



UNBoxed

A Journal of Adult Learning in Schools

REMIXING EDUCATION

samuel steinberg seidel

THE INCREDIBLE JOURNEY

sarah barnes

MATH MAKEOVER

samantha gladwell

ASK THE KIDS

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ALL THE SCHOOL'S A STAGE

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MADE TO ORDER

mike strong

THE ICEWORKER SINGS IMPERIAL VALLEY

manuel paul lopez



Graduate School of
EDUCATION

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Volume Three, Issue One
Fall 2009





The Graphic Novel Project (see card for more details).

cover: Vector Collage by HTHMA junior Vanessa Siebold

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Fall 2009

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Welcome

The Editors

Welcome to *UnBoxed*, the journal of adult learning in schools. In this issue we feature two educators who take hopeful and visionary perspectives on schooling and society. Gunter Pauli offers inspiring examples of how young people can devise solutions to our most pressing social and environmental problems. Sam Seidel explores the creativity and resourcefulness of hip-hop culture and considers implications for teaching and learning.

We also introduce a new genre to *UnBoxed*—the opinion piece. Ben Daley critically examines the term “performance data” and proposes an alternate set of measures to indicate student and school performance. In a companion piece, Edrick Macalagium describes the impact of standardized testing on his teaching, his students, and the culture of his school. We invite you to respond to these pieces on our website’s blog and to submit your own opinions for future issues.

Macalagium’s account is one of several articles about teaching practice and teacher action research. Randy Scherer describes his efforts to link school and work in the HTH internship curriculum. Samantha Gladwell describes her work with math learning stations in her fourth grade classroom. Jenny Pieratt considers her approach to writing instruction against the backdrop of John Dewey’s notions of a child-centered curriculum. Paul Lopez offers a compelling account of his first evening of teaching at a local junior college.



HTMMA middle school students pose for a photo on the Great Wall of China.

Four articles and our photo essay touch on middle school practice. Zoe Randall shares images from her students' participation in the National Veterans Storytelling project. Cady Staff describes her quest to provide personalized feedback to each student. Linda Libby points out instructive similarities between project management and theater production. Sarah Barnes offers lessons from a “crazy” trip to China with 37 middle school students. Mike Strong shares reflections and questions about the power of choice in a project-based environment.

Our set of *UnBoxed* cards offers quick, concrete glimpses of student and teacher work at High Tech High schools. These are intended as tools and bits of inspiration, to be shared with colleagues and community members.

We invite readers from across the country to join us in conversations about purpose, policy and practice in education. Read, enjoy, and contribute!



Students learn about silk-making in Shanghai.

The Incredible Journey

*Sarah Barnes
High Tech Middle Media Arts*

I went to China with 37 middle school students.

We scaled the Great Wall, swayed to the dirges of Buddhist monks, watched Chinese acrobats battle with gravity, stood eye to eye with the Terra Cotta Warriors, gripped the rails of rickshaws on Xian's ancient city wall, and navigated the open markets of Shanghai.

I watched these 37 students learn self-reliance and confidence as they packed personal suitcases, threw up on 15-hour flights, navigated five international airports, kept track of their passports, bartered for trinkets, and tried fried turtle.

We returned home bursting with stories. And yet the response I often received was one of leery apprehension, "What were you thinking? You must be crazy to have taken 37 middle school students to China." "Perhaps, but it was an incredible journey," became my trite reply. Life-altering experiences are often inadequately described with clichés, tied up neatly in a way that leaves the conveyer grappling with the meaning behind the experience. Going to China with these amazing young men and woman *was* an incredible journey.

As the months passed and I settled back into my life stateside, I finally had a chance to reflect on just why this journey had been so incredible.



The author with Warhol icons at the Met.

With the close of school I rediscovered the lonely luxury of traveling alone. One afternoon I wandered through the Andy Warhol exhibit at the Metropolitan Museum of Art in New York. There amidst the haunting duplicates of Marilyn Monroe and Jackie Kennedy loomed what had become an even more familiar face, Chairman Mao. Warhol's carefully chosen casts of green and yellow stirred my memories and a knowing smile crept across my face. As I felt my cheeks tighten I heard the hushed voice of a young woman. The middle school teacher in me gauged her to be about 14. "Who is that?" She whispered to a nearby adult, "Wasn't he a general in World War II? I think I remember reading about him in Ms. Grouper's class." My smile spread deeper. My students would know. My students would stare back at Mao's cool eyes and know at once that he was deemed to be the "Father of Modern China, leader of the 1949 revolution."

In China, Mao is perched atop government buildings and bannered over streets. He is strewn across tables beckoning to tourists, as if a visit to China could not possibly be complete without a wrist watch of the "father" or a souvenir coffee mug. Yes, my students would undoubtedly recognize the image, but most significantly, my students would understand the Mao image from a multitude of perspectives. They would gaze at Mao and not only recognize a historical figure but see the metaphor of duality that images like this hold.

Westerners associate Mao with communism, the iron fisted rule of a dictator, a man

responsible for the starvation of his people, forced labor camps for intellectuals during the Cultural Revolution, and policies that lead to the Tiananmen Square Massacre. As my students and I prepared to visit the land that still carries a torch for Mao, we studied these aspects of history. We also studied censorship and freedom of speech. Our lively debates and classroom discussions often centered on trying to understand the point of view of the Chinese people. My students recognized that there would be some that shared a Western point of view, but that there would be others that would see him as the founding father of their country, a true contributor to a better way of life for a growing people. Peppered in these discussions was the realization that China censors the internet and does not tolerate speech against its policies. These discussions and realizations were exciting and meaningful to my students, but instinctively I knew that these discoveries were being neatly filed away, cleanly cataloged. Without any real personal relevance these were facts that would be relegated to distorted foggy recollections.

Like many teachers I strive to create authentic real-world connections for my students. I knew traveling to China would provide ample opportunity for this, yet I still feared our classroom discussions would fail to resonate half a world away.

On day two of our trip my fears were extinguished.

As our tour bus navigated the Beijing traffic we pressed our faces to the glass, eager to see our first view of Tiananmen Square. Our local tour guide could clearly read our faces. As a preemptive strike he quickly took the mic. “Please do not ask me about the student protests,” he humbly stated, “do not ask me about how many were killed. I cannot answer those questions.” The bus fell silent as 37 pairs of eyes locked with my own.

I knew at that instant that these young people would forever understand the impact free speech has on history. More importantly, I knew they would forever approach their education armed with probing questions about perspective, free speech, and individual liberties.

As our journey continued the real-world connections grew exponentially. When we were welcomed into the apartment of a local family, my students marveled at the kindness that was shown to us. “I didn’t expect them to be so nice,” one student commented. When I gently asked why, the student replied, “well you know everything you said in class, the stuff about the secret police, the re-education, all the pollution, the over-crowding. I figured everyone would be sort of mean. But the families are just like us.”

Now when I hear, “You took 37 middle school students to China, you must be crazy,” I just smile back and say, “I’d be crazy not to.”



Remixing Education

Hip Hop Pedagogy, School Design and Leadership

*Samuel Steinberg Seidel
Rhode Island School of Design*

A *TV satellite dish made of tin cans. A tattoo gun crafted out of a ballpoint pen and a rubber band. Turntables and speakers plugged into a streetlamp to power music for a block party. Growing an innovative alternative high school out of a professional recording studio...*

These are examples of what my colleagues and I call “Hip Hop Genius,” by which we mean: creative resourcefulness in the face of limited resources. Or as it is often said in the hip hop community: flipping something outa nothing. When we use the term hip hop, we’re not just talking about music—or music, graffiti, and dance (which are considered central elements of hip hop culture). We’re referring to the unique blend of instincts, confidence and ingenuity that develop in oppressed communities, as has been superbly demonstrated through the evolution of hip hop culture over the last thirty years.

“Can you teach people to be more creative?” someone once asked the philosopher, Nelson Goodman. “Yes,” he answered. When asked how, he replied, “Give them harder problems.” Faced with racism, classism, ageism, and other forms of structural subjugation—instead of breaking down and giving in to stereotypes and statistics—young people have developed new forms of art and business as well as the audacity to believe they can do something that’s never been done. This is Hip Hop Genius.

What Does Hip Hop Offer Educators?

Educators often view hip hop as a negative influence in students' lives. As far as many teachers are concerned, hip hop music promotes violence, misogyny, homophobia, hyper-capitalist consumption, and—to add insult to injury—bad grammar! Hip hop culture is seen as a force that competes for students' attention, which frustrates many teachers who invest time and energy attempting to engage students, only to be drowned out by cultural products that often critique the very values schools are trying to instill.

Layers of racism, classism and ageism also factor into educators' frustration with a medium created predominantly by young Black and Latino people from low-income communities—a medium that is wildly successful at engaging the very students schools struggle to reach. It is this disjunction between the achievements young people have experienced through hip hop culture and the failure of schools to fulfill the responsibility of engaging these same young people that has drawn me to study hip-hop education.

Many hip hoppers now have the skills, credentials and resources to influence what goes on in schools. And other educators are ready to engage with hip hop. But what should this engagement look like? On the most basic level, it could mean looking at hip hop as an art form and studying its history and content. But for those of us who understand hip hop's essence to be a perfect storm of ingenuity, chutzpah and style—as exemplified by disenfranchised teenagers siphoning electricity from streetlights and manipulating audio equipment to create an entirely new genre of music—the question becomes, how can we embrace and embody those innovative instincts in the field of education?

Hip Hop High

For the last five years, I have worked with a school where hip hop reigns. The High School for Recording Arts (HSRA) in St. Paul, Minnesota has been dubbed “Hip Hop High” because of its deep embrace of hip hop culture and its innovative approach to education. The school—founded by a professional rapper, who grew it organically out of a recording studio—has developed to incorporate proven practices from the music industry, the hip-hop community and the field of alternative education. In what follows, I will share a few elements of the school that exemplify the creativity and swagger of Hip Hop Genius. My hope in sharing these examples is to engender thoughtful dialogue about hip hop's potential implications for pedagogy, school design and leadership.

Hip Hop Pedagogy

Students learn through independent projects

HSRA educators honor each student's brilliance by encouraging students to develop independent projects, for which they receive academic credit. Allowing students to play

such an active role in their education demonstrates confidence in students' ability to take responsibility for their own learning. Advisors help students identify project topics and develop timelines, but it is ultimately the students who determine how much they learn, and consequently, how much credit they will receive (staff assign credits based on the knowledge and skills students are able to demonstrate upon completion of a project).

Hip hop took classical dance, flipped it on its head and literally spun it around. Project-based learning does the same thing to traditional schooling. There is no set curriculum. No rows of seats with a teacher standing at the front. No multiple choice tests. Students are doing work that is relevant and real to them. They do not receive credits for sitting quietly through lessons. As is customary in hip hop, each student must “show and prove,” demonstrating their new knowledge and skills. Students' projects are not only a personal learning experience, but also a learning opportunity for their community, as they share new understandings through project presentations.

My point here is not that HSRA invented project-based learning—this style of learning has existed for many years and is a prominent part of several other school designs. What excites me is that, like hip hop producers who select samples of old music and loop and layer them to create a new composition, the hip hop educators at HSRA have looked at a variety of traditional and alternative methods, sampled aspects of several and added their own flavor.

Students learn through partnerships with businesses and public entities

By starting and cross-promoting their own record labels, media outlets, clothing brands, fragrances and beverage companies, hip hop artists have crafted a fresh approach to the art of business. HSRA has followed this lead, structuring deals with several companies, as well as state departments of health and education, to provide student-produced music and materials that are effective at reaching other young people with important messages. While students are responsible for creating the music, they also learn about the business of music through a workshop led by the school's Development Director, Tony Simmons, who was formerly an entertainment lawyer.

HSRA has also entered an innovative partnership with the graffiti-artist-turned-urban-fashion-mogul, Mark Ecko. As one of the first schools in the nation to partner with Marc Ecko Enterprises, a company that owns six multi-million dollar clothing brands, HSRA has put students in contact with top designers in the fashion industry. HSRA students, many of whom wear Ecko clothing, are enlisted to design products for Ecko and receive feedback on their work (via videoconference) from Ecko designers. Ecko gains an authentic young, hip perspective on design, while students gain experience and, if their designs are taken to market, a share of the profits.

The rigidity of schedules and course requirements makes this type of program difficult to



One of the recording studios at the High School of Recording Arts.

imagine in traditional schools. But just as hip hop artists have broken barriers between the music business and several other industries, hip hop educators can embrace this spirit of entrepreneurial collaboration to provide their students with valuable opportunities for authentic work experiences, career exploration and engaging connections to academic content.

Teachers mix music and critical analysis of social issues

Over the course of their tenure at HSRA, many students participate in the “Urban Music” workshop facilitated by Darryl Young, a certified Special Education teacher, and Phil Winden, a professional studio engineer and educator. Urban Music teaches participants audio production skills, while also diving into issues that affect students’ lives and communities. Past Urban Music groups have produced compilation albums on topics ranging from homelessness to HIV awareness. These high quality, mass-produced albums are distributed to audience members of all ages. The songs on each compilation offer multiple viewpoints on the topic students are addressing and represent research they have conducted, as well as their personal experiences and perspectives. These songs serve as words of inspiration and sometimes warning for their peers, while also giving outsiders a glimpse at some of the challenges they face.

In addition to the obvious connection to hip hop through the songs that are produced in Urban Music, the workshop also carries on the hip hop tradition of critically addressing

social injustices. While hip hop has always included party music, it has also always told stories of experiences that were not being represented in mainstream media. Urban Music carries on this legacy, teaching students how to make their songs sound good, but also instilling a level of consciousness and responsibility around the message of their music.

Hip Hop School Design

The school is built around recording studios—physically and conceptually

The set up of the physical environment in which learning occurs is so important that constructivist educators at the famous Reggio Emilia preschools in Italy speak of space as one of the teachers. The first time I walked into a Reggio school, before I saw any teaching or learning, I noticed beautiful furniture, sculptures, costumes and art materials and knew I was in a place of curiosity, discovery, and joy. Similarly, HSRA's facility itself communicates a powerful message. From blank CDs being sold from vending machines in the school's cafeteria to halls lined with posters of albums that have been produced at the school, there are many visual cues that HSRA is a hip hop school. The most obvious indication is the school's physical layout. When you walk into HSRA, you immediately see two professional recording studios. Red "In Session" lights over the doors are the first indication that these are serious studios. Inside, everything—from the soundproofed vocal booths to the state of the art computers—drives the point home. The leather sofas and dark lighting provide the finishing touches.

Not only are the studios the first thing students see when they enter the school, the rest of the school's space is wrapped around the studios. They are literally at the center of the facility. This sends an important message. The academic program reinforces the point as workshops like Urban Music meet each day in the studio. Of course not every school should be built around recording studios. The larger significance of HSRA's layout is that the architectural design is intentional in the way that it welcomes students and communicates the school's purpose.

The school is open at the right times

Respecting students means not only embracing music and culture, but also working hard to cultivate conditions that honor their realities and foster success. For instance, HSRA has struggled with chronic tardiness. In addition to implementing consequences that discourage students from being late, the staff has gone to great lengths to understand the problem and generate innovative solutions, one of the most fruitful of which was to start the school day at 10am—later than almost any other high school in the country. The school came to this solution organically through experience and dialogue, but research has demonstrated that later school hours are actually more in line with teenagers' natural circadian rhythms.

The school day at HSRA runs later than most schools, officially ending at 4:30pm, with many students and staff members staying later to work on school projects, pursue personal

endeavors, and hang out. Given that most arrests of teenagers occur during weekday afternoons, keeping the school open during these times helps students stay productive and avoid dangerous situations.

Many hip hop artists intentionally “leak” tracks from upcoming albums to get a feel for listeners’ reactions, returning to the studio to make any needed changes. To be successful, innovative schools must exercise this kind of responsive flexibility by listening to their audience—students—and breaking conventions to implement creative solutions.

Hip Hop Leadership

The school leader has credibility with students and their communities

“TC is a straight up hood cat,” an HSRA alumnus told me with great affection in his voice. The former student was referring to the school’s leader, David “TC” Ellis’s proximity to street culture, as well as to particular stretches of concrete that pave HSRA students’ realities. Born and raised in the Twin Cities (hence his acronym), TC has overcome many challenges, including struggling as a student and battling a drug addiction. These experiences give TC a firsthand understanding of challenges faced by many HSRA students and families. While not a lot of principals have this history, every school leader can take on the responsibility of serving as a bridge between community and school.

TC’s credibility extends into the recording studio. He was a rapper with a record deal on a major label. One day when I was visiting HSRA, a friend of TC’s brought the famous rapper and actor, Ice Cube by to check out the program and talk with the students. During a school assembly, Ice Cube shared the stage with several HSRA students and rapped over a beat by a live student band. TC also grabbed the mic and kicked some of his lyrics. A student near me shouted, “That’s my principal!!!”

TC has personal relationships with so many people in the local community that when I ask students why their performance at HSRA is so different from lackluster efforts at past schools, one of the many reasons I have heard repeatedly is, “I know TC’ll call my mother” (or grandmother, or other family member). TC’s relationships throughout the community also come into play when gang violence threatens HSRA. TC calls local gang leaders and enlists their help in keeping the school safe. There are few principals who have these kinds of relationships. Students see TC’s ability to navigate these two worlds and realize that the world of school doesn’t have to be as separate from their other realities as they once believed.

Leadership is constantly evolving and homegrown

The more students feel respected and engaged, the more likely they are to succeed and to want to “give back” after they graduate. I brought a friend on a recent visit to HSRA and the first six people she met were former students who are now staff members. Regardless

of their positions at the school, which range from advisors to studio technicians to security guards, these staff members are role models for students and help extend the culture of authenticity. Some students for whom HSRA has been a turning point have a deep desire to provide similar experiences for future generations of students. It is alumni like these who will keep the school hip, relevant and constantly innovative as it moves into the future.

This is Hip Hop Genius. And this is what we need more of. Thirsty young hustlers ready to remix the educational equation. Not just altering the content of a traditional academic structure, but building institutions that are fundamentally more responsive to young people's ingenuity, interests and needs. Creating schools that not only teach hip hop, they *are* hip-hop.

To learn more about Sam Seidel's work and research, visit <http://www.risdpublicengagement.net/id99.html>

Photos:

p. 10, Photographic Memory, www.as220.org/photographicmemory

p. 14, Courtesy of High School for Recording Arts



A Mathematical Makeover

Learning Stations in the Elementary Classroom

Samantha Gladwell
San Diego Cooperative Charter School

I'm done, what do I do now? This is one of the utterances I *least* enjoy hearing in my fourth-grade classroom, and yet as the new school year began I had a hunch that I'd be hearing it far too frequently—and I was right. As in previous years, each day's math lesson resulted in some students needing more time to complete the activity, another handful of kids finishing in the allotted time, and still others who blazed through the task and were ready for the next steps.

The biggest problem with this scenario wasn't having to come up with the next steps. Rather, it was managing the logistics of all of the different activities that were going on, including scheduling the time needed for completion, setting up groupings, providing instructions, gathering materials, and conducting assessments. After a while it felt like the kids and I were on a mathematical treadmill, always going, going, going, but not really getting anywhere, and certainly not finding the time for reflective conversation, critical thinking, and projects. I was getting frustrated, and for the first time in my three years of teaching, I was really motivated to do something about it.

Around that time, I happened to pick up a copy of Carol Ann Tomlinson's *The Differentiated Classroom: Responding to the Needs of All Learners*. I was immediately drawn to a section entitled "Grade 4: Math," and was astonished by the content it contained. What Tomlinson described there was exactly what I needed in my classroom: learning stations

“where students work on various tasks independently” that allow for flexible use of time and a variety of student groupings (1999, p. 62). Learning stations would allow me to use a variety of mathematical contexts (e.g. problem-solving, basic skills practice, projects) and instructional strategies (e.g. small group instruction, partner work, quiz-show-style review, portable centers) that could be tailored to the individual learning goals of each of my students. I envisioned a math class where on any given day I could look around and see students hunker down to solve complex problems (and create their own!) in one corner of the room, explore a new math concept via online video at the computer station, practice fundamentals with hands-on centers while plopped down on our blue polka-dotted rug, gather around the small coffee table discussing the next steps in an ongoing math project, and engage in a conversation about a mathematical discovery, *all at the same time!* It seemed as though I had found the perfect solution to my instructional woes, and I couldn’t wait to try it out.

Learning Stations as a Vehicle for Differentiation

Unlike their popular classroom cousin, learning centers, learning *stations* “work in concert with one another,” linked by the same topic or subject (Tomlinson, 1999, p. 62). Centers, on the other hand, are distinct from each other and “students won’t need to move to all of [the centers] to achieve proficiency with a topic or set of skills” (p. 62). For example, a classroom might have a science center, a writing center, and an art center alongside a series of interrelated math stations.

When designed with diverse students in mind, stations support the idea of differentiating content, process, and product. A set of math stations on the topic of money, for example, can address content at varying levels of difficulty, from identifying coins and making combinations of coins in different amounts, to calculating cost per unit. In addition, the processes in which students engage can differ from station to station, with one station focused on direct instruction, another on problem-solving, a third station on project work, and so on. The products of such work could include exit cards, journal entries, drawings, and myriad other items that students use to demonstrate mathematical understanding and proficiency. Moreover, as a mobile, interactive, learning experience, stations also support the notion that constructing mathematical knowledge is not a passive endeavor, and that mathematical activity is in fact “both mental and physical. It requires the use of tools, such as physical materials and oral and written languages that are used to *think* about mathematics” (Harkness and Portwood, 2007, p. 15).

What Stations Are (and Are Not)

Bizar and Daniels warn that designing high-quality centers and stations can be time-and-resource-consuming, which sometimes leads to the construction of stations that are little more than poorly constructed “ambulatory seatwork” that diminishes the potential for

meaningful learning (1998, pp. 91-92). In their view, worthwhile stations are characterized by three elements. First, stations must provide an opportunity for students to “learn or discover...to have an ‘aha’ experience.” The stations can be “applications or extensions of previously taught concepts, ones that illustrate topics currently being studied during other parts of the school day, or stations that preview upcoming topics,” but the authors specify that the stations “are not for review or assessment.” Second, the stations should offer “some kind of interaction,” preferably opportunities for students to engage in group exploration and conversation. The last facet, “a tangible outcome,” suggests that students should come away with (or leave behind) evidence of their experience at the station, such as a journal entry or a message to the next group of students arriving there. In addition, Ohanian writes that allocating a generous amount of time (days or weeks as opposed to minutes) for students “to experiment, to engage in ‘off-task’ speculation and tomfoolery” with station materials is an important part of setting the stage for discovery (1992, p. 126). Clearly, active participation is encouraged when stations are set up in this manner, in sharp contrast to the silent, stationary seatwork that still dominates many traditional classroom settings.

In discussing what stations are *not*, it is important to point out that stations are intended to be used by all students, not just a select few. As Patti Drapeau notes, “To many teachers, [stations] are essentially ‘free-time’ centers where students go when they finish their work” (2004, p. 77). In terms of practicality and educational equity, this approach is problematic. As Drapeau describes, “If the activities are too challenging, students typically complain about the work and don’t want to go there. If the activities are ‘easy and fun,’ then I feel they should be for all students, not just for the ones who finish early” (p. 77). If stations are set up as the high-quality learning experiences described above, then we as educators have an ethical obligation to ensure equal access for all students.

From Theory to Practice (Almost)

Shortly after stumbling upon the idea of learning stations in Tomlinson’s book, my initial enthusiasm waned ever so slightly when I realized that, like many things in life, implementing an entirely new math program mid-year would be easier said than done. While on one hand I was ready to jump right into making these big changes, I also knew that I needed to create a strong organizational system to support this kind of learning; without it, the students couldn’t achieve the degree of independence and self-monitoring that was critical to the success of this kind of instructional approach. In addition to creating the framework for the stations, I would also need to schedule in some time to actually *teach* the students all of the structures and routines, plus articulate the expectations for and goals of each station. All of this may explain why it was not until several weeks later that I even considered introducing the idea of stations to my students, let alone start to use them in the classroom.

After devoting a few long days over winter break last year to putting all of the pieces of the

new program together (tackling issues such as communication, group size, readiness level, assessment, student choice, etc.), I finally felt ready to bring forth the fruits of my labor to the students. On the first day back from the break, I began right away by describing the rationale of the new program (nothing like a new calendar year to justify a major change in the way you do things!). As I described my Big Idea, their young faces lit up with curiosity. I had their full and undivided attention as I pointed to the big pocket chart with the names of the stations written on colorful pieces of construction paper. They followed my every move when I held up a copy of the Daily Memo, a piece of paper adorned with a simple graphic of a clipboard that would serve as a written list of their to-dos at that particular station. Twenty sets of eyes pored over the details of the Exit Cards they would be filling out at the conclusion of the day's work.

With the promise of a richer, more exciting math experience on the horizon, the anticipation only grew each day with the introduction of Teacher Town (small group instruction), Center City (folder games/activities), Media Mall (computer and web-based activities, games, and demos), and Project Place (applied learning opportunities). After a brief hiatus to get caught up on some neglected content, we rounded out the line-up with Quiz Corner (Jeopardy-style review game), Practice Plaza (basic math fact review activities/games), and Problem Park (word problems). Each new addition to the list of stations was met with the same high level of enthusiasm as the first, making all of the behind-the-scenes work feel completely worth it, and bringing a huge grin to my face every time I thought about what was to come.

After introducing each of the seven stations over the course of three weeks, not a single day had gone by without at least one student asking me, "When are we going to start the stations?" I must admit that although I knew I had done my best to prepare for this huge change in my instructional methods, I was still somewhat hesitant to launch into this unknown territory. I wanted to believe that I had designed everything so well that all difficulties would be avoided, but if I have learned anything about teaching and about working with children, it's that you can always expect the unexpected. It was time for me to just jump in and trust that, like my students, I would learn everything I needed to know along the way.

Looking back on a semester's worth of using learning stations in my classroom, I can say that my students and I experienced many of the benefits that emerge from interactive learning and having different students working on different activities at the same time. On the other hand, I also experienced some challenges in organization, record keeping, and ensuring on-task behavior. I will be implementing stations again this year and I'm excited to learn even more about how to use stations effectively to meet the needs of my different math students. To that end, I have designed an action research project to explore the question, "How can I use mathematics learning stations to differentiate instruction and increase student math proficiency?" I feel that giving learning stations a trial run has given

me great insight into the potential of this instructional strategy to support a diverse group of learners. I look forward to using the stations in new and different ways, and evaluating the effectiveness of this approach in the months to come. Ultimately, I hope those cries of “I’m done!” become a thing of the past, replaced by laments of “Math class is over already?” Will I find success in this mathematical makeover? We will see. Next year, I’ll let you know how it all turns out!

To learn more about Samantha Gladwell’s on-going research with learning stations, visit her digital portfolio on the HTH GSE website at <http://gse.hightechhigh.org>

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Gunter Pauli, founder of Zero Emissions Research and Initiatives (ZERI).

“Ask the Kids to Find Solutions”

*Gunter Pauli
Politecnico di Torino*

Gunter Pauli is the founder of Zero Emissions Research & Initiatives (ZERI), a global network of creative minds seeking solutions to world challenges. He visited High Tech High a few years ago and discussed his work, ranging from re-growing rainforests in Brazil to publishing fables in multiple languages to teach kids about sustainability and systems thinking. He spoke recently by phone with Cady Staff of UnBoxed about our interconnected world and how schools can empower youth to find innovative solutions to tough problems.

INTERVIEWER

Could you tell me about ZERI and how you got started?

GP

I am an entrepreneur, so I started several companies. My detergent company was extremely successful, and so I created the biggest ecological factory ever. Then I realized that in order to make my biodegradable soaps in my biodegradable factory, I was using palm oil. I was generating so much demand for palm oil that many countries started logging rain forests to plant palm trees. So I said, “Oh no, I don’t want that.” How could I try to clean up the rivers in Europe while destroying rain forests in South America and Indonesia? I said, “No,

no, this ain't right. We just can't tolerate any collateral damage, unintended consequences. We have to focus on creating businesses that are just doing good." And that's how I came up with the concept of zero waste and zero emissions.

The concept means that everything has to be used, nothing can be wasted, and everything has to be thought through. And when I started doing it, I realized that we could do so much more with what we have. For example, there are sugars that are waste from the pharmaceutical industry. These sugars are dumped, and I could use them as a cleaning product. I never thought that sugars could clean well, but science has proved me wrong. It's that kind of thinking, and being able to go and see that citrus peels have a nice alcohol that also is a great cleaning agent. I just started connecting one thing after the other after the other and said, "Gee whiz, if we were only able to think in a more interconnected way, I'm not only seeing ways to become more sustainable and more green, I'm actually having an enormous opportunity to generate more jobs, to use new technologies, to get new science applied in industry." So, that's how I decided to get started with ZERI.

INTERVIEWER

How can we open up this world that you're talking about to students? What would be your advice to teachers and school leaders about what we can do to promote this interconnected thinking?

GP

My advice is to ask the kids to find solutions. Go for solutions. Say, "Okay, we know that recycling of batteries is a problem. We know that after 25 years of battery recycling, we have not succeeded in getting control of the issue. So, we're failing." The car battery—you know, the typical lead battery—we're recycling 75% of the lead batteries in the world. The 10 billion little batteries that go into cell phones, hearing aids, and pace makers, most of those get discarded and go into landfills, or don't even reach the landfills. So, when we realize that we've got something and we're not finding the right solution, ask the kids to get to a solution without any of the hypotheses that we consider as the framework of thinking today. Let them get out of the box! And get creative.

Ask kids who are 14 or 16 or 18, in high school today, "Give me the 10 energy sources available to power your cell phone, your i-phone, whatever it is, without a battery." And I'm convinced that those kids, within three months, will come up with 10 solutions. And then the battery is gone, because it's out of the question. So, as the teacher, you pose the framework, but you pose it in such a way that they have to get out of the box. And if you have done that three or four years in a row, then as the teacher, you're going to know all of the possible solutions that no one ever told you, even if you have a doctorate.

INTERVIEWER

The kids will come up with solutions.

GP

They will find them. And then you can experiment with it like we do. We experiment with kids about how to make electricity with banana peels and an eggshell. And you know, when kids know how to make electricity with a banana peel and an egg shell, I guarantee you that nuclear never sounds like a fine solution for them any more. It just doesn't make sense. And engineers debating about coal-powered fire stations—it just doesn't make sense. Because, if the kids find 10 solutions, and if they can apply one of those solutions themselves within minutes, this empowers them. This convinces them. They can see how the Fraunhofer Institute in Germany, in this day, is powering a cell phone that is powered by your body temperature only. So you just have a little device sticking into your belt, but basically that device is a heat exchanger, and that heat exchanger through radio frequency is powering your cell phone. And when you see that before you, then you wonder, "How come Nokia and Sony and Samsung, how come these guys aren't doing this? How come we never hear about that?" And that's the trigger for the kids to get going. That's the trigger, because that empowers them. The inaction of industry empowers them to translate their creative insights into action.

INTERVIEWER

So to prepare our kids for those future jobs and systems thinking, we should just give them problems and ask them to come up with solutions?

GP

Yeah, don't teach them anything. Just tell them, "We need you guys to figure it out."

INTERVIEWER

What is the most surprising lesson you've learned through working with ZERI?

GP

The biggest surprise is that it is a job generation machine. It generates jobs like I could never have imagined. And not just thousands of jobs; it's 100 million jobs. I'm bringing out a book next year and I'm describing how we generate 100 million jobs. I never thought about it. I never saw it. It's only when I started connecting and adding the numbers—gee whiz, 100 million jobs! It sounds like what we need in this time of crisis. And they're jobs

that require children and students to study things that we don't teach them.

I'll give you a concrete example. If we looked today at any type of small electronic device, we take it for granted that there is a battery. Here, I find so many examples of ways we can actually power small electric devices without a battery. I'm Professor of Design at the Faculty of Architecture in Turin. If I throw in front of my students the option that now you design a hearing aid, now you design an i-pod, now you design a cell phone, but it has no battery. I mean, the whole machine looks totally different. It's much lighter. The whole pollution is gone. We are eliminating pollution. We're eliminating mining. So, I mean, it's time we close down the mining schools, the schools that teach you how to dig mines. It's about time that we learn how to convert half a degree of temperature difference into an electric current.

We identify more than 10 different types of energy sources that all can be converted. For example, I can talk into my cell phone and the pressure from my voice is generating electricity. This all sounds like science fiction, like this would be for *Iron Man* or *Spider Man* or any of those, but the fact is that the prototypes already exist and they're cheaper. So, this is the surprise and I think that's the great thing about it. Once you eliminate certain things, once you become unconditional on some of these subjects—like when you say, “No battery!”—then you are saying, “Go for it!” But who in the electronics industry has this know-how? Who has that core competence? What we're realizing is that people don't have this core competence. You go inside Apple and Apple will say, “Well, you know, we need to have the lithium batteries with polymers.” And I go in and say, “No guys, no batteries.” They think I'm not for real.

It's not that I want to upset the people who know how to make lithium batteries with polymers and who consider this to be the innovation, the green solution, of the century. I'm saying instead of having a toxic solution that becomes greener, I have a totally different solution. It's not about a battery being replaced with a greener battery; it's about a battery being replaced with no battery. And that kind of thinking is a real rupture in technology. And that is the type of thinking, when I talk to young people, be it in high school or university, that spurs them on. Because they say, “Wow, if that's possible and no one is doing it, well, I'm going to do that.”

INTERVIEWER

What's your favorite ZERI project so far?

GP

Oh, I have so many favorites. If you go online and look at EQUATOR Coffee, there you'll see one of my favorite projects, which is about coffee and orphans in Zimbabwe. We're

re-launching the import of Zimbabwean coffee to America, in spite of the boycott against Mugabe. I think if you look at that, it is very inspiring. It shows how it is possible to re-launch an export of a crop, and how it becomes a cash crop. The waste from the coffee farm is used to grow shitake and other mushrooms and the availability of food eliminates the abuse of the girls, who were abused because they needed scarce water and food to work. With adequate food available, they are much less vulnerable to abuse; and if they don't get abused, there's no sex trade; and if there's no sex trade, then you stop AIDS. And I think that empowers a consumer: you can buy your \$8.00/pound coffee and you actually succeed in helping to stop AIDS. Then, you see how a system really works.

INTERVIEWER

How would you define project success?

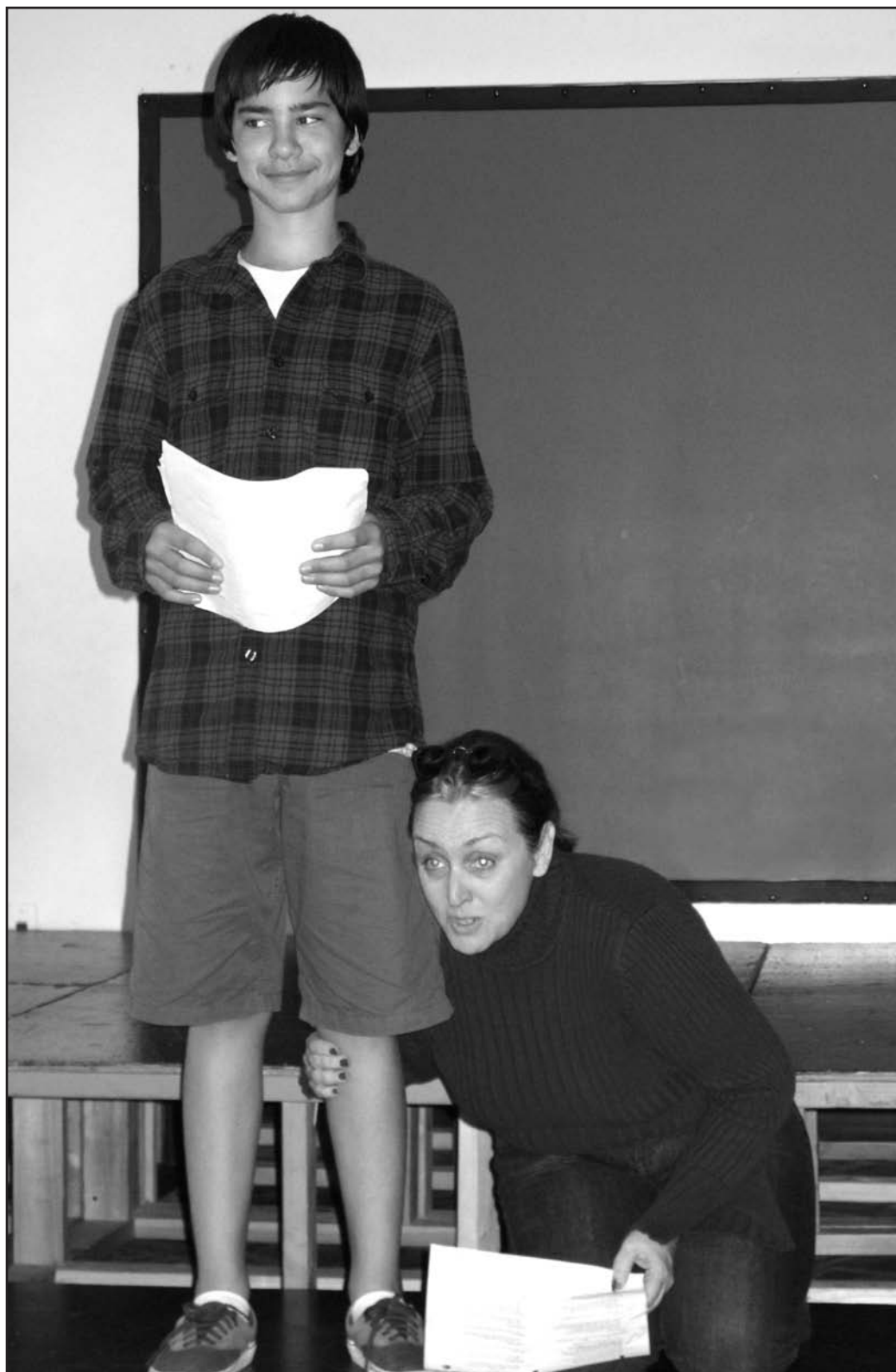
GP

Success is when the kids upset the parents. Upsetting meaning that parents don't understand. When parents are saying, "What are they doing? How is it ever possible to do it without a battery? What teacher is this polluting your mind? It's science fiction. It's not reality." And the kids are saying, "No, no, no, mom. It is reality." Mom says, "How can I make food out of coffee waste?" The kids respond, "Well, we can do that. You absolutely can do that, mom. You can generate, actually, great shitake mushrooms out of it." And Mom says, "What do you mean shitake out of coffee waste? That doesn't make any sense."

So, it's that level of discomfort that will really help everyone to frame the new thinking. And that's what we need to do. And the new thinking exudes a high emotional intelligence in the sense that children feel that they are empowered and they have the capacity to change the future. And that, to me, is success. Success is a high level of discomfort and questioning and not understanding by the parents and a high level of emotional intelligence of the kids, feeling that they know how to do it. They're confident. They're not confident because they know how to do the latest computer game. They're confident because they know how to change consumption and production systems.

And this is a very powerful new generation, when you can really look at waste that is existing all around and you can show that this is not the way forward. But, at the same time, instead of focusing on simply recycling the material, you can also formulate solutions. What are the other options? What can we do with this? How can we do it?

To learn more about ZERI and Gunter Pauli's work, visit <http://www.zeri.org>



All the School's a Stage

*Linda Libby
High Tech Middle Media Arts*

“Places!” The audience settles. The lights go down and the curtain rises. It’s show time!

Many people would rather die than put themselves onstage, so they are comfortably seated as audience members, ready to be swept away by the performance. There are others who crave the limelight, and they are the actors waiting in the wings. There is one other who may watch the entire scenario from the back of the house, or may hide in the local bar until the show is over and the reviews come in—that’s the director—who takes all the credit (and all the blame) for the success of the show. These diverse roles in the theatre echo the roles and the process of project-based learning: the teacher as director, the students as actors, and the lucky students, parents, and community members who experience the final product as the audience.

Like producing a play, at the outset project-based learning (PBL) looks daunting. There are too many unknowns, too many variables, too much planning and far too much risk. It is much easier to find one way to teach a lesson and repeat, hone, repeat—a system that seems sensible enough. PBL requires a taste for adventure, the ability to think on one’s feet, adaptability, and a willingness to learn as much as is taught. Project-based learning, like any performing art, takes courage!

The PBL teacher wears the director’s hat and shapes the vision of the project. Concepts



Students perform at the Student Shakespeare Festival in San Diego's Balboa Park.

and standards become like the script, but the manner in which they are delivered becomes the creative connection that is so challenging about art and PBL. The teacher creates the project with a hopeful eye toward an exciting final product. The beauty and terror of artistic endeavors (and projects) is that from inception to completion a concept can take unexpected turns that may surprise the participants. The way each artist contributes may or may not match the original vision of the director, and the wisest directors find room for the final product to transcend their original idea. In plays and projects alike, the sum of the parts is greater than the whole, so a surprising contribution may come from an unsuspected source that transcends and illuminates.

Directors often find a “spine” or “foundation” idea that they can bounce all other ideas off of to see if and how each choice serves the bigger picture. Without a solid core idea, productions falter, riddled with “why are we doing *this*?” In PBL we call this the driving question.

Mistakes are the portals of discovery.

-James Joyce

In developing a project, a teacher may have an imagined end result in mind and plan backwards to achieve that goal. As the project unfolds, however, flaws in the design may appear. Some students may need more challenge, while others struggle to keep up. This happens to actors in rehearsal—one has many more lines, another must learn a new skill, yet another may have done the show before and seems miles ahead of his/her colleagues. The director must find ways to bring them all to their best for the opening night, just as the teacher must nurture individual students according to their individual needs.

Actors work hard to please their directors and even harder to please their audiences. Once an actor knows his loved ones—or better yet, his agent—is in the audience, energy and conviction abound. Similarly, to draw meaningful connections for students it is essential to find a powerful audience for the project. Public presentation raises the bar when the audience includes people from outside the classroom, experts in the field, and public figures, as well as friends and family. Presenting to a meaningful audience raises the stakes for students and teachers alike.

On opening night, once the curtain is up and the show has begun, the director has no control. The success or failure of the play is in the hands of the cast and crew that she has led to this culminating moment. It takes courage to step away and let the work stand or fall. When the play is over, the actors recall the impact of their performance on the audience and, like a new mother, forget the agony of childbirth to delight in the glory of the new baby. Meanwhile, the director moves on to the next production, just as the teacher moves on to the next project, a bit wiser and with a few more grey hairs.



Stories of Service

HTMMA 2009 8th Grade
Student Exhibition

Friday, May 1, 2009



Doors Open at 6:00 pm
Film Screening 6:30 -7:30 pm

Veteran's Museum, Balboa Park
2115 Park Boulevard, San Diego, CA 92101

Stories of Service

*Zoe Randall and Students
High Tech Middle Media Arts*

In the spring of 2008, eighth graders at HTMMA took part in a National Veterans Storytelling project, Stories of Service, creating digital videos to convey the wartime experiences of San Diego veterans. After exhibiting their videos in San Diego's Balboa Park, they journeyed to Washington, D.C. for the Memorial Day Parade. There, as the youngest group to attend, they joined other storytellers in honoring the service and sharing the stories of veterans nationwide.

To learn more about this project, visit Zoe Randall's digital portfolio at <http://staff.hightechhigh.org/~zrandall/>



Student filmmakers with WWII veteran Jack Walker, who was there the day the American flag was raised in Iwo Jima.



Students interview Will Hayes, who served as a Navy Captain in Vietnam.



For students like Michelle, who interviewed family members who served in the military, the project was deeply personal. Here, she stands with a picture of her great-grandfather.



In a Navy wreath laying ceremony in San Diego, students honor a local Pearl Harbor survivor.



Many veterans, like Anna's father, are reluctant to share their experiences of war with their children. After persuading her father to tell his stories of Vietnam, Anna acknowledges his service, walking with his image down Constitution Avenue in Washington D.C.



Karina's family proudly welcomes her back from her first trip away from home.



Teaching Beyond the Test

Edrick Macalagium
Myrtle S. Finney Elementary School

When I first started teaching, I felt like I was fumbling around, wanting to do well by my students but always struggling to find the right approaches. I started strong, like most new young teachers, full of enthusiasm, staying late and working through the weekends. But as the first few years passed, I changed. My practice was largely influenced by a stranger I didn't know too well during that time: NCLB.

I first felt the pressures of raising my students' test scores during my second year. After we received the data from our end-of-the-year California Standards Test (CST), my principal pulled me into her office. She pointed out the lack of significant math growth and advised me to raise the level of my teaching. That's when I started to change into the teacher that I never wanted to become—a teacher who focused his year on preparation for the CSTs.

I continued my practice with the slow poison of NCLB running through my veins. I wasn't alone. Cynical conversations cropped up in the shadows of our school. New and veteran teachers together started to change the good, replacing it with textbooks full of scripted curricula. Our craft had become a list of instructions, a how-to book, devoid of the creativity and innovation that was once there. In a conversation with my wife about the teacher I had become, she disclosed to me that if she was a parent at my school, she wouldn't want her child to be enrolled in my class. Ouch! Her brutal honesty woke me

up. During the following months I spent some time in deep reflection and created a plan to bring me back to my roots.

My new path was littered with roadblocks. Tight schedules prevented me from teaching away from the textbooks my district heavily relied upon. Ever more frequent assessments had married us to a traditional way of teaching, and any departure from it prompted closer looks from school and district administrators. Lessons were focused on the type of questions the students were going to face on the next assessment, and not on the development of critical thinkers or productive citizens. School for our students had become a breeding ground for the mundane and boring, while our copy machines continued to clatter and groan from the abuse they received during their daily routine of producing worksheets.

Nevertheless, real change for me and my students has started to happen. The catalyst for this transformation was project-based learning (PBL). A neophyte to this approach, I have waded through many confusions and misconceptions. My initial thought was that projects should be an enrichment activity, done after a unit of learning, or between units. However, after reading about crafting “beautiful work” in Ron Berger’s book, *Ethic of Excellence*, and engaging in conversations with colleagues in the HTH GSE and elsewhere, I realized that PBL is much more than students creating products. The real value lies in the processes of research, design, critique, revision, and reflection that lead to those products.

For me, new questions have surfaced regarding the implications of project-based learning in traditional settings. With a heavy concentration on test prep, coupled with a regime of bi-quarterly summative assessments, the students at my school have been inundated with years of traditional rote learning. The complexities and independent learning of the PBL process have left my students confused, looking to me to fix problems for them and to give them a structure for working and thinking.

In particular, since I have added PBL to my curriculum, I have discovered that the majority of my students continue to struggle with finding their voices. Being asked to articulate their thoughts and to reflect on their learning is foreign to their experience. At first, they struggled to speak with complete thoughts and complete sentences, and their journals were void of personal reflections. Here is where my action research question was born. For the next year, I will be trying to figure out what I can do to create a classroom where students are comfortable explaining their thinking and sharing their ideas. I hope that my research will provide my school with strategies that will help our students take command of their learning and develop the skills of articulation, reflection and independent learning that will carry them through their middle, high school, and college years. I also hope it will help me get one step closer to becoming the teacher I always wanted to be.

To learn more about Edrick Macalagium’s on-going work and research, visit his digital portfolio on the HTH GSE website at <http://gse.hightechhigh.org/>

Water, Water, Everywhere, and Not a Drop to Drink

*Ben Daley
High Tech High*

We are awash in data on students, and yet the focus on data has not dramatically transformed our schools. This is partly because we are not looking at the right data.

The next time you hear someone talk about “student performance data,” try asking, “What kind of data do you mean?” Watch the stammering that this simple question provokes. If people think that the goal of education is to raise students’ scores on standardized multiple choice tests, why do they get so uncomfortable saying this out loud? Why do people feel the need to cloud the issue with the language of “student performance data”?

To me, there is a legitimate debate to be had about the value of multiple-choice tests. For example, as someone who has been rabidly opposed to standardized multiple choice tests, I have to admit that when I look at the English portion of the California High School Exit Exam, I think that our graduates *should* be able to read a passage at that level and answer some simple multiple choice questions about what they just read. And I acknowledge that for the small percentage of our students who have not passed the test after the second attempt, we do in fact concentrate more resources on helping those students pass. Students who cannot pass this test are not merely “bad at taking tests.” The test seems to be picking up that these are struggling students who we have had a hard time teaching well. The high school exit exam has caused us to improve our practice for these students. On the other

hand, many other tests, such as the California Standards Tests, completely divert energy from productive teaching and learning with their relentless emphasis on memorizing lists of soon-to-be-forgotten facts.

So I welcome the debate on the merits of statewide accountability efforts and the costs associated with various attempts to improve our schools. What is increasingly disturbing to me as I meet with educators and policy makers around the country is the way in which we are becoming unwilling to say out loud that to which we are subjecting our students. If, on balance, multiple choice tests are a cost effective way to gather some kinds of information about what students are learning (a debatable proposition), then let's embrace the tests for what they are, acknowledging their flaws and limitations as we do so. What I see instead is an abdication of this debate by pretending that the only way one could look at how schools are doing is by measuring "student performance data."

The limitations of standardized tests have been well documented, and I will leave that critique for others. However, I would like to make one point to anyone who supports giving a standardized test to a student. Larry Rosenstock, the C.E.O. and founding principal of High Tech High, has quipped that if any legislative body wants to give standardized tests to students, they should first give the test to all the legislators and make the results public, then give the test to all the teachers and principals and make the results public, then give the tests to all the parents and make the results public, and then, if anyone is still paying attention, give the tests to all the students and make the results public.

This line always elicits a chuckle, yet this principle can be applied on a small scale with dramatic results. My corollary to the Rosenstock principle is the following: before subjecting students to a multiple choice test, first take the test yourself. At High Tech High, there was a suggestion that we have every student take a particular multiple choice test as a pre/post test, "so that we can measure growth of students over time and make data driven decisions that lead to higher student performance." But before we started giving out the test, we did something radical. A number of us sat down and took the test ourselves. The results were telling. Support for the idea evaporated. The pain of taking these odious tests and realizing once again how little what was being tested matched our goals for our students completely changed our conversation. In the end, we may choose to give students a pre/post multiple choice test, but if so, it will be given with full understanding by stakeholders as to what is and is not being measured by such instruments.

So, am I arguing that standardized tests are the devil incarnate, are ruining our public schools, are draining all the creativity out of teaching, and are causing our best teachers to leave the profession? I am not. What I am saying, however, is that we could be "holding schools accountable" to other data that would have a more dramatic and immediate impact on students' lives and learning.

The pot of gold at the end of the rainbow is for students to earn a college degree. Publishing data on the percentage of students from a given high school that eventually earn that degree (say, in six years) would transform that school as well as the national debate. Since it is difficult to wait years to find out the outcome of this data point, it seems reasonable to keep track of some other data along the way that reasonably predicts college entrance and success. Bear in mind that if we are going to compare schools based on this data, any reasonable system would honor schools that do better than you would expect given the demographic of students they serve.

Alternative Standards for Assessing the American High School

Admissions. What kinds of students are admitted into the school? It defies common sense to compare schools that have meritocratic admissions processes with schools that do not.

Demographics. Who ends up going to the school? Again, let's not compare apples and oranges.

Attrition. Who stays in the school, and who leaves? Some well-known schools that have raised test scores have also lost a lot of their students (i.e. the ones who don't do well on standardized tests) along the way.

Curriculum. What percentage of students take college preparatory coursework, disaggregated by ethnicity and family income level? These data should be readily available. California already keeps track of and publishes the percentage of students who complete the University of California entrance requirements, as well as the percentage of students who take physics, chemistry, and advanced math courses.

College entrance exams. How do students perform, and more importantly, what percentage of the students at a school even take these tests?

High school graduation rates. Current reports on student drop-out rates dramatically under-report these data.

College acceptance rates. What percentage of the ninth grade class from four years ago has been accepted into a four-year school?

College attendance rates. Do the students show up in the fall? The National Student Clearinghouse, a voluntary database that follows students from high school into and through college, can help us find the answer.

College graduation rates. College entrance tests such as the SAT have been found to be mildly predictive of first-year college grades, but not college graduation. It is important to remember that college graduation is the goal.

The above numbers are easy to compile, understand, and compare. If I were to seek one "silver bullet" to reliably compare schools, it would be this: what percentage of free-and-reduced lunch eligible ninth graders eventually complete a four-year college degree program? The answer to that question would give us "student performance data" worth looking at!

&Ampersand

The Student Journal of School & Work



accept & refuse
specific & general
beginning & ending
above & below
inside & outside
humble & proud
advisor & advisee
work & play
parents & children
new & old
student & intern
near & far
public & private
employer & employee
tourist & local
host & guest
freedom & rules
war & peace
boom & bust
hired & fired
creative & analytical
here & there
organic & industrial
regular & decaf
asleep & awake
proactive & procrastinate
rain & shine
brothers & sisters
stressed & relaxed
classic & contemporary
mac & pc
individual & group
online & in person
clock in & clock out
this & that
left & right
car & bus
non profit & for profit
question & answer

Ampersand

Making Sense of Internships

Randy Scherer
High Tech High Media Arts

“The name *Ampersand* was inspired by the way each of our lives changed as we took on internship. We developed relationships with professional mentors. We saw that our teachers are experienced professionals often with relevant industry experience. We learned to balance our roles as high school students, sons and daughters, brothers and sisters and now as interns. In this way, *Ampersand* is inspired by all of our worlds coming together—the world of home, the world of school and the world of work.”

—from the Editors’ Introduction to *Ampersand*

In January 2009, in my sixth year teaching and fourth year at High Tech High Media Arts, I was thinking this might be the point at which things start to make sense and maybe even seem—dare I say—easy. But here I was, walking into school with all of the feelings of a first-year teacher. “I’m a fraud! The students are going to find out that I don’t know what I’m doing! If I can just make it to the end of the day, I’ll be okay.”

My anxieties stemmed from one source. My 11th grade students would be on their internships, and for my Master’s action research project I was developing a curriculum that I hoped would strengthen the relationship between internship and school. I had already learned that many students experienced a disconnect between these worlds. Yet, as the semester approached, that knowledge had yet to translate into a coherent curriculum for

my classes. For the first time in my career, I walked in the door without a clear idea of what my projects would look like and what my students would learn. Part of the problem stemmed from a lack of examples. HTH facilitates an internship experience for all eleventh graders, but I struggled to find a clear example of a project that grew out of internship and bridged the gap between school and work.

While the students' internship experience provides a powerful "text" from which to draw lessons and projects, internship is also a great unknown for the teacher. Students leave school to work on projects that we don't fully understand, in a workplace that we may have only seen a few times. Given this context, I decided to develop projects that would draw from my personal strengths and emanate from students' internship experiences. For a teacher who enjoys creative writing, I could see students deriving archetypal characters from people they meet, learning to describe a setting clearly, and constructing a narrative structure. I could similarly envision students mining their internship sites for data sets, environmental samples, and more for analysis in math or science. For me, I decided to focus on my passion for various forms of journalism.

I started with a mentor interview—a small project that meshed my interest in journalism with my goal of having students process the lessons from their working experiences. Early on, I asked students in a journal prompt, "What is the purpose of doing a mentor interview?" Students responded with phrases such as, "to get to know him/her," or "so they can get to know me," or "to learn about this career, my internship, this field of work." I decided that we should spend time generating more nuanced goals.

For three days we journaled and discussed a variety of topics designed to unpack the purpose of a mentor interview. Each time, I asked students to select—or I assigned—key phrases from past conversations for them to unpack, expand or otherwise further develop. Sometimes I inserted my own phrases. For example, when students repeatedly came back to the concepts of "to get to know my mentor" and "for my mentor to get to know me," I suggested the word "relationship" and searched for key terms such as "professional," "intellectual," "productive" and related concepts. Each day we recorded our thoughts, covering an entire wall of whiteboards in my classroom.

Through these exercises, we developed new purposes, such as:

"To see different paths my life might take beyond high school."

"To understand different decisions my mentor made in his/her life."

"To develop a professional and intellectual relationship with my mentor."

Over the course of one month we completed and exhibited mentor interviews, sharing insights into each student's internship. I decided to delve further into the concept of documenting internship (and my personal passion for journalism) by assigning students a photo essay. The photo essay demanded significant writing, but it also encouraged us



Jasmine Bell interned at the San Diego EcoCenter, where she developed educational programs for elementary school students.

to see what each other's internship sites, coworkers and projects looked like. Throughout this experience, we maintained regular blogs that featured writing, photography, and other supporting materials, such as video and audio.

As we worked on our projects, I encouraged students to think outside the nuts-and-bolts of their internship for inspiration. One student did not want to write about much of anything related to his internship. His job was to write code for the internal website of an insurance company, and that just wasn't providing the spark needed to develop exhibition-worthy work. I noticed that he frequently talked about the amount of electricity wasted in his workplace, wondering aloud if the enormous glass windows in his building could be replaced with solar panels. So in class, I encouraged this student to behave like an entrepreneur and consider the economics of the situation. What tax incentives might be available for such a project? What would it take to bring a product like this to market? With each student's experience, I became more confident in my ability to tease out the value of an internship experience and help the student translate it into a meaningful project. What I was discovering in these interactions was that the connection between school and work is not "curricular" in any traditional sense, but, instead, interactive, reflective, and analytical.

One opportunity for reflection came when two internship sites closed and laid off our

interns. Like many Americans, they found themselves out of work. Meeting the graduation requirement of an internship was suddenly difficult. One of the laid-off students wrote about the experience of finding a second internship well into the semester. She wrote, “People with college degrees and high capabilities are being forced out of work. Knowing they need to support their families, many people accept positions that underutilize their skills....When HTHMA students were laid off from their internships, our teachers wouldn’t allow us to remain unemployed, but in some ways we were underemployed....I witnessed firsthand how fragile this economy is.”

As I read through blogs, mentor interviews and photo essays, I began to see many high quality reflections and complex narratives told by young people who were seeing a world that I wanted to better understand. I knew we had possibilities for an exhibition among these writings. The previous semester, we had created an interactive website where the user could navigate through multiple media forms to encounter a variety of messages. Because the news during the course of the semester (and a few blog assignments) explicitly highlighted the so-called death of traditional media, I assumed that students would naturally want to continue working with new media. I walked into class excited and proposed that we bring in our best work and think of a way to showcase it in a media form best suited for the 21st century. I was met with a room full of bored stares. What was wrong?

Students said, “We’ve already made a website,” and “We do stuff like that all the time—can we do something different?” Then came the real kicker, when a student asked, “Can we make a magazine?” Now, ideas were really flying, and the class seemed most enthusiastic about a seemingly quaint suggestion: “Let’s make a book!” The idea of a print publication had been the furthest thing from my mind. “Print media?” I said in disbelief. “You mean, like the kind that is going out of business across the country? The kind that might not even exist anymore when you are out in the ‘real world?’” But they loved it. I talked to both of my classes, and both came to the same conclusion—we were making a book.

I was hesitant to work on a class publication for a few reasons. First, printing takes time, and we didn’t have that much. Second, printing costs money. We had a few hundred dollars in our class bank account and I knew from experience that high quality printing—especially color pages—could easily cost a few thousand dollars or more, even if we only printed enough copies for each student in the class to take one home. I worried about the static nature of print. Once we sent the files to the printer, we would be stuck with it forever. Our mistakes would be set in stone.

I presented these concerns to my classes, and they shrugged them off as if I was simply afraid of a challenge. Need time? We’ll work twice as fast, they said. Need money? We’ll fundraise after school and sell sponsorships to local businesses. Scared we’ll make mistakes? We’ll draft and revise, we’ll do some form of critique every day, we’ll get the tutors to help, we’ll get more teachers involved, we’ll get our parents to help. What could I say?



Energy-Efficient Businesses Can Save the Economy

My Advice to President Obama

By Rodrigo Arrieta

MR, PRESIDENT,

Rodrigo Arrieta wrote his *Ampersand* article as an open letter to President Obama.

I reiterated the initial offer to the students—choose your best work from the semester and use it as the jumping off point for a single piece of writing to showcase in our book. Naturally, I hoped my students would develop new ideas, but I was excited to see that many made legitimate revisions, often synthesizing multiple previous writings to form a new piece far stronger than the sum of its parts. Our earlier work provided an archive that they could draw on to shape new creations.

During the critique process, students began to exhibit the decision-making skills I believe they saw in their internship mentors and other adults. Faced with challenging deadlines, the editorial board led a class-wide discussion about the choice of printers and how it would impact the class schedule, the critique process, and ultimately the overall nature of the final product. To my delight, that process led to a unanimous decision to base production decisions around what would yield the highest quality writing, even at the expense of cosmetic enhancements like color pictures or glossy paper.

Later, students wrote in reflections about the benefits of collaboration and critique. One student wrote, “What stood out as a good example were my fellow classmates’ articles. By

going through them I was able to get lots of good ideas....[Other student's] blogs helped me the most because they got their layout plans by looking through other magazines. I tried to make my layout unique while keeping their ideas in mind." Another student wrote, "What worked very well was all the critiques done on my paper and how much time I actually spent on them. I have had so many critiques and I would change something and then people would say to change it again. In the long run it helped me shape my article into a well-written piece. I used a significant amount of my time helping my editor with the layout. We spent a lot of time trying to figure out what worked and what didn't."

The tangible product of a book motivated students to reflect deeply on the internship experience. And as they reflected, I learned a valuable lesson—the relationships students develop with college-educated professional adults may just be the most important aspect of internship. Although it is easy to mistake internships for career tracking, they are not. They offer students a chance to understand—and hopefully try out—the thought processes and decision-making skills practiced every day by working adults.

At this point it seems hard to believe that I was so concerned about how internship would fit into my second semester. It had felt like a puzzle to solve. Yet, when I view the whole, the connections between the pieces seem so logical and even simple. My next steps are to continue developing the core vision of documenting students' internship experiences, and to use that material as the springboard into a large-scale system of projects and curricula. And, of course, to feel comfortable in the face of uncertainty, and to find my strengths so that I can best support students' discovery of the unknown.

As we neared production, I was working on an initial draft of my master's thesis, but I hadn't seen the big picture yet. In fact, I hadn't even mentioned *Ampersand* in my thesis, since I was still nervous. But my students felt differently. Around that time, the *Ampersand* cover crew proposed their design to the class as a whole. Along the spine, they had written "Volume One." When I gave them a quick little look, the head designer said, "What? You're going to do this again next year, right?"

Connecting School and Work: Spring Semester 2009 At a Glance

These elements of connection were the building blocks for the internship curriculum.

Blogging—At least twice per week, students posted reflective writing in response to a prompt from class. Blog entries typically involved writing as well as various forms of media found online or uploaded from our work. Blogs generated content and drafts for other projects and provided a convenient forum for critique.

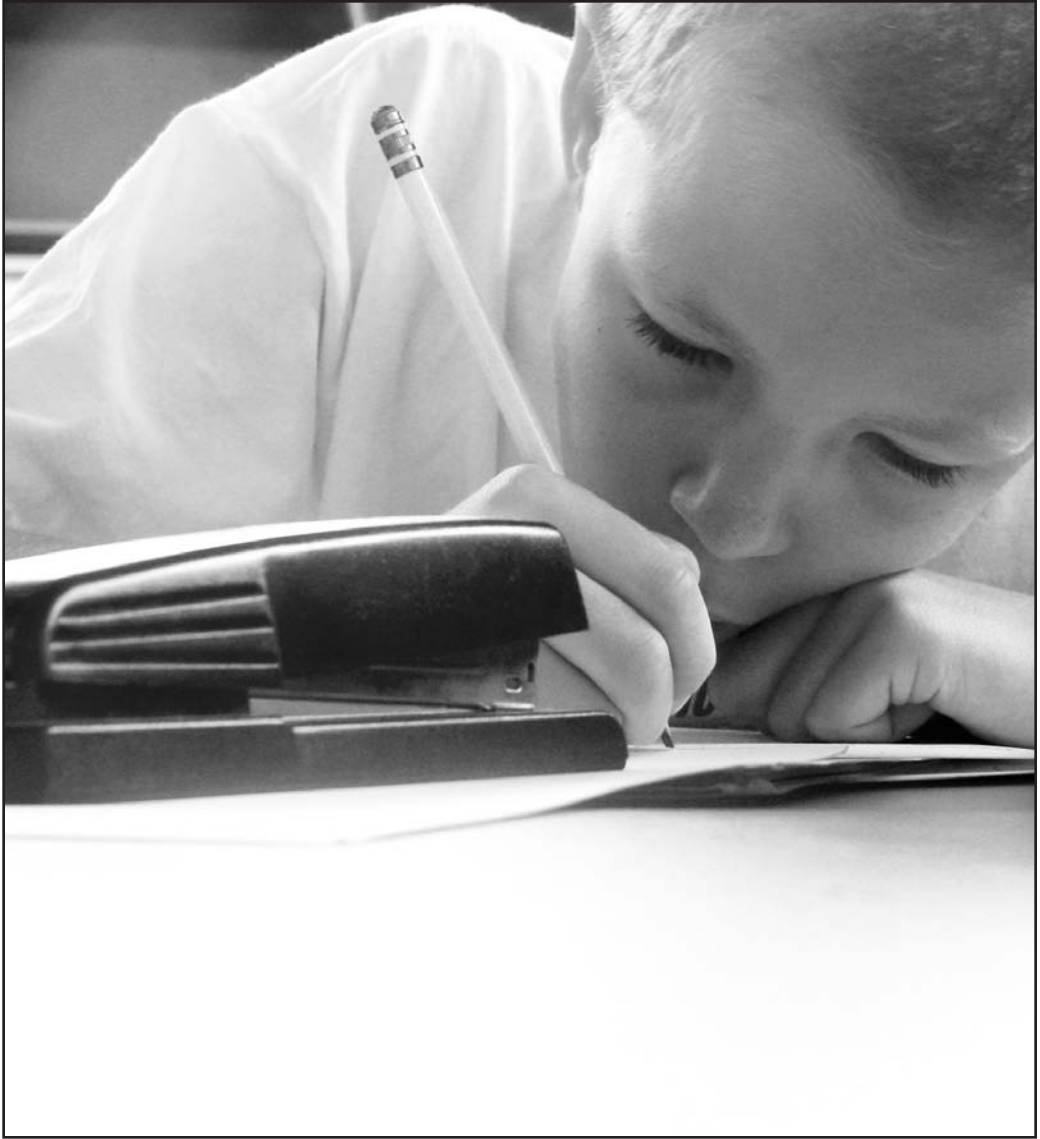
Mentor Interview—Students interviewed their internship mentors and exhibited their write-ups on their digital portfolios.

Photo Essay—Students documented their internship experience via five to seven photographs and accompanying captions. Each caption was 150 to 200 words in length and offered additional research and dialogue. The final product developed a character, told a story and/or communicated a theme discovered in the world of work.

Ampersand: The Student Journal of School & Work—Students created a book to showcase their writing, art and photography as inspired by their engagement with the adult world of work. Some approached this as a retrospective and synthesized previous work samples into new pieces, while others took the opportunity to create original work. Students filled all of the roles needed to create, publish and sell the books.

US History & Literature—Humanities content stemmed primarily from the world of work; labor history and economics provided a lens through which we viewed much of 20th century American history.

To learn more about Ampersand and Randy Scherer's on-going work and research, visit his digital portfolios at <http://staff.hightechhigh.org/~rscherer> and on the HTH GSE website, <http://gse.hightechhigh.org/>



Writing From Experience

Jenny Pieratt
High Tech High North County

“There is all the difference in the world between having something to say and having to say something.”

— John Dewey, *The School and Society*

Every year I embark on a journey in which I attempt to engage my students through literacy. I spend the entire summer thinking of books that my students will enjoy and considering the types of writing they should master before they leave me at the end of the year. Fall comes and I am immediately reminded of how challenging this task can be, as the students moan about past English teachers, tell me they hate reading, or stare longingly out the window at their peers building canoes and roller coasters. I decided this year would be different. I would approach writing in a way that aligned with my personal beliefs about education. Anything my students wrote would start and end with them—their stories, their passions, their interests.

My class began with a basic project that I hoped would set the tone for writing throughout the year. By the conclusion of the second week of school my ninth-graders had successfully completed their first project: Our House on Discovery Street. We read Sandra Cisneros’ *House on Mango Street*, and each student was asked to write a memoir of his or her own that paralleled an event in the book. I provided prompts to help them revisit moments in their own identity development, those events that have shaped who they are today. For

example, in the story “A Rice Sandwich,” the main character describes a time when she was embarrassed about her lunch because she felt as though it reflected her low socioeconomic status. I invited my students to write about a time they were embarrassed of what they had or wanted something that others had.

I approached this assignment in a way that seemed foreign to my students, as I told them they were to write for nobody but themselves; not me, not their peers, not their parents. I conferenced with each one of them every day and talked to them about the content of their writing, not the mechanics. They would leave my desk and say “Don’t you want to correct it?” I would respond “Who am I to correct your story?” I created a space for them where they felt comfortable, safe and free to express themselves without judgment. They wrote frantically every day, not because I stood over them and told them they had to, but because like every child they had a story to tell and needed a medium to share it.

As the year went on I continued with this mindset. My students learned advanced styles and structures of writing, while their peers and I played an active role in their writing process. I held one-on-one conferences with students to discuss their goals for improving their work and the areas they wanted to develop with my help. These ranged from grammar and mechanics to integrating vocabulary words and figurative language. Similarly, peers would critique each other’s work by discussing elements of the writing that struck them, questions they had as a result of reading the work, and areas of strength and areas for growth. The work always originated from the student and was always for the student.

Our final writing assignment was an iSearch paper that required students to develop a question and write about the process of their research. The paper included what they knew, what they wanted to know, what they could assume, and finally what they learned and what further questions they had as a result of their research. Initially, I was reluctant to utilize this format for a research paper because I feared it would not uphold the standards I sought for my students. Would it ensure they learned research skills? Would they learn how to properly cite their work? Would they learn how to write a formal research paper?

Looking back on this project, my apprehensions could not have been further from reality. My students each developed an essential question about a person they wanted to learn about. Questions ranged from “What motivated Kurt Cobain to commit suicide in the prime of his career?” to “What inspired Martin Luther King Jr. to rise above the tyranny of oppression?” I have never seen my students more engaged. They spent weeks at the library, reading books, watching documentaries and searching the internet to answer their questions. I was moved by watching them develop more questions as they found the answers to their initial inquiries. As if that weren’t enough to make a teacher happy, they proceeded to beg me for more time to write because they realized they had learned so much.

Over the course of this project my students reminded me how valuable student-lead inquiry

can be in the humanities classroom. When I asked them to reflect on this process and its success their response was unanimous and simple: “I enjoyed writing an iSearch paper because it was all about me and my interests.” One student wrote, “Out of all the papers I was ever required to write I felt the iSearch paper really reflected me. Even though the topic was on a historical person, the paper was not filled with dry facts, it was more of a journal of my discovery while learning.”

Child-Centered Curriculum

I began my work as a teacher inspired by the work of John Dewey. As I enter my eighth year of teaching, I have come to agree with his position that one of the greatest dilemmas facing traditional education is that it does not reflect the child’s interests or experiences; therefore, students struggle to make meaningful connections to the curriculum.

In *The Child and the Curriculum*, Dewey stated that in education we often “...get the case of the child vs. the curriculum,” treating the two as conflicting terms rather than as part of an integrated whole (1900, p. 5). Setting the stage for future progressive educators, Dewey challenged this dichotomy by suggesting that the curriculum should be child-centered. This means that the curriculum must start and end with the individual child. As a humanities teacher, applying Dewey’s approach to writing was something that I grappled with. Am I responsible for teaching my students grade level skills or is it my job to construct an enduring learning experience? The answer is both.

Striking this balance required that I consider every child, for every assignment, every day. My heart always seemed to be split between developing writing skills and creating an avenue of expression for my students. Learning how to mend this split was uncomfortable and scary at times because it meant letting go. I had to learn how to stand and deliver and then step aside and coach from the bench. I had to let students experiment and then mentor them through the process of improving their writing for their own purposes. This meant developing projects that would foster the balance between child and curriculum that Dewey so often refers to in his work. Assignments such as the memoirs project and the iSearch paper were successful because through them students learned how to write using various advanced styles and techniques while exploring their own life experiences and personal interests.

Balancing Purpose vs. Impulse

Over the course of the past century, many scholars have misinterpreted Dewey’s theory of a child-centered curriculum as lacking rigor and traditional content. However, considering both the purpose of the lesson and the impulse of the student enables us to develop a well-balanced curriculum that is both rigorous and meaningful. In the humanities classroom, this means developing writing prompts that are relevant to the worlds of my students,

explicitly teaching writing skills, and supporting students in mastering these skills while finding their voice. I set the standard high by teaching various writing skills, but beyond that, my students learned to value the revision process and to challenge themselves and each other in their writing. Students were constantly asked to critique the work of their peers, with the intent of applying a critical eye to their own work as well. With a focus on practice and revision, students learned that writing could be an outlet for them that was not just a one-time expression, but a process that could support their growth as a student and as a person.

R.S. Peters noted that for Dewey, the key to teaching traditional subjects in relevant and practical ways was to allow children to explore present situations and problems, teach them valuable problem-solving skills, and appeal to their impulses to express themselves through reading and writing (1977, p. 111). The iSearch paper provided an opportunity for my students to engage in rigorous work and master the skills that Dewey refers to, while also pursuing their intellectual and social interests. As one student noted about the process, “I think the iSearch paper worked for me because it was written from my point of view. This helped me to connect to the person I was researching, thus intriguing me to do more research. This chain reaction caused me to create a stronger final product.”

As educators we sometimes forget that teaching does not have to be an either-or battle between the curriculum and the child. On the contrary, student work can have a purpose driven both by content and by the interests of the student. Dewey (1938) stated that all curricula must have a purpose, and that impulse or desire alone is not sufficient to produce an educative experience. I believe that Dewey recognized the danger in a curriculum that was driven only by student interest and that lacked rigor; this is the delicate balance that we, as educators, must seek. Dewey advised that “an overemphasis should not be placed on activity derived from impulses, but instead upon intelligent activity” (p. 81). In my classroom I have learned to interpret this as beginning with an important skill that my students need to learn and challenging myself as an educator to make a connection between that skill and their world. This connection was what allowed my students to integrate their personal interests with the desired skills.

My greatest challenge throughout this process was providing enough flexibility to foster those connections, while still upholding rigorous standards. In a child-centered curriculum, one should not confuse impulse with purpose, but instead focus on using them in combination. If at any point during an assignment my students lost sight of the writing skills that I was asking them to develop, we would sit down and revisit the objectives of the project. I would remind them that while their interests were significant, they needed to complement these impulses with the skills they were expected to master. I would also remind them of the purpose for developing these skills, whether it was for a future job, college entrance or life. Daily conferencing, multiple drafts and frequent benchmark assignments allowed me to mentor them through this process. While this balance proved to be challenging for

new high school students, by the end of the year they learned how to find themselves in the curriculum. They learned that while writing well requires various skills, writing itself can be an outlet for expression.

Back to Deweyan Basics

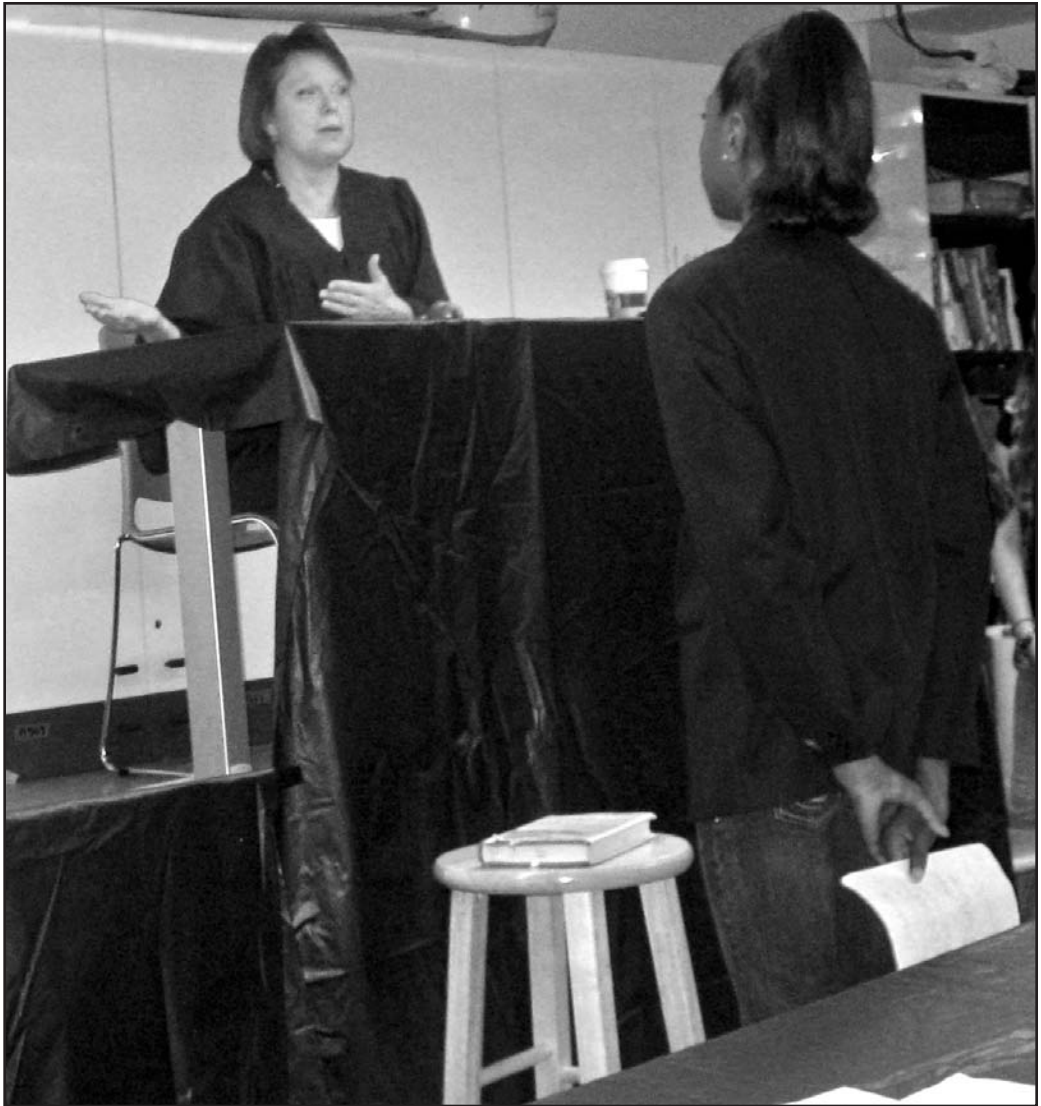
I have always believed in a child-centered curriculum, but for some reason I separated that belief from writing in my classroom. Dewey warned that when students are not the source of development for the curriculum, they become too removed from what they are learning. I couldn't agree more. Most of us can recall scenes from our childhood of being asked to write essays like robots, free of emotions or interest. This year I challenged myself to integrate rigor and student-centered literacy projects into my humanities classroom, and it was by far the most rewarding year of my teaching career. My students were engaged in their work and their writing exceeded my expectations. Almost a century later, Dewey reminds us that going back to the basics is often what matters most. Ultimately our work must begin and end with the student.

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Judge Riley addresses the court.

Differentiated Assessment on Trial

*Cady Staff
High Tech Middle Media Arts*

Alice rubbed her sweaty palms against her mom's blazer as she delivered her opening statement to the jury. For the past month, my students had been reading *Lord of the Flies*, and this was the trial of The People vs. Jack Merridew. Alice was not nervous about the notes I might be taking or the video camera pointed at her. She was concerned with the jury's opinion and the real judge staring down at her, who had just called our classroom court to order with her real courtroom gavel.

Later Alice wrote, "The trial was a perfect chance for me to get an experience of the real court system since I want to be a lawyer for my backup career. Being the defense attorney, the judge told me and the others when to object and when to end questioning to leave the jury suspicious." My students took the judge's feedback to heart. As one commented, "It's not every day that you get a real judge in your classroom."

It was natural to differentiate when it came to our trial. Students chose their positions based on their strengths. There were witnesses, jury members, attorneys, and a bailiff. In their reflections, they graded themselves and wrote critical comments. One student/lawyer wrote, "Judge Riley gave me a lot of advice during the trial. Even though she sounded like she was bossing us around, her criticism was really helpful." For students, it was the experience and personalized feedback that was meaningful; the grade was secondary. It was liberating to see that my numeric assessment was not what they cared about most.

When it came to assessing my students on their five-paragraph essays, I did not feel so liberated. As a defense attorney, Alice naturally wrote her essay arguing that Jack Merridew was not responsible for the murders of Simon and Piggy. She had plenty of evidence to back up her claims after her extensive preparation for our trial. She wrote about the deterioration of order on the island and the shared guilt of all the boys. Yet, while her reflection on the trial brought a smile to my face, her essay felt heavy in my hand along with the fifty-three other essays I received. My students were not writing for Judge Riley, the jury or the 6th graders who attended our trial. I was the judge now.

But how was I to give each student meaningful, personalized feedback on their writing? I had given students a rubric when they received the essay prompt, to help them understand the requirements for the essay. I know that for some teachers, rubrics are timesavers when it comes to assessment. But by the time I began grading the third essay of the bunch, I abandoned the rubric altogether. I could not seem to get my comments to fit into the boxes I had created.

So, rather than fight with the rubric, I wrote all over their papers and crafted a personal letter to each student. I made suggestions in the margins to move their writing forward and to correct grammar mistakes. At first, I hesitated about writing all over my students' papers. However, that was how I learned Spanish grammar when I wrote papers for my Spanish Literature class in college. So I returned my students' essays with the disclaimer that I have always learned best when my teachers wrote all over my papers. I even showed them an example of one of my college papers drenched in red pen. I told them I would never use red pen on their papers. My students agreed that the color was important. I asked them to please tell me if they would rather I not write directly on their papers. No one did.

In each letter, I highlighted what the student had done well and what they could improve, hitting on many of the dimensions from my abandoned rubric and emphasizing the role of revision. I made sure my feedback was kind, specific, and helpful—just as I expect when students give feedback to each other. Each letter included a checklist with next steps and an attached skill-based grammar exercise specific to each student's writing. Below are two examples of the letters students received with their essays, one to an advanced writer and one to a struggling writer in my class.

Dear Student A,

What an amazing book you have in your introduction! You drew me in right from the start and your whole essay was strong. Each of your body paragraphs has solid evidence from the book to support your claims.

What I would like to see you focus on in your next draft is making sure that the major claim that you started with in your first paragraph shows up throughout the rest of your essay. How does each murder connect with this idea that there is a breakdown

of order happening on this island? How could your conclusion help summarize why the breakdown in order caused these murders, rather than any particular person or event?

You should be very proud of your work on this essay! You are a talented writer! Keep revising and make this even stronger than it already is!

Sincerely,

Ms. Staff

Complete the following items on the checklist to earn an A on your essay:

- ☐ *Make the suggested changes on your essay as you revise.*
- ☐ *Complete the Comma Usage Rule Sheet and Worksheet for grammar review.*
- ☐ *Post your revised essay on your Weblog (Essay tab).*

Dear Student B,

You have gathered some excellent evidence from the book to build a strong essay! Your thesis is clear about Jack's and Roger's guilt and you prove it well. You should be proud of your work!

What I would like to see you focus on in your next draft is rewriting your introduction. Right now, your introduction has all of your evidence jam packed into it. That's great evidence, but you need to save it for your body paragraphs. Your introduction should briefly introduce the setting and characters involved in your thesis statement. The hard facts and evidence should come later to prove that thesis statement. It's important to establish your background information first.

Also, when you are writing an essay, you don't need to announce what you're going to do. Instead of writing, "In this paragraph, I will prove..." you need to just jump right in and start proving it.

Keep up the great work! I look forward to reading your next draft!

Sincerely,

Ms. Staff

Complete the following items on the checklist to earn an A on your essay:

- ☐ *Make all suggested changes on your essay as you revise.*
- ☐ *Complete the Compound Sentence Worksheet for grammar review.*
- ☐ *Post your revised essay on your Weblog (Essay tab).*

When I asked students to write how they felt about the feedback, one student wrote, "I liked how you wrote all over the paper, so people could correct their mistakes instead of getting 'you did good' and stuff, because that doesn't help anybody." Only one student wrote about feeling discouraged by all of the marks on her paper, "What discouraged me was the fact that I had made so many mistakes, but there's nothing you can do about that." However, that same student also wrote, "One thing that encouraged me was the letter. It shows me that you care."

Surprisingly, when I asked students if the grammar exercises were helpful or seemed disconnected from their writing, most responded positively in their journals. And when I met with seven students to ask questions and videotape a reflection on how they felt about their essay assessment, three of the students had done the comma exercise and gave each other high-fives. One student shouted, “I learned that there are rules for commas instead of just putting them where you want to pause.” Another student suggested that the class do a Schoolhouse Rock Project where they perform songs about grammar rules to music they like.

I have always been uncomfortable with the idea that the teacher is the sole assessor of student work. As much as possible, I use peer critique and invite outside “judges” into my classroom, hoping students will care about these audiences’ assessment of their work more than mine. Yet, at the same time, students want meaningful feedback from me, and giving it to them often makes me feel like a judge. As students opened their envelopes and read their letters, our classroom took on the gravity of a courtroom. I’m not sure that giving them a completed rubric would have had the same effect, or that it would have inspired the same effort. More of my students did a thorough job on their revisions and earned A’s on their *Lord of the Flies* essay than on any other piece of writing that year. I was proud of their work, and they knew it.

For me, the biggest benefit of writing each student a letter was that all students had the opportunity to earn an A on their next draft (or, in some cases, with their third or fourth draft). That is the opportunity I wanted to make available to advanced and struggling writers alike. In the end, the students who received the letters above both earned As on their essays because of their responses to my suggestions and comments. Now, I just need to figure out how to make this process of assessment sustainable.

Unlike a judge, my students are with me everyday. They know I love them. I am not intimidating or novel. I do not like to be their main audience most of the time, but when I am, I try to challenge them and make them work hard, just like the judge did when she visited. I want my criticism to be helpful. I want to meet them where they are and push them from that point. I have found that it is easier to judge student work than it is to judge my assessment practices. In that department, my students are my jury and I must remember to spend time in the deliberation room to listen to the reasoning behind their verdict. Ultimately, their judgment is what matters most.

To learn more about Cady Staff’s on-going work and research, visit her digital portfolio on the HTH GSE website at <http://gse.hightechhigh.org/>

Made to Order

Student Choice in the Project-Based Classroom

Mike Strong
High Tech Middle Media Arts

“I’ll have a grande iced doppio espresso with two pumps white mocha and one pump raspberry.”

This is my summertime drink at the coffee shop I frequent. It’s sort of a poor man’s iced raspberry mocha. I order all of the ingredients I want in a manner that serves my taste buds and my wallet best. In a society that has become increasingly sensitive to the needs of individuals within the collective, options and preferences have become a necessary component of many successful systems. This is no different in education.

Last year, toward the end of our study of Paulo Coelho’s *The Alchemist*, my students and I discussed what a final assignment might look like, and we quickly realized how different we really are. From twenty-seven minds came twenty-seven opinions; all were of equal value and impressive focus.

We started that class with a journal entry titled, “Show me what you got! If you could show your learning in any way, what would it be?” The students wrote about methods they wished I used and reminded themselves of the tools their past teachers had employed that worked well for them. After the students were done writing, we rearranged the classroom to facilitate a round-table discussion, somewhat like a Socratic seminar, and we began to



Students explore the novel through a board game one of their classmates created.

focus and forge all of our ideas into a plan.

One student shared, “I have always wanted to make a puzzle. Each piece would represent a different project or part of a project.” She held up a sketch of what her puzzle project would look like. It was impressive. Another student said, “I like to watch movies and then discuss them. Maybe we could make our own movie and then have a discussion group about it.” Other ideas emerged: a dice game, a slide show, a drawing, a personal legend. I could sense that they were starting to understand the purpose of the activity and the pending assignment.

The students decided that many of their ideas were excellent, but that they needed my advice and approval before beginning their project. They also found that they were often conflicted between avenues of expression that they enjoyed and those that best reflected their understanding. We decided to allow one hour for writing project proposals and then two days for the products to be created and exhibited. The time allotted for project proposals replaced a final quiz that would have covered the novel’s content. Instead of receiving a test/quiz grade for an assessment that I created, they earned the same points for a project proposal that they designed. This made the planning and development of their idea at least as important as the product itself.

When students returned to school the next day they were noticeably more enthusiastic about working on their projects than they had been for previous blocks of project time. Most students were ready to work with supplies they had brought from home and others

were focused on completing the content outline for their project before they started constructing. I felt that the day was a success and students seemed to share my sentiment. One student told me, “I can’t remember ever getting to choose my own project before. It’s kind of a lot of pressure.” Echoes of rigor reverberated in my eardrums. Another asked, “If we are going to create our own project, shouldn’t we get to create our own due dates?” Nice try. They were starting to have fun with it.

The second and final day of in-class work proved to be an adventure. Some students completed products and were asked to critique each other’s work and revise. A few students showed obvious signs of the pressure that comes with working outside of a group. Others were focused on finishing their work on time. The ethic was as good or better than in most projects I design entirely on my own. I realized that the instructor alone couldn’t design an inclusive classroom, but that the instructor must incorporate the ideas and needs of the learner into the curriculum. The rigor, focus and calendar don’t have to change, but options must be available.

As a final assessment, students compared their final product to the proposals they created on the first day and gave themselves a final grade. Each student wrote a reflection about his or her design, implementation, successes and challenges; they focused on areas of their work that turned out differently than they had planned. We spent the next day sharing work and discussing how similar student options could be worked into larger projects. In the end, I concluded that a well-differentiated assignment or project is like a great cup of coffee. Each one may look, taste and smell a little different, but they all share some ingredient that wakes us up in the morning and makes us love what we do.

To learn more about Mike Strong’s on-going work and research, visit his digital portfolio on the HTH GSE website at <http://gse.hightechhigh.org/>

The Iceworker Sings Imperial Valley

*Manuel Paul Lopez
High Tech High*

I had just turned twenty-five and had accepted a spot as an adjunct instructor teaching composition at our local junior college. To say I was terrified is an understatement. I had no training to speak of, and the only experience I had was the dissipating memory of some of my old teachers in the classroom. I didn't sleep much the night before that first day. To be honest, I didn't sleep at all, involuntarily practicing my introduction to the course to a mirror deep into the a.m., pantomiming key points on the syllabus with my index finger, and to heighten the experience as all good teachers should, working myself up into a stammering crescendo as I pointed out the responsibility of the students to attend class consistently, if not religiously, for the betterment of their souls. Yeah, that's right. But that mirror reflected back a young brotha who obviously lacked the confidence to take the reigns of a classroom eager with waiting adults, students who had most likely worked all day and who needed nothing less than a person heading the class as confused as they were. What could *I* offer them? I tried to remember how my old instructors addressed their classes on the first day, but ended up imagining myself gliding into class in huaraches and tube socks, like my statistics professor did one long and harrowing summer session just before he unleashed a flurry of formulas that twisted my mind up into square knots for months after I'd just squeaked by that course. Just thinking about it made me nauseous. I knew if I ended up falling asleep that night, everything I had ever learned, all of the preparation leading up to the course would somehow ooze out my ear and encrust itself forever across my pillowcase. I *had* to stay awake.

I arrived early that first evening, about two hours. I figured I'd battle the nerves by thumbing through a few books at the campus library. I'd spent many hours there over the years, reading at least a hundred books alone as a seventeen and eighteen year old kid, which always seemed to calm me down before a big presentation or exam. Of course at the time, I had no idea that that would eventually lead me to a classroom years later to attempt to share some of that same literary magic with some of my own students. Spencer Library was also a good place to cool off, given that it was a September evening in the Imperial Valley. Temperatures usually peak between 106 and 108 degrees in early September, not to mention the humidity that quickly factors in the moment a person steps out the front door.

As I walked through the stacks, I pulled books randomly from their shelves, revisiting old favorites and recognizing some of the marks I'd left on many of them years before. One still had an old True Romance movie stub I used as a bookmark. I also found the copy of Vicente Huidobro's *Selected Poems* that was mildly stained from a Guinness Stout incident in Ensenada. If I remember correctly, I also grabbed Amiri Baraka's *The Dead Lecturer*, Frank O'Hara, Hart Crane, Henry Miller, Sylvia Plath, Kenneth Patchen, and several others I can't quite remember now. Didn't actually read them, though, just pulled them from their shelves nervously only to tuck them back in line without any real recollection of what I was doing. Lumbering through the stacks, I was a Chicano zombie in Doc Marten's and a tie that was too tight, trying desperately to eliminate the fact that I was about to teach my first class in a couple of hours.

As I continued, however, I eventually came across a title that demanded my attention for more than its familiarity. Being that it was 108 degrees or so outside, the title alone seemed like the antidote for the heat that had been forking its sweaty teeth into my skin for over four months. The book's title was *The Iceworker Sings and Other Poems*. It had a black and blue cover with an interesting photograph that depicted a couple of men in what appeared to be a downtown alleyway, surrounded by signs that read in ominous, exclamatory statements, things like: "Repent! The revolution is at hand!" and "I betrayed like Judas." I opened it and started to read. Andres Montoya? How come I had never heard of him? On the back cover was his bio—it was his very first book, and sadly, he had already passed away. What? Who was this large, bespectacled dude from Fresno, California, birthplace of my father and grandfather?

After reading a few short lines, I was immediately intoxicated by the speaker's voice, greedily reciting the poet's language to myself, as if it meant everything to do so. Montoya's voice was fearless, one that saw far ahead of itself like an antenna registering signals from some distant level of consciousness, using language that was simple and uninterrupted. And what courage to question the Great Homeboy in the sky! What audacity to emphatically demand answers as if standing bare-chested at the edge of a rooftop, arms stretched, demanding

God to “have mercy / on la raza and los pobres!”

That night, in that library, Montoya’s poetry beat a series of tattoos into my flesh. Phrases like “saying prayers, asking for the blessing / of Christ to come down like a jackhammer / breaking us all to pieces,” rose on my skin like yeast. Believe it or not, there are many people out there who still believe that worthy poetry is an academic word game that must always ascertain some level of erudition for a select few, or that verses must speak in enigmatic utterances meant only to be untangled over a cup of hot tea at a hip, city café. *Olvidate!* Montoya’s work screams. His poetry is real, about real people, beautiful but imperfect, sometimes even broken, questioning their existence while living through circumstances as dark and as turbulent as the Bering Sea. In my hands that night was a poet who wasn’t afraid of emotion.

After reading several poems, I realized I had to get to class. With the nerves finally slain, or at least distracted, I raced across campus fueled by verses I could barely contain, like that rare feeling one experiences after interacting with something wild and alive.

When I finally got to the classroom, there were about eighteen students waiting for me. There were only twelve on my official roster, which meant I was going to have to determine how many were missing and how many were either waitlisted or needed to crash. I should’ve done this immediately, but I couldn’t keep the work to myself much longer. I drew in a long breath, pulled the book out of my bag, opened it and said: “You all gotta hear this.” Then prefacing the poem with something ridiculous and unintelligible, I’m sure, probably even melodramatic, I read “star struck”—it was the first poem I read in the library. “i would step out / into the night / into the alley, where the ants / savored the crushed / anguish of a peach.” Reading this, my mind levitated, as if the rooftop was opening up for us, the stars, the moon, all of us in that room going at it together. When I finished the poem, silence enveloped the room like the long and excruciating pause that comes just before the verdict. But while fumbling through the book to find another poem before I’d be forced to speak, I heard a young guy at the back of the room exhale a long and inspired “damn.” And that’s what did it. Our semester was on its feet and running. Students commented on the geography of the poem: the fields and ditches, the wide, blue sky; basically, how much it resembled our valley. One person commented on the poem’s conclusion that read “I could find the cold love / of earth beneath my back / and God smiling, / making promises / from the sky.” She expressed that it was hopeful, and to her, it meant that God would always take care of the heartache and confusion in due time. Then another student added: “This is exactly how I felt a while back.” The class was enlivened; I couldn’t get them to quiet for the next poem. Many expressed how utterly confusing poetry had always been in school, and how this was somehow different. A voice, many believed, that finally spoke for them.

Eventually, I read “truly,” and after that one, an older man sitting in front of me asked for the title and author again, intensely scribbling the names into his notebook. Needless to

say, we spent most of the hour talking about Montoya's poetry. I even had to review the policy statement and syllabus the following week.

Everyone stayed that evening, not one person was turned away. Luckily I didn't get into any serious trouble that night, because that's when we're supposed to tailor our official rosters based on who shows and who doesn't, who will be dropped, and exactly how many students will be added to the class in order to satisfy everyone in administration. Inevitably, everything is eventually reduced to numbers; but at that moment, poetry, and more specifically, Andres Montoya, is what broke the ice on that first and fateful night for a young teacher and his students in the Imperial Valley.

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Cards contributed by **Andrea Barrett, Nicole Costa, Anne Duffy, Tom Gaines, Tara Giannini, Matt Leader, Manuel Paul Lopez, Jen Peterson, Jenny Pieratt, Bobby Shaddox, Jeff Robin, and Patrick Yurick.**



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