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The Impact of Professional Development on One Teachers Thinking and Practice

Leslie Kramer

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by

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Introduction and Background

Throughout this past school year, I was a staff developer's dream. Knowing from experience that staff development would help me improve my teaching, I signed up for every inservice opportunity my principal had brought to our school the year before, stayed with those commitments throughout the year, and even signed up for a third new project. While some of these were one-day workshops with discrete sets of information, others involved a deeper commitment to lifelong learning. The three powerful ongoing professional development opportunities I chose to invest my time and energy in were:

- Project ASSIST (PA), a three-year collaboration with Education Development Center, Inc. (EDC), that investigates the integration of technology with inquiry-based science instruction to support both typical and atypical learners;

- ArtWorks (AW), a three-year, three-way collaboration among the Underground Railway Theater, the DeCordova Arts Museum, and Project Zero, an arts curriculum/critical-thinking focus group; and

- Discovering the Past: Learning Through Archaeology (ARCH), a one-year, grant-funded school partnership with Harvard University's Archaeology Department and Peabody Museum.

Selecting each of these learning commitments with great care, I prepared myself to invest significant time and energy into the kind of in-depth, thought-provoking activity that any worthwhile staff development effort entails. However, the professional development opportunities I chose to inform my thinking need also to take into account a unique, complex dimension of my practice: I include all learners, regardless of physical or cognitive disabilities, in my classroom. Fortunately, each of the three initiatives could and did contribute to the development of instructional strategies that ultimately benefited all my students.

As a teacher in an inclusionary classroom, I am constantly planning, adapting, and modifying curricula, materials, and lessons to meet the needs of all my students. By nature, inclusionary teaching is an iterative, organic process, ever evolving and adapting to the vast range of students' strengths and challenges. It is different from general classroom teaching in that half my students in a given school year might be on Individualized Education Plans (IEPs), which can involve adaptive, augmentative communication equipment; intensive, one-on-one assistance; or occupational/physical therapy services. Were they not in my classroom, some of my students might otherwise be placed in substantially separate educational settings.

These students (to whom I will refer as "included" throughout this paper) have significant developmental, emotional, and/or behavioral challenges, and planning for their classroom time

requires substantial time, energy, coordination, and creativity. Such students sometimes come with an aide or a student teacher who may or may not be trained or experienced. These included students might thrive with additional innovative teaching strategies; they also might be unable to participate if they don't have the necessary skills or are having a difficult day. Additionally, some of the more "typically developing" students also have a vast range of needs, from high-demand behavioral disorders to extreme, often undiagnosed, distractibility. This potent mix of learners calls for careful consideration of management issues, along with ongoing modifications of curriculum content and goals.

Clearly, inclusionary teaching–which can be simultaneously demanding, gratifying, and exhausting–requires ongoing collegial coordination and support as well as intellectual nourishment. I anticipated that each of my three professional development commitments would bring me together with thoughtful, honest, informed facilitators who cared about the demands of my classroom and about me as a teacher. I needed to feel comfortable with these professionals and hoped they would be people who would walk the learning journey with me–not in front of me–dispensing advice and value judgments. After reading the descriptions of each enterprise and meeting the facilitators, I sensed that they would indeed be colleagues with whom I could think through and experiment with new teaching ideas. I also liked the facilitators–as teachers, as thinkers, and as people. I enjoyed discussing classroom issues and teaching with them, as well as listening to their perspectives on teaching and their personal lives. I knew I wouldn't feel embarrassed pacing with frustration in front of them if a lesson didn't go as hoped. Most important, the facilitators needed to understand (1) the complexity of planning, teaching, and assessing for an inclusive classroom, and (2) that the included students were one of many factors to consider.

As the head teacher in my own fifth-grade inclusion classroom this year, I was also eager to learn new content and methods for teaching science and social studies and new ways of infusing the arts into the curriculum to reach all learners. But how could I manage the demands of reading, planning, teaching, and reflecting required by all three staff development strands? Project Assist (PA) seemed to offer a thoughtful, effective organizing structure for teacher planning and reflection in science and other content areas. This was the second year for both of the three-year projects, and their demands increased from September on. The archaeology workshops required highly attentive participation, since much of the material was new to me. From my previous staff development experience, I had learned how to integrate into my teaching new information and techniques from a single program. The real learning for me occurred in the teaching itself, after the reading and planning. This year, I had three staff development strands to weave together. I also had a graduate student intern and a student teacher to support and mentor. To create and nurture this potentially effective classroom team required my attention and frequent processing of events. And I still had other subjects to teach, such as math and language arts, to 19 students. Fortunately, each project coordinator required just one meeting a month for participants. Most of our time was invested in the essentials of content-area reading, team planning, teaching, and reflecting on our teaching.

Early in the school year, I saw that this would be a persistently challenging class. I had two "official" inclusion students, one with significant learning disabilities, and both with severe behavioral and emotional disorders. Nine students had IEPs to address major language and spatial difficulties. Several students presented highly challenging, defiant, belligerent, and explosive behaviors, disruptive to learning and teaching. Students seemed excited about investigating ideas individually and in small groups, but they had tremendous difficulty getting along with each other

and mediating conflict. They were passionate about learning; they were also startlingly possessive of their desk space, materials, and teacher time. Sharing was a skill they needed to relearn daily. They were exhausting.

I started the school year attending all the projects' scheduled meetings. I had conscientiously follow the procedures outlined by PA: pre-observation meetings, teaching, and post-observation meetings. I planned and taught lessons inspired by Artworks (AW) and Learning Through Archaeology (ARCH). I was always available for discussion with my student teacher and intern. I held field trips, parent meetings, and classroom family events. Regarding incentives, lessons, groupings, materials, and activities, students' responses were sometimes inconsistent. One day they would work cooperatively; the next, they'd squabble all day. Still, I pressed on, faithfully attending all meetings wherever and whenever they were scheduled.

I didn't consciously plan it this way; however, I realized that I was experimenting and cross-referencing more and more frequently as the year progressed. Perhaps I was encouraged by the growing positive student reactions, the increasing complexity of student responses, and the thrill of seeing students make connections and seek unlikely pairings of ideas. Gradually, some of the disruptive, antisocial behaviors diminished, as students were continually pulled in by such integrated assignments as "What do you see in this American Colonial painting that helps you learn more about those times?" and "How would you redesign your ice-cube container if you only had one material to use?"

Sometimes this integration was planned beforehand, as a teaching experiment. For example, as part of an archaeological activity, I placed an object in the center of a group of students and asked them first to draw it, and then to share what they observed from their perspective. This exercise integrated AW and ARCH, as well as reinforcing the essential PA skill of careful observation. At other times, I borrowed strategies spontaneously, as teachable moments, hoping to reinforce immediate connections. During our archaeological dig, one student found a tiny blue button. A few days later, to redirect students' whining about being unable to dig all day, every day, I held up an imaginary button in the air and wrote an assignment on the blackboard in blue chalk: "What is the story of this tiny blue button?" Students brainstormed a few ideas and then were asked to write and edit their own stories of the blue button. Again, AW and ARCH were integrated into an assignment that arose from a highly methodical, PA-embedded archaeology dig.

As the year progressed, students came to expect these kinds of thoughtful assignments and revisits to our work together. These assignments were engaging because they allowed students the flexibility to work in a visual mode, rather than the usual "text-based" mode, with paints, colored pencils, and graphite shading. Many students were intrigued by assignments that juxtaposed the familiar with the unknown, such as microfishing, in which a familiar microscope slide was "unfamiliarly" suspended in our class pond water tank by a paper clip/thread "fishing line." Students really did want to know where pond life was most plentiful–in the mud at the bottom, under the floating log, or at the water's surface.

Three powerful teaching/learning occurrences–what I refer to as "experiences"–from this year exemplify successful and enriching cross-project integration. The first occurred early, during a PA planning workshop. In the second, I used tools from both PA and AW to observe and document a student constructing her science project. Third was an archaeology activity that brought together all three strands: PA, AW, and ARCH. Each experience began with a group of guiding

questions similar to those teachers had used in workshops and in the classroom to set the tone for hands-on, inquiry-based learning. These examples support my belief that although multiple staff development commitments can seem overwhelming, they are worth the effort. When points of integration are identified and used to teach and learn, the results are more rigorous and inclusive teaching and insightful learning–for both the teacher and the students.

Experience One: Project ASSIST

Guiding Project ASSIST Questions: Thinking About Thinking
and Using Landmarks to Stay Found

- What will be the evidence of student learning in inquiry-based science?
- What should students know and be able to do?
- What are our questions and concerns as teachers?

Hypothesis

I began to think about how the structure from one project could help organize and convey the content of another collaboration. Project ASSIST (PA), with its dual emphasis on (1) teacher reflection and (2) teaching and assessment for all learners, was emerging as a model for the other two partnerships, AW and ARCH. PA had a whole-effort structure, from planning meetings and organizing questions to post-observation check-ins and follow-up teaching plans. Its format supported both innovative teaching as a way to reach all learners and focused reflection, based on teachers' expectations and lesson results. And because PA was designed to help teachers reach all learners, it could integrate both content and methods AW and ARCH into science, as well as other academic areas.

Procedure and Materials

Last summer, PA staff arranged a one-day institute to prepare participants for the upcoming school year. During this time, we got a much-needed chance to talk with our own colleagues, science staff developers, and the PA facilitators. For the afternoon project, PA staff directed us to develop a friendly, useful Action Reflection Planning Tool (ARPT), a personal flow chart of sorts that would show how we, as "learning teachers," reflected on a lesson we taught; restated our goals, objectives, and understanding of science content, and processes; and planned the follow-up lesson coherently and effectively.

The PA facilitators supplied us with posterboard, preprinted text strips of the "Action Reflection" vocabulary, various geometric shapes (squares, rectangles, circles, ovals, and triangles), markers, pencils, crayons, colored construction paper, fluorescent-colored paper, glue, scissors, staplers, tape, paper clips, rulers, blank labels, and plenty of table and floor space. Once situated, I looked around at my colleagues. We were all smiling and laughing. This was great! It was just the kind of assignment and range of materials we'd give to our students, but we seldom allowed ourselves its cognitive pleasures and affirming benefits. Like amoebas, we slid apart from each other, spread out our materials around our workspaces, and began arranging our own planning tools. After a few minutes of chatting, the room grew quieter.

I leafed through the text slips: "Science Inquiry Process," "Science Content," "Organizing Question(s)," "Assessment," "Student Profile," "Instruction Plan," "Technology," "Evidence," and so on. I took some geometric shapes out of the envelope and laid them on the white posterboard,

choosing a few triangles, several squares, more rectangles, and an assortment of ovals and circles. A tangle of long-armed arrows slid out from the envelope and lay in a tight pile in front of me, arrow tips pointing in all directions. I carefully teased them apart, noticing that all the arrows were one-directional rays, single-tipped. Automatically, I knew I'd be gluing a number of them together to reflect the two-way, multifaceted thinking that often keeps me vacillating.

The next step in designing my own ARPT was to consider content and process questions: How do I begin planning a lesson? How do I begin units, other than having students brainstorm what they already know, and would like to know, about a given topic? Is developing student independence always a "big idea"? Doesn't our understanding of a student's strengths and challenges constantly grow? Certainly, our general instruction plan is determined by our particular group of students, but does the learning change as the teaching methods are modified for "atypical" or challenged learners? How can we ever really know what students have learned?

I took the large ovals first and arranged them asymmetrically on the board. These shapes projected a sense of expansive, more flexible thinking than the circles had. I placed the related phrases "Assessment" and "Reflection" on the oval to convey my belief that we need flexible, innovative thinking as we assess and plan for ourselves and our students. I returned to the beginning, the critical "Organizing Question(s)" that must grab our students at the onset of a unit or lesson and also helps us as teachers get focused in our thoughts and actions. I've presented organizing questions that captivated some students yet left others cold. I knew that one specific question could grab several students, while a second or third restated question was likely to pull in the rest. Those restated questions, sometimes planned beforehand, are more powerful and effective when formulated in real teaching time. The students get caught up in the energy and passion to "find out." Therefore, the expansive "Organizing Question(s)" text also needed to be placed on an oval.

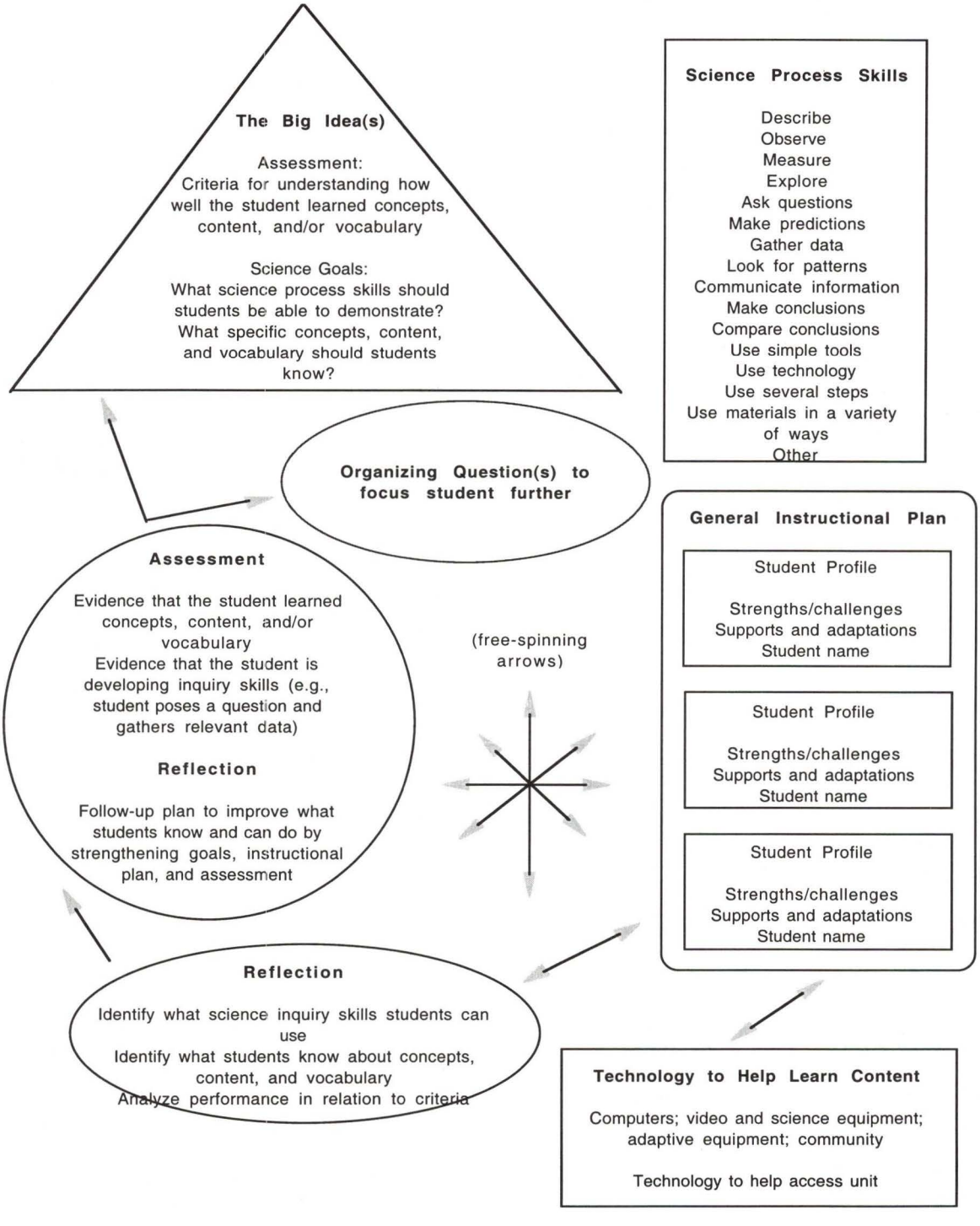
"Student Profiles" were the students themselves: ever present, solid, demanding. Each student needed to be placed in a "box" so that he or she would stand out from a sea of circles and ovals, each in his or her own frame.

The "Science Process" also required a rectangle, because it represented the scientific method. Was scientific method a "big idea" for students to know? Should it serve as a tool, such as using a pencil to write an essay? Should it be part of every science experience? Should all science activities have common features in order to accurately call them "science"? I began thinking that any science time should have an organized, documented approach, one that would include descriptions, observations, pattern identification, and so on. These were indeed "big ideas," and they belonged in all the places in my ARPT. I glued "Assessment (Criteria, etc.)" and "Science Goals" onto a giant triangle and tilted it to point diagonally across the page, at all the other parts of the flow chart. I was done, or so I thought. But where would the arrows point?

Observations

EDC had supplied plenty of arrows. I quickly glued down several, indicating the flow of my thinking, and then sat back and appraised their flow. Something was missing. My thinking seemed more nimble and connected than all these arrows indicated. I glued two together to form a double-tipped arrow and placed it where I thought I often made the greatest connections or leaps back and forth: in the midst of students, assessments, reflections, and organizing questions. In other words, how I teach and assess is directly related to students' strengths and needs at any given moment. My ongoing assessment of the situation affects how and where my teaching reflections go

Leslie's Action Reflection Planning Tool (ARPT)



and how to plan for the next lesson. I was conscious of this ongoing, highly active feedback loop. I needed to have the arrow be able to move to show that energy, attention, and flexibility.

Conclusion

I took a paper clip and straightened out one of the curves. Next I poked a hole first through the middle of the arrow and then through the posterboard at the place where the arrow would turn. I then turned the posterboard over and, using a pen shaft, twisted the paper clip into a flat spiral. I bent the spiral slightly inward toward the posterboard, so that the paper clip wouldn't fall out, then flipped the board back to the front. I secured the paper clip again so that the arrow could turn freely.

Application

There. The arrow now moved much the way my own thinking does: continually retooling, returning to what I think I know about a student, a subject, and the underlying methodology, in order to assess both what a student has learned and how effective I've been as a teacher. The arrow's movement demonstrated how important I believe this process to be. I need to watch a student work in order to fully understand how the product came to be, and to create a more complex map of that student's learning. I could learn a lot about how to more fully engage a student by watching that student being engaged, working, and asking questions to support her or his thinking and reasoning. A staff developer could learn much about how to provide meaningful experiences for me as a teacher by having watched me work that day.

I didn't know it at the time, but after I learned about material and nonmaterial aspects of culture during our ARCH workshops, I thought about how difficult it is to accurately map a person's thinking and to include on the map the infinite connections we make while we ponder. The only map we have of our connection making is in the material world. Otherwise, we must keep observing in order to literally see the thinking.

Experience Two: ArtWorks

Guiding ArtWorks Questions: Creating a Superior Hinge,
or Why Braided Yarn Beats Masking Tape Any Day

- What story do you see in this work of art?
- How do the colors help tell this story?

Hypothesis

Nina, one of my students, needed a way to keep the handmade ice-cube container she had been working on closed. She had tried using masking tape on the plastic surface, with mixed results. The tape stuck to both the top and the bottom but required an extra amount at the bending point to allow for opening and closing. The tape ends looked sloppy and unfinished, no matter how clean her cut was. Nina's mouth pinched in frustration; she was determined to work with the materials until her handiwork met both the insulation requirements and her personal aesthetic standards.

By using the Project ASSIST model of Relevant Assessment Questions for observing one student from a number of perspectives (Levine, 1994), I could develop a more complex model of

modifications, technology, media and materials, science content and inquiry process, and teaching instruction. Since Nina placed great importance on the creation of form as well as function, I found myself incorporating AW into how I was understanding her efforts. A major component of AW is careful observation and perspective taking: careful observation of fine arts, such as sculpture, two-dimensional canvas work, or drama, and perspective taking from various viewpoints, such as one of the characters, a visitor from a different period, or a contrasting idea.

Watching Nina work helped me continue to construct my understanding of her learning strengths and needs. I had already developed an initial mental description, including her preference for low-tech materials, with the exception of our classroom's microscopes. I could see her preferences for work environment (seating, lighting, noise level, proximity to other students and teachers), materials, organization, work and break times, pacing, and instructional support needs. I could also learn more about how Nina understood the placement and purpose of insulation by observing how she went about constructing and testing her container. I could watch her retool her invention, using particular materials. Would she be limited or satisfied with what was available? I knew Nina would ask for a desired material if she didn't see it displayed. I also knew she understood this assignment. But did she understand the science concepts too? Her actions and final product revealed this to me.

Procedure and Materials

An hour before, Nina had searched methodically through all the available materials in the classroom in order to construct her insulated ice-cube container. She poked through bags of materials for insulation, holding in her left hand two plastic take-out container lids and a square of bubble paper. She had let several other students go ahead of her, her eyes scanning the materials stacked around the room, so she was the last one to choose the materials that would best match her sketch.

Nina brought her selections over to a row of desks where her friends had begun working earlier. She arranged the materials in a frame around her workspace and asked a friend sitting next to her to share the glue between them. Nina then placed the two lids so that they would form a container with an inside space. She wiggled them together for a few minutes to see if they would snap together. When they didn't, she planned for a hinge.

Nina made the first hinge with a strip of masking tape. She ripped the tape hinge off the lids. It was no good, she explained; when the container was in the "open" position, the tape bulged out. Nina wrinkled her nose at this, even when asked to think about why the tape did that. She then requested yarn. She looked through the yarn bag and asked for green and gold. I couldn't find green yarn, just gold. Nina said, "Keep looking. Oh, yeah, can I have a safety pin too?" I found the safety pin, as well as some green yarn, and gave her a yard each of green and gold.

Nina returned to her work area. She lined up the strands side by side and tied a knot at one end to secure them together. She then began braiding the yarn, tugging at each strand. After about two inches of braiding, she tied a knot and snipped off the remaining yarn. She again lined up the lids, punched a hole halfway along the length of each lid, pushed the braid through the holes, and tied the ends together. On the opposite side, she punched another set of holes, snaked three strands of yarn through, and tied up the ends like a bow. She tested the hinge and the tight closure, wiggling the lids from side to side and pulling at the braid and tie.

Nina opened the ice-cube container and arranged the insulating materials in a way that revealed her understanding of how insulation works. First, she dripped glue in and around one of the concave lids. She then sprinkled a few wood shavings on the glue and pressed the bubble sheet over that. She glued the Styrofoam pellets inside the opposite lid. Finally, she set the open container to dry at the side of her workspace.

Conclusion

Nina persisted at the task until it met every requirement. She checked her plans, modified them when necessary, and showed her understanding of what ice needs to stay frozen. Her final product was tidy-looking–no glue drips or torn materials. Her Styrofoam pellets were symmetrically placed, and the wood shavings were uniformly sprinkled over the glue. In addition to her container working effectively, it had to look a certain way. Unlike the work of most of the other students, whose construction looked more randomly patched together, Nina's work was elegant: a daintily tied bow, whose knot belied its strength, and a plain exterior, with all the interior insulation visible through the clear plastic.

Before AW, I might have assessed Nina's understanding almost solely on her final product. I could dissect, understand, and describe Nina's container, much as I might understand a work of art. Now, with the support and affirmation of both PA and AW, I placed greater importance on the process as a critical piece of the assessment. Nina's container told a story; I had witnessed some of the action narrative as she worked. She acted out her understanding of how an insulated container works. Her colors told the story of her need for her personal style to be incorporated into her process and product. It is possible that, even without PA and AW, I would have approached Nina's assessment with this visual/action perspective anyway, but without PA and AW I might have missed the rich complexity of observing the whole of her learning.

Experience Three: Archaeology

Guiding Learning from Archaeology Questions: What's Left, Where, and Why?

- What's the difference between an ecofact and an artifact?
- How did this artifact get here?
- What story does this artifact tell?

Hypothesis

Our ARCH seminar group stood in a huddle in the Old Cambridge Burying Ground just outside Harvard Square, hoping the rain would hold off. This was our assignment: "Locate and sketch three separate gravestones: one from the early 1600s, one from the late 1600s or early 1700s, and one from the middle to late 1700s. Include the writing and all the decoration. When we get back to Harvard, we'll arrange them by date of death and see what we see." I guessed that our archaeologist workshop facilitator had created an open-ended assignment to provoke action, observation, and critical, connected thinking for his students.

I started with these questions: Were there really major differences in gravestone design from the early and middle 1600s through the centuries to the early 1800s? If so, why? What could these gravestones tell us about beliefs, values, and social changes from those times?

Procedure and Materials

We each had a clipboard, sketching paper, and pencils. I looked around the graveyard, trying to determine which stones might be the oldest. Simply rounded gray slate stones stood side by side with off-white limestone slabs. I walked over browning grass, moss mounds, and gravel to a slate stone about two feet tall. I stood off to the right, to avoid stepping atop where I thought the deceased might be buried, and read:

> Here lies ye Body of Mr. John Stearns son of the Late Rev:d M:r David Stearns of Lun-inburg. He died in the service of His Country Aug:t 22:1775 and in ye 23d year of his age.

Letters on top of letters. Colons instead of periods or apostrophes. The stone carver had etched a trailing vine along the right and left sides, beginning just after the curved top met the stone rectangle in a kind of shoulder. The top portion contained a round head, with feathery wings spread like a collar. A head/skull/spirit contained oversize, deep eyes, a wide nose, and a thin mouth. Why were some letters capitalized? I knew about the letter f substituting for the letter s in some places. Kneeling down, I placed the clipboard on my leg and sketched the stone–first the outline, then the writing, and finally the designs.

I stood up and walked to another stone. This one was from a century earlier, January 1688:

> HERE LYETH BURIEd ELIZABETH ANDREW WIFE TO –

The rest was illegible. This tiny stone was decorated with a skull: heart-shaped, triangle-nosed, square-chinned, teeth-clenched, hollow-eyed, and winged. A curved, leafy branch was carved underneath the skull. This short message about someone's wife was carved solely in uppercase letters, except for that one lowercase d.

The other two stones I sketched displayed more detail. The stone of William Pattin, who died October 5, 1730, was topped with a less fierce-looking winged skull and had more elaborate scrollwork alongside the inscription. The stone of Widow Mary Russell of Salem, who died June 3, 1814, had a planter urn and a geometric border around the inscription. Her epitaph noted that her father had been killed in the Battle of Lexington.

The workshop leader called us in. Time was up. I stood, rubbed my knees, and walked to the gate to leave.

Observations

We returned to the seminar room and arranged our sketches by date of death. Stylistic changes emerged along the layout. Over time, the frightening-looking winged skull motifs softened in appearance, the severe skulls giving way to a rounder heart shape, their feathered wings spreading out like soft collars. Decorative borders began to include more foliage–plants, leaves, vines, and flowers. By the 1800s, winged skulls were being replaced by urns, vases, and garden motifs. Newer stones presented more information about the person buried there.

Many gravestones were difficult or impossible to read, their inscriptions eroded by time, air chemistry, and plant growth. Both older and newer stones, such as slate and limestone, seemed equally affected. Slate stones split along natural cleavage lines or cracked inexplicably. Limestone slabs were pitted and gray. Some slate stone inscriptions appeared so untouched by time that the carver's writing guidelines were deep and sharp. Other stones bore no trace, by sight or touch, of any writing on either side. Many stones sat more or less upright, while others were tilted at precarious angles or protruded just slightly above the lawn's surface.

Conclusion

This was a burying ground for white landowners, Daughters of the American Revolution, Sons of Liberty, and such well-known, colony-founding names as Stearns and Russell. Husbands and wives were occasionally, though not always, buried side by side. The evolution of gravestone designs revealed a complex, changing set of values and beliefs regarding death, afterlife, and respectability–from stern, stark, unyielding Puritanism, to a softer, more classical, early-nineteenth-century style, with urns, winding vines, and weeping willows.

We were told that tombstones were carved and placed in the graveyard sometimes years after the associated burial, so that the stone wasn't necessarily aligned with the deceased person. Mosses and lichens have moved into such areas as the one we had explored: shady, protected, and well watered. Trees newer than the stones were growing there as well.

Inspired by the burying ground and by our group's recollection of history, we asked a myriad of questions: Where were other folks, such as indentured servants, enslaved peoples, non-Protestants, and non-landowners, buried? When was this graveyard consecrated? What was its association with Harvard College, nearby churches, and surrounding towns? Was it the oldest colonial cemetery in Cambridge? How disturbed was this soil, and what could it tell us about the original soil composition in this part of Cambridge? Which funerary design motifs and burial practices were brought over from England, and what caused changes in tradition? What were the sources for quarrying these stones? What exactly do lichens and mosses do to slate and limestone? Why can these plants live on those stones? What else could we observe with the use of a magnifying lens?

This activity left us with many unanswered questions, much the way archaeologists sometimes are. I found myself thoroughly intrigued as a learner and as a continual transformer of adult concepts and experiences into curricula for fifth-graders. I thought about what students might need to gain meaningful learning from an experience like this: historical background reading, vocabulary specific to the period, lessons in cemetery etiquette, and permission from their families. What organizing questions needed to be asked in order to get students engaged and caring about this activity? What questions might the students themselves be inspired to ask? What adaptations would some students need?

I began to realize then just how the three professional development activities I was involved in were coming together and how they might enrich my teaching. PA's ARPT had helped me to organize my thinking and planning about such lessons. The ARCH project helped with concepts, vocabulary, and historical framing for an activity like this one. AW's art observation strategies added to my vocabulary of description.

Culminating Experience: Putting It All Together

Now What? Guiding Questions

- What do we as teachers need to proceed with staff development?
- What do we need when we are engaged in multiple strands?
- Why has this been a great experience?

Good staff development gives teachers tools for the classroom. Outstanding staff development helps teachers ask more compelling questions about our own understanding of teaching. If we believe that our students learn best with meaningful curricula, adequate time, appropriate materials, supportive learning groups, and varied ways to show understanding and lingering questions, then we as teachers need those same conditions for providing multifaceted learning experiences. This requires time to think and plan within mandated frameworks, discuss, gather appropriate materials, teach, observe, manage, assess, reflect, revise, and plan for next time.

Time is also needed to integrate the different cognitive and content strands of two or more projects, such as PA, AW, and ARCH. Staff developers and administrators must continue to be patient and acknowledge aloud how rigorous this work is–how much courage it takes for a teacher to invite another adult to observe her closely, day after day, to try out new ideas, many times to stumble and grumble, and yet to return to the revision table to reflect. Though I'm fortunate to have a very supportive principal, I believe it has helped to have both him and other principals and administrators attend sessions designed for their supportive roles.

From my vantage point, it would be particularly useful to have the administrators of both general and special education attend these kinds of professional development activities. Administrators, too, must explore and confront their own attitudes and beliefs about educating both "typical" and "atypical" learners and must help to break down the barriers that currently exist in schools around inclusion. As an inclusionary classroom teacher myself, I have begun to dismantle these barriers in my own classroom by using PA, AW, and ARCH to create a framework and classroom curriculum to include all learners. And to successfully educate students in inclusive environments, teachers–both general and special education–must learn in inclusive environments themselves.

Along with PA, AW, and ARCH staff, I was also supported by my student intern and student teacher, as well as other building staff. Whenever possible, they attended these staff development activities as well. We planned together and checked in with each other throughout lessons. The learning disabilities tutor and the speech and language pathologist understood that I was innovating, and they applauded my efforts to include all learners. As a well-trained and adequately staffed team, we had the capacity to reach all children.

Given this especially challenging class, I drew heavily on the structure of PA, the content of ARCH, and the strategies of AW to keep students engaged, learning, and behaviorally appropriate. Using PA's thoughtful, analytical ARPT, I could more accurately distinguish between a student's learning-style challenge and a behavioral or emotional issue. Included and typical students received even more specific accommodations when we planned using the ARPT. Typical learners were assigned as partners to atypical learners, and more multiple-modalities tasks gave all students opportunities to show what they had learned and knew in a variety of ways. The use of visual arts, drama, and other project-based work reached and engaged greater numbers of

students and effectively promoted student confidence and independent critical-thinking skills. And as a teacher, I myself was energized by the greater diversity of assignments.

Though I'd taught this way previously, I was more organized working in a team with a planning tool and discussing my goals and ideas. I was no longer isolated, forced to keep all the thinking and speculating in my head, with no feedback from other like-minded people. I could talk about doubts, frustrations, hopes, and experiments with colleagues in the classroom. Art (doing, observing, discussing) and archaeology (digging, studying, hypothesizing) have been lifelong passions of mine, fields rich with critical-thinking, teaching, and cross-disciplinary assessment opportunities. And because I committed my time and energy to this cluster of professional development efforts, I had to be passionate about the material myself. I hoped that, through our work together, the students might become passionate about it too.

I expect this kind of staff support and development to continue even after the third year of Project ASSIST is over, given its deep impact design. In addition, I'd like to see the in-classroom support continue, especially from my own colleagues. Classroom teaching is the time and place where I get the integration plan out of my head, off the paper, and into motion. The act of teaching is truly the source of the reflection. It is where the students, the content, and I all meet. The "proving ground" of the classroom is where I want the feedback, so that I can improve my own teaching and learning–for myself and for my students.

Reference

Levine, M. (1994). *Educational care: A system for understanding and helping children with learning problems at home and in school.* Cambridge, MA: Educators' Publishing Service, Inc.