocketed. Suddenly, the book made a lot more sense. The students could recall more facts and even relate the story to their lives. The students were able to practice many aspects of public speaking, such as tone, volume and pace. By the third and final play, each student was speaking slowly and clearly and consistently faced and made eye contact with each other and the audience. They learned to pay close attention to punctuation and to add inflection to certain words or phrases.

This play was an opportunity to involve the students who did not often volunteer. One student, in particular, stands out in my mind. A quiet, seemingly distant student opened up and showed an outgoing and downright hilarious side during the play. I believe it strengthened her ability to interact socially. The opportunity to interact with each other was particularly beneficial for two of the students with learning disabilities. These students were often pulled out during shared reading time, and the play provided valuable social interactions, not to mention the benefits of better comprehension and public speaking. I'll never forget the excitement on their faces when they were performing.

The plays really brought the class together. The students sincerely enjoyed and learned from the activities. After each play, the class held a discussion about likes, dislikes, funny moments, and prior and future scenes. But more importantly, the students were using memories of their friends on stage to recall important events. They were relating to the characters in ways they could not possibly relate by simply reading the story.

Shared reading is sometimes complicated because the students are required to read a certain book; they do not get to make the choice. The reading levels within a classroom vary widely, therefore making it difficult to find a book that each student can both read and understand. Incorporating theatre into the classroom brought an average shared reading book to life and energized and motivated the students. I believe each student found something within themselves during the process; They were proud of their work and displayed high levels of confidence. During one discussion, I asked the students, "Why do you think we did these plays?" One student raised her hand and summed it up perfectly: "It helped us read better, have fun, and know the story!"

Teacher Education: Preparing Pre-service Teachers to See Hats or Boa Constrictors Digesting Elephants?

As teacher educators, we, along with the pre-service teachers, must search beyond the visible and attempt to understand what we bring to our courses and what we take away. Will my students go on to teach art as a meaning making process?

Have they learned to look beneath the surface of their assumptions about teaching and learning as well as art? What have I learned from our work together?

Through these course experiences, most of my students end the semester with new perspectives of language, literacy, learning, and art. Through their field experiences, they also may have had an impact upon the views of the classroom teachers and the children with whom they worked. Through my reflections upon our interactions in both settings, I have advanced my understandings of others' beliefs and concerns. Our attempt to make meaning has challenged some common theories-in-use and, perhaps, has caused a small interruption in the patterns of practice that have become engrained in many early childhood classrooms.

Will my students see the boa constrictors digesting elephants? At least they will understand that they should look.

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