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Getting the Green Light:

The Transformative Power of Participatory Action-Research with Students as
Researchers

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April 3rd, 2001

Mrs. Wolk: Okay, everyone. Let's get together. Now, we've got to be good in the teachers' lounge, or they won't let us back in here. (Motioning to Cristina M. and Sergio). Come on. No, you can't have anything from the snack machine. We've got to figure out what we're going to do. How are we going to talk to our friends and family about being safe on our streets? What do you think? (Brenda squishes in tightly between the eight other student researchers and myself around the lunch table.)

Esme: Yeah, isn't the Walk a Child to School Day soon?

Mrs. Wolk: I'm getting nervous. We don't have anything planned. What are we going to do?

Cristina: Move over! Move over! I don't fit!

Edwin: Hey, Mrs. Wolk! I've got an idea. What about a parade?

Mrs. Wolk: A parade? Do you think. . .? (pause)

Brenda: Yeah, we should have a parade and we'll invite everyone. We'll invite all the families. We'll ask the classes to make something. Yeah, the teachers will help us out if we ask. Maybe they could have the kids make like those things people carry in parades.

Mrs. Wolk: Do you mean banners? Those things that people carry in front of a marching band?

Edwin: Yeah.

Mrs. Wolk: Hey, maybe we could get some balloons.

Esme: How about green or red or yellow ones like the light we want.

Cristina: And we'll have a band or something. Let's get Britney Spears.

Mrs. Wolk: I don't know if we could get Britney Spears.

Edwin: Yeah, yeah, Britney Spears.

Cristina: She's so cool!

(E. Wolk, personal communication, April 3, 2001)

Edwin's idea was the beginning of one of our most successful events to engage our urban elementary school and our surrounding neighborhood in addressing a serious problem in our community, pedestrian safety. On the day of the event, nearly 700 students - kindergarteners with stop sign hats, third graders with banners and whistles, fifth graders with carefully designed posters with the logo, "Cuidado cuando cruces" (Be careful when you cross), - marched and chanted to the rhythm of the Santa Ana High School Marching Band, "Walk safe, be safe!" The chanting and the drumbeats echoed off the large, tenement buildings that make up a large percentage of the housing in one of our nation's most densely populated square miles.

Onlookers watched curiously from windows and balconies wondering why, at 2:00 p.m. in the warm California afternoon, the streets were flooded with a pedestrian parade: moms with strollers, police officers on their motorcycles, business leaders, city officials and 1,400 little feet. Reporters from "Rumores," our neighborhood Spanish language newspaper and the local television station came to cover the parade. This was quite an event. This had been quite a research project.

Starting this group of students called the "Pio Pico Researchers" seemed a natural corollary, drawn from my years as a classroom teacher. But, it also filled a tremendous need to re-establish myself as a teacher having just left the classroom to support our large numbers of young, inexperienced staff grappling with their first year in our "under-performing school."

For years, as a classroom teacher, I worked collaboratively with my students and their families on what we called "Action-based Projects" to make positive changes aimed at social justice in our school and community. My desire to implement this kind of

alternative curriculum was fostered, in part, by our school's commitment to preparing students to become problem solvers and critical thinkers. Yet, I also noticed that when my students and I worked within our community on this type of curriculum, such as beautifying our streets through projects like "Operación Limpieza" (Lubetkin, 1996), my students and I became invigorated and both teaching and learning somehow changed. It was this spark that carried me through the challenges of being a teacher in a school of a large urban district: the stacks of mandatory accountability pieces such as the endless checklists of what was taught and mastered, the pressures to improve student performance on standardized tests and the mandated curriculum and assessment schedules.

Now, faced with little classroom contact and even more endless paperwork as a school-based project coordinator, I felt I was losing my connection to my own identity as a teacher and perhaps, my own integrity to address other teachers about teaching. Moreover, I was unable to realize my personal commitment as an educator to teach my students - all Latino, mostly first generation – the skills necessary to look at their world critically and to address the injustices that I knew they faced in their own lives. Therefore, I decided that I had to find a way to stay connected to students.

In late 1997, I initiated a club with a small group of interested students that we later came to call, "The Pio Pico Researchers." The idea came from my classroom practice where my students and I became co-researchers. I was deeply influenced by my university advisor, Dr. Suzanne SooHoo (1991, 1993, 1995), who used various techniques and strategies to "capture" the essence of a problem. In her study (SooHoo, 1991), students received notebooks to record their observations, and cameras to

photograph “meaningful learning experiences.” Students met twice weekly to discuss and analyze observations, clarify misconceptions, or volunteer any other data. Like my advisor, I also wanted to deepen my understanding and check my own perceptions of teaching and learning with my students in my classroom. These initial steps in my classroom became my foundation as a teacher researcher, co-researcher with my students and a member of what later would become a participatory action-research project.

Not having my own students to begin a research project with students was obviously problematic. To recruit students, I went to every third through fifth grade classroom announcing that I was looking for some students who might be interested in doing research. My only requirement was that they attend meetings.

On the next Tuesday after school, seven students met me in the school library to begin a research project. At first, I relied heavily, and a bit reluctantly on my former university advisor feeling embarrassed that I did not have a better grasp on what I was doing. I had only a fundamental notion of what we could do together based on the little I had read about research methodology and those experiences I had had as a researcher in my classroom. Maybe we would collect data about our school or community through interviews. Maybe we could do some observations. Maybe we could take some photographs.

The first meeting was short and based on a quickly sketched out lesson plan on the back of an index card – “Find out what the students know about research and what they would like to research. Take photographs using the Polaroid.” I sat in a chair and the kids sat on the floor. When I asked the children what they wanted to study, one student called out, “Let’s study about frogs.” Most looked confused. I was shocked by their

response. I had naively expected that the students would have a broader understanding of research.

Fearing that they might not come back, I wanted to engage them actively and provide them with an alternative view of research and who does it – specifically, them. I spoke to the children for a short time about research and how we might conduct our project. But, as soon I felt I could, I invited the students to walk through our school's hallways to take pictures of "problems." We took pictures of gum stuck to the hall floor, trash scattered around the building. Interestingly, I felt the students pulling away from the school building itself. The children were reluctant to take photographs of anything related to teaching and learning, teachers or students. At the time, I did not pursue this resistance, but rather suggested, taking their lead, that maybe we could continue taking photographs around our school, off campus. The children were excited. After our first meeting, I called my advisor, "What should we do next week?" She suggested that we watch a movie for inspiration, "Harriet the Spy"¹ (Hughes, 1996) to learn how to observe our community and take notes.

These were the beginnings of our research group, and in the spring of 1998, we continued our work in earnest. With our Polaroid camera, "Harriet the Spy" under our belts, research notebooks and constant conversation, we began walking around our densely populated Pio Pico community in Santa Ana, California. The focus for our walks was simple: "What are the problems in our community?" We moved along the cracked sidewalks and through the tenement buildings in the afternoon summer heat weaving through narrow alleyways taking instant photos of "tagger" names sprayed on common

¹ In the movie, "Harriet the Spy," Harriet, a burgeoning journalist, records her detailed descriptions and observations of her friends, family and community members.

mailboxes, holes punched in the walls of the laundry rooms of apartment buildings, and the traffic and pedestrian congested intersection at our corner of Flower and Highland streets. Our community walks were noisy events. Much of the conversation was devoted to negotiating who would take a photograph and what and why it was going to be taken. Our conversations during these community walks were punctuated with personal stories, anecdotes and jokes from the kids and me. Conversation whizzed among members like a ball during a Nation Ball game. One student picked it up as another gathered up the last comment and whizzed it to the front of the group, "Hey did you hear about that kid . . ." Community walks were also opportunities to teach about research - how to mark the photos, take notes and discuss the responsibility and respect that one must show when studying in a community, even our own.

During our meetings at lunch, after school or passing from recess to the line, we discussed whom we would interview. We interviewed leaders in the neighborhood: an activities coordinator at the Boys and Girls Club, the lady in the pink house, Liliana's dad, the principal of our school and the crossing guard. We gathered our notes and analyzed our photos simply by laying them out on a table during a dialogue session with parents. We discussed each sorting them first by topic and then along a continuum according to severity. Two areas were clearly identified: 1) pedestrian safety and 2) graffiti.

Making our final decision, I thought, would be difficult. Clearly, the parents and students who lived on the east side of the school had advocated investigating pedestrian safety. Students who lived on both the east and west sides had talked about graffiti. I also knew that many of the students, as part of the classroom work, had led many

campaigns against graffiti and I wondered whether this had somehow caused them to focus on it. Secretly, I admitted to myself and a few colleagues what I felt was a dilemma. Should I support the students in addressing an area of concern (graffiti) that was clearly identified by all? Or, should I push the students towards addressing a potentially life-threatening situation, but one that been identified by only those students who lived on the east side of the school? In addition, I was also dealing with my own reluctance to head up another graffiti campaign, something that had become almost cliché at our school. Uncomfortably, as I was trying to figure out the degree to which I should assert my own voice as a teacher in our research group, I suggested that we focus on pedestrian safety at Flower and Highland as the problem that we should try to solve. Without any protests, questions or comments, the children accepted my suggestion as what we were going to do. At first, their readiness to accept my opinion struck me as odd, yet when I thought about it, I was confronted by what I had always taught students to do, follow directions. I identified that this was going to be an ongoing issue, but at that moment, it served the project to let it go. The collective consciousness had already been raised concerning graffiti, and it was time to move on to another issue. In subsequent meetings, I encouraged my students to question the status quo and listen to their inner voices.

Once we had our focus, we were able to narrow our research and I was able to consider various ways to gather data around the issue of pedestrian safety at Flower and Highland. Again, I consulted with my advisor and during one of her many visits, she initiated an impromptu trip to what became known as “our corner,” the corner of Flower and Highland Streets. We formed teams. Two students counted cars traveling from east

to west. Other students counted cars moving from west to east, north to south, south to north while still others counted the pedestrians crossing through the intersection. This became the first piece of data related to our corner. This is also the manner in which the students and I learned about research methodology. We sought out and listened to people who could teach us about collecting data. One parent suggested borrowing a radar gun from the local police substation to determine how fast cars were speeding through the intersection. A reporter from the local paper suggested interviewing accident victims. One particularly powerful suggestion came from our school office secretary who hinted that we should conduct a comparison study of a more affluent neighborhood within our same city. The information gleaned from this study became convincing evidence highlighting the inequities between and among different neighborhoods in our city. Many people, including parents and local city representatives, suggested we meet with the city's engineering office, political officials, and the police department to present our data.

The work of the Researchers spanned over many years, and as Researchers promoted to middle school, new generations of students joined our efforts. Our work also gained momentum as the collective energy of our group grew. It was this sustained effort by all the students, the community and our broad network that helped us accomplish our goal of placing a 4-way stop at our intersection² (see Appendix for Evolution of an Intersection).

² The Pio Pico community received notice that a light will be installed in Winter of 2003. This installation was credited to the research and lobbying efforts of the Pio Pico Researchers.

The Pio Pico Researchers, Participatory Action-Research and Transformation

Initially, I was unaware that I had embarked with my students and community on a project and an alternative inquiry method called participatory action-research (PAR). I began taking classes at the university to learn more about conducting research with my students. I read literature about various inquiry methods. The more I read and studied about research, the more I realized that my work with “The Pio Pico Researchers” shared a number of epistemological, theoretical, methodological, and political elements with something called participatory action-research.

Torres (1995) writes that participatory action-research is rooted in a vision that allows both student and teacher the opportunity to be critical thinkers engaged in a transformative process of identifying relevant issues for reflection and critical analysis. This type of research values experience, feelings, introspection and a sense of responsibility to the world as much as it values scientific inquiry. In the introduction of a book, Nurtured by Knowledge: Learning to Do Participatory Action-Research (1997), Susan Smith also writes about participatory action-research emphasizing the transformative potential inherent in the methodology itself,

When people form a group with a common purpose, investigate their situation, and make decisions to take actions that re-form power and create justice, their reality is transformed. In so doing, they also are transformed—losing fear, gaining confidence, self-esteem, and direction. (Smith, 1997, p. 6)

I was most impressed by this element of transformation, because I had witnessed change happening on different levels as we conducted our own research project.

Obviously, the physical environment began to change: repainted crosswalk lines, new signage, and the installation of a 4-way stop. But what I had not expected was the change or transformation that was occurring in the way the students and I acted and what I believed and valued about teaching and learning. Through this participatory action-research process, my students and I had both **caused** a change and **become** changed.

But, what had been transformed? And, under what conditions had these transformations occurred? What could I learn from my own practice as a teacher that might improve how I taught my students and inform my pedagogy about how students engage in social action? This is what I wanted to study as a teacher.

It's More Than Just A Story: Conducting Research About Research

As the project drew to its natural conclusion, it seemed like a particularly opportune time to conduct a research project about our participatory action-research. As I stated earlier, I was filled with questions, and I had begun to wonder how I might learn from my work with The Pio Pico Researchers. What methodology could I use that would honor the spirit and the integrity of the work I had done with my students? I brought these questions to my teacher research work group at the Carnegie Foundation.

For years, I had kept notes on our interactions. I recorded dates, times and events. I took pictures and audio taped some of our sessions, but it was the stories of my children that were most meaningful to me and, surprisingly, to others. Therefore, when I began to look at my own research with my colleagues from the Carnegie Foundation, they suggested that I utilize my stories **as data**. Fortunately, I was able to design my research project with Anna Richert who had written the article, “The Narrative as an *Experience*

Text: Writing Themselves Back In" (2001). In this article and in our Carnegie group meetings, she discussed the ways in which teachers can freeze a moment in teaching to create what she called "experience text" that builds on our natural capacity to tell stories about what we know best – our lives. Therefore, she suggested that I collect the stories that I had written and begin to add other stories as a way to record my experiences. These narratives became my experience text and my data source to learn more about my own practice as a teacher of and co-researcher with my students. In addition to these narratives or experience texts, my Carnegie colleagues also suggested that I begin to keep a daily journal about our activities, teacher anecdotes and my reflections on them and videotape and/or audiotape my sessions with the Researchers as we reflected on our data, our actions or our reflections about our project.

For a year, I collected data from my work with my students, wrote my narratives about our experiences and organized my boxes, bags and crates of photos, pictures, audio and video tapes, writing samples and notes.

Soon, it became time to analyze my data. And, since my narratives had been such an essential piece of my "story," I focused on them. As I read them, it became clear to me that each of these "stories" was more than just a story. But, how might I begin to make sense of them?

I read and re-read my narratives searching for emerging themes. I struggled however with the number of narratives and the complexity of looking at more than five years of data. I made an appointment with my university professor. During this appointment, she suggested that I "map" my narratives to see what could be learned from these stories. Map out my stories? Okay, I thought.

I began to map out the stories about my students such as “Edwin’s Pedestrian Parade,” “Hanging-out with Mrs. Cazden,” “Poor Zed.” I cut out the stories gluing them to poster board. There were too many stories, and I found using them in their entirety difficult to manage. Soon enough, I realized that this was going to be impossible. I started again using a legal size paper, a ruler and a very sharp pencil to create the lines much like a concept map. Instead of gluing the narratives directly to the piece of paper, I created a kind of “Emily Short-hand,” creating titles for the narratives to represent the story themselves. For example, I mumbled to myself as I wrote, “ ‘The Beefaroni Incident’ links with ‘Oscar.’ ‘Oscar’ goes with ‘Elan’s Turn.’ ‘Elan’s Turn’ hooks here with ‘That Kid Named Orlando.’”

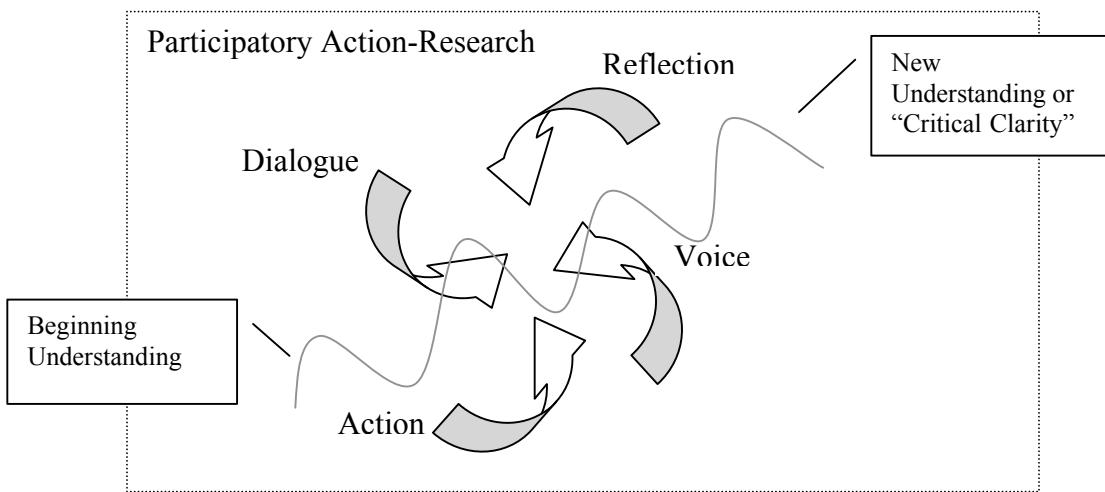
When I finished and presented my map - one could kindly say it looked something like one of those dog-eared aviation route maps that you find in the front pocket of your airline seat- a teacher colleague gently suggested I buy and use removable adhesive. I was in my element – glue sticks! With tool in hand, I set to work again. I prepared my narratives by cutting out the titles and using my removable adhesive to temporarily paste them to my chart paper: paste, peel, stick, move, paste, peel, stick, and move. As these titles danced on my white chart paper, I sub-vocalized what they had in common. During this exercise, I recalled a conference I attended where a teacher, Bill Terrazas (Terrazas, 2002), shared four elements that he asserted where necessary to critical pedagogy: voice, dialogue, action and reflection. Perhaps these four elements related to my work with my students. When I returned to my map, there was a moment

of clarity pulling from the web of stories: each “pivotal moment”³ was preceded by these four elements. When I tried to cluster my stories by one isolated element, I could not. “Okay,” I said to myself, “students were voicing their opinions, I was expressing my thoughts. We were listening to the voices of others. We reflected on our new idea. I pulled back to listen to the voices. I asked questions. We talked. We determined next steps.” These four elements were really conditions for critical growth. They were also inextricably linked and liquid and, each of these conditions provided the climate for transformative thought and reflective practice. Moreover, these conditions set the stage for a process of change. I developed my own model based on this new understanding (see Figure 1).

Importantly, I recognized a cycle embedded in the change process. The cycle as it related to my work as a teacher went something like this: As I enter into participatory action-research with my students, I enter with my existing values, beliefs and understanding about certain things. As we do our various participatory action-research activities, I as a teacher create the four conditions for critical growth (voice, reflection, dialogue and voice). From that engagement emerges moments of critical clarity. Freire calls it *conscientização*, (Freire, 1996). Be assured, I am not asserting a simplistic model or way of looking at teaching. I believe one of the values of teacher research is how we are able to interrupt the perpetuation of “discourse-only” about the pedagogies that must happen in our schools today. I offer this model as a way to make visible critical clarity or conscientization in practice, specifically my practice with my students.

³ As I began to analyze my narratives, I came to realize that each of these “stories” represented pivotal moments where I seriously re-evaluated my values and beliefs about my students and me as the teacher in our group, the community and the potential of research.

Figure 1: Wolk's Model for Developing Critical Clarity in PAR



Learning From My Own Stories

Searching deeply into my own narratives about my work with the researchers became an alternative methodology for researching my experience with my own students. When I began to “clump” my stories of my students, a more complete picture emerged about what was being transformed as we engaged in our work as a participatory action-research group. The following are my findings. I have utilized excerpts from my narratives to illustrate my points.

Participatory Action-Research with Student as Researchers: Transforming Power Relations

One of my major goals in working with my students as researchers was to change the unequal power relations that exist between teacher and student. Traditionally, students must be subordinate and submissive to teachers. However, within the context of participatory action-research the teacher and the students work together, so traditional

ideas such as “teacher as expert” are challenged. McTaggart (1997) discusses the importance of confronting this type of power:

To counter this expectation of academic role, considerable energy must be directed at ensuring reciprocity and symmetry of relations in the participatory action-research group, and at maintaining community control of the project (and its staff). The group must ultimately engage an ideology critique to ensure its work is not misdirected and its understandings not distorted by deference to illegitimate authority. When status and power differentials exist among participants, these must be suspended to allow collective work to begin, but combated in the course of that work. To claim to be participatory action-research, any activity must attend to these criteria ahead of all others. (p. 33)

One example of this confrontation occurred during one of our community walks with a professor from one of the local universities. The children fondly referred to her as “Dr. Seuss.” “Dr. Seuss”, the children and I were walking down one of the most densely populated parts of our community. Gang members in the area refer to it as “Lil’ Brook.” Rents are high in this area and families live in very tight quarters, often sharing one apartment among many families or extended families. It is not uncommon to see laundry drying on the porch with bicycles and storage boxes. Space is at a premium. Since the children were taking photographs of the problems in the community, “Dr. Seuss” remarked to me that overcrowding must be a problem in the community. She questioned one of the students about the cramped nature of the living conditions. The students did

not respond to her question with concern, but answered that people had their belongings on the porch because they needed more space to store things. Nonetheless, “Dr. Seuss” insisted that this must be a problem in the community. She pursued this line of questioning further. “Aren’t the doors close together? There are so many people living here. Is there enough space?” The student replied that she was happy to have lots of people living with her. That way she could have all of her playmates close by. I was surprised to see how different their perceptions were. My friend unconsciously projected a culturally conditioned bias in this new context and assumed that this situation must be intolerable and a serious problem in the community. This scenario is repeated in school and other social institutions all too often, and it demonstrates the need for those who are impacted most by the research to become the researchers because they have the best understanding of the true issues.

Later that year, the students again demonstrated their expert knowledge of the community and its issues. When I received the official report on the number of accidents at the corner of Flower and Highland, I was shocked. There had not been one accident documented involving pedestrians, and there had been only a few traffic accidents involving motorists. I was convinced that there was no problem and we were wrong. I had resisted showing this information to the students. Once I had revealed the city’s data, they rejected it flatly. “No, that’s not right.” “I know Eduardo and Jose, and they were hit and broke their leg in two places.” From their own experiences they were able to identify three accidents that had occurred within the last two and half years. We then arranged interviews with the parents of these students and the students themselves to find out what had happened, how, when and where they were hit, and what were their injuries.

This information was then confirmed by the paramedic reports. This information became the basis of the report to the city engineer's office, which prompted the formal study of the intersection.

Incidents like this occurred often and continued to occur as I worked with the students. The students challenged the notion of legitimate knowledge as we conducted participatory action-research. According to the City, we needed to look for legitimate data in the reports generated by the city engineer's office, the police department or transportation department. However, we found that these traditional sources were unreliable, outdated or non-existent. What information could we use to find about what was happening in our community? We had to depend on ourselves. Individuals such as academics and researchers from Chapman University and University of California, Irvine's Pedestrian Injury Prevention Project worked with us, teaching us the skills necessary to collect, analyze and present our own relevant data. We presented this data to a representative from the city's traffic engineering department. He was astonished at the degree to which the methodologies that we employed paralleled a "formal study." The data was undeniable. There was a significant problem in the community given the number of cars, the speeds of traveling motorists, the number of pedestrians injured and the community's concern for pedestrian safety. The work by the students challenged legitimate knowledge. And, though the city engineer had to confirm the study, the students' report had rebuffed preconceived notions about what my students could do and the idea that legitimate knowledge of our community is produced by others. Participatory action-research begins to call into serious question the idea of who knows best, resulting in a shift in power from those who have been traditionally been considered to be

knowledgeable to those who have not. This begins the shift from disenfranchisement to empowerment.

I think it's important for adults to listen to what children have to say about what they think, because maybe children know something that adults don't know. For example, some children paid attention to what was happening on the corner of Flower and Highland. The adults weren't paying attention because they were in such a hurry to get to their job or to a meeting. The kids knew because they were always there and they were always crossing at the corner and saw what was happening. They saw that many kids were getting hit and nobody was paying attention or doing anything about it. (E. Muñoz, personal communication, October 24, 2000)

Participatory Action-Research with Student as Researchers: Transforming Roles

When conducting participatory action-research, traditional roles of student and teacher are transformed. The student teaches, and the teacher learns. Freire writes, "Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all grow" (Freire, 1996, p. 61). This is an essential element of participatory action-research because all participants help to construct, analyze and interpret the data to inform the action steps. In my own notes, I write about this change

in my perceptions of the degree to which students are essential members of the research group:

I was surprised by the degree to which children made insightful comments and decisions given the necessary information, practice, environment and time. Initially, it was the research by others that encouraged me to listen to the children. I was somewhat concerned that they would not be able to make comments about issues that impacted their lives. Consequently, they would not be able to identify or study problems that they could resolve.

Later, I learned to trust the students in a way I had never before. I was surprised at their depth of understanding about their peers and their community. Just as some administrators believe teachers to be unprepared to make decisions about teaching and learning, I believed the same about children. Yet, as I began to teach differently, I began to see the students differently. Freire (1996) writes, 'The teacher cannot think for her students, not can she impose her thought on them' (p. 58). (E. Wolk, personal communication, May 15, 1996)

Moreover, I found that being part of a participatory action-research group stretched me as an individual and a teacher. I had to extend myself beyond what was comfortable to include people I did not know and from whom I had traditionally insulated myself. There were times when I found myself dreading who I might need to contact next, a traffic engineer, an elected State representative, a school board member, a school district administrator? Even working with parents and community took on a different

life. Previously, I had conferred with parents or built school partnerships within local community organizations, now I began to work with parents and the local neighborhood associations by attending monthly neighborhood meetings, dialoguing with parents about their concerns about the community and initiating community events (health fairs, community walks, etc.). Communication left the formal realm where I had only deposited my professional opinion about their students' progress. I needed to listen to and hear what the parents and the community had to say.

The students changed too. They began to behave in a very "unstudently" manner. An illustration of this phenomenon has become known as the "Beefaroni Incident." One of the greatest indicators of the students' change was made clear to me when four of the six researchers, who were on vacation, began to "show up" during my lunchtime. They would plop down in my office, lunch in hand, ready to discuss the upcoming meeting. One day, after one of our impromptu lunch meetings, I stepped on a Beefaroni noodle⁴ and laughed about it. There were little tomato sauce encrusted tube-shaped noodles around my office. At that moment, I realized the extent to which my students' behaviors had changed: Their level of comfort, self-confidence, and independence had grown. Liliana and Lorena, who at the beginning of our study were extremely shy and whispered their questions to me to ask on their behalf, were now set to speak during a session at the American Educational Research Association Conference. Moreover, they were making phone calls during their vacation to remind the other "off-cycle" children about the upcoming meetings. They filled out their own field trip request forms. They easily piled into my car to go out on community field trips and explained to strangers what we were researching and photographing. These two girls also formulated questions and

⁴ The students brought plastic containers filled with a canned pasta concoction called "Beefaroni."

interviewed community members. Every week they seemed to become more confident and engaged. Another student, Oscar, had become a positive leader. Before our Research Club began, the principal described Oscar as a child who could “go either way” (into a gang or become a positive group leader). One day the secretary had mentioned, Oscar is self-assured, well spoken and polite. He nearly knocked me over. The change has astounded me. He was so aggressive and so defensive. He’s gone from someone who’s always making excuses for himself to wanting to act more mature and participate more actively in all school activities. (F. McKuen, personal communication, March 5, 1998)

Participatory Action-Research with Student as Researchers: Transforming the Educational Timeline

With the advent of the California Standards and the great pressures associated with performing well on the state’s standardized testing, teaching is moving farther away from learning the skills and knowledge necessary to become powerful individuals. The institution of schooling ensures, as well, that students will not learn many of the interpretative or analytical skills related to research or the hegemonic or epistemological issues related to their own marginalization until well into their university classes. Historically, my students have been absent from these levels of education and the institutions that might address these issues. Therefore, it is critical that my students learn these skills early in their educational careers. Not only might it be the only time that they learn and practice these skills, but the result may be to empower them to challenge their

own perceptions of themselves and the expectations of others. Participatory action-research with students transforms this educational timeline.

Conclusion

Participatory action-research is indeed research, but it is not only research. Individuals engaged in participatory action-research are armed with tools that help them transcend the stubborn boundaries between researchers and community, teacher and student and individuals and themselves. Through the act of praxis, a cycle of reflection and action, participatory action-research supports the researchers in having real ownership of research theory and practice while challenging the notions of who holds legitimate knowledge and when individuals should have access to it.

Working with my students as fellow researchers has changed me as a person. This was never my intention. I wanted my students to gain the skills and practice, so they could make a change in their world. However, through our struggle together to learn and inform ourselves and others, I learned from my students. I learned to listen to what others had to say. I learned to, as Brenda once said, "Be more positive. If you do not believe it will happen, it will not. If you believe it will, it might" (B. Betancourt, personal communication, June 6, 2000). Moreover, I received the greatest gift as a teacher. I learned to see the innate value and potential within my students and myself. One of the researchers, Esmeralda, at a recent presentation, remarked,

I joined this group because I wanted to have a better and safer community than it is. I like to come to our meetings, because the more time I have to work on this, the better my community will be. . . I have changed a lot

because I was very shy and now I'm really loud. I've done presentations in San Diego in front of 300 people. I've also talked to reporters from newspapers and television. I've talked to dignitaries from the city. I think I've changed because of my friends because they're really loud too. And, I'm getting a lot of friends and my voice is getting louder. (E. Estrada, personal communication, October 24, 2000)

This is truly the essence of participatory action-research with students as researchers. The transformative power inherent in this type of research releases the innate value and potential within the participants through the cycle of sharing, reflection and action. This research experience helped these undervalued students to find their voice and use it loudly to perfect change in their own community.

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Appendix

Evolution of an Intersection – A Timeline By the Pio Pico Student Researchers

This is our story/timeline about the evolution of our intersection. The timeline was based on interviews conducted by current and former Researchers, information provided by Bernadette Vargas at the Pediatric Injury Prevention Research Group, University of California, Irvine and by our teacher, Mrs. Wolk.

Fall 1992- School Opening. Crossing guard hired by school between Shelton and Flower on Highland in front of the boys and girls club to handle mid-block crossing in front of school.

- 1) Winter 1998- The students took community walks and interviewed parents, neighborhood leaders from the local boys and girls club, and the lady in the pink house. Student researchers also canvassed several neighborhoods.
- 2) Spring 1998- Based on interviews and photos, the students then identified the intersection of highland and flower as a dangerous intersection for pedestrians. Speeding, and drivers not yielding to pedestrians then caused researchers to begin collecting data at the intersection.
- 3) Spring 1998- Student researchers struck out across the city to identify all the ways that traffic is stopped or slowed. They also counted the number of cars and pedestrians that crossed the intersection. The researchers recognized the need to speak with traffic engineers to compare data.
- 4) Spring 1998- The researchers found a discrepancy between the number reported by the city and personal accounts of student victims interviewed by the student researchers. Researchers then met with the City of Santa Ana's traffic engineering division and presented their evidence of a pedestrian safety problem at Flower and Highland. The city engineer recognized their concerns and launched a formal study that would begin in the summertime.
- 5) Spring 1998- The students garnered the support of their community by collecting signatures from parents and students. Local residents expressed interest in installing a light at the intersection of Flower and Highland.
- 6) Summer 1998- The traffic engineer concluded the study of the intersection and announced that neither a stop sign nor a traffic signal could be installed due to lack of funds. City engineers re-paint the crosswalk to make it more visible to drivers.
- 7) Summer 1998- A reporter from the Orange County Register ran a story on the Pio Pico Student Researchers (PPSR) and their effort to improve their neighborhood. This article triggered a response from local television and newspaper, while attracting attention of city officials.

- 8) Spring 1999- The California Office of Traffic Safety creates the Santa Ana Pedestrian Safety (SAPS) Project. The SAPS project and the PPSR combine their efforts to collect data on the speed of cars traveling through the intersection. The SAPS project connects the researchers with the Santa Ana Police Department to use a radar gun and collect information on speeding cars. In a comparison study a few blocks north of the intersection, they found less traffic, and more traffic calming and diversion devices. This was also a high-income residential neighborhood.
- 9) Spring 1999- PPSR receives media coverage from OCN, channel 2, 4, 34, and 7 news stations. Their effort to improve the dangerous conditions at Flower Street and Highland are featured in the Los Angeles Times and the local Comcast Cable station.
- 10) Summer 1999- The SAPS Project invites the Researchers to present their case at a special SAPS Task Force Meeting with the Director of the California Office of Traffic Safety. The students videotaped their presentation and were interviewed by reporters for a story in the Los Angeles Times.
- 11) Fall 1999- Pio Pico participates in Walk A Child to School Day with the SAPS project and 4th and 5th grade classrooms use the “Walkability Checklist” to assess walking conditions.
- 12) Fall 1999- The Santa Ana Dept. of Public Works installs a four way stop, and moves the crosswalk further south.
- 13) Winter 1999- The Researchers notice that drivers will do not yield to pedestrians and are rolling through the stop sign. The researchers conclude that a signal light may be the best solution to improving safety at the intersection.
- 14) Winter 2000- The Researchers participate in a pedestrian safety trigger video with the SAPD, Santa Ana High School Video Production Department, Pedestrian Task Force and Parents from Washington Elementary School.
- 15) Spring and Fall 2000 The Students receive a grant from the City to plan a neighborhood public information campaign to:
 - ❖ Host a safety parade
 - ❖ Host a health and safety fair
 - ❖ Create pedestrian banners and posters
 - ❖ Design and paint a neighborhood mural with pedestrian safety message.
- 16) Spring and Fall 2001 – Researchers continue to work to ensure that the City installs the street light by:
 - ❖ Conducting petition drive
 - ❖ Collecting data about aggressive drivers

- ❖ Mapping accidents in the city near our school
- 17) Summer 2001– Students appear in MADD video, “Street Smarts” and are highlighted in the magazine, MADD. And, are interviewed for a PBS special, “America’s Walking” with Mark Fenton to be aired in the May 2002.
- 18) Spring 2002 – continue to work by collecting additional data and will be presenting to the city council and the Santa Ana Pedestrian Task Force. The Researchers created a Safety Museum at the Critical Educators Conference at Chapman University in Orange, California. They shared their story with educators at Azusa Pacific University.
- 19) Fall 2002 – Based on information provided by Geographic Information System (GIS), a mapping system, the Researchers have identified mid-block crossing as a serious problem in Santa Ana. Their work will be to investigate and suggest a solution(s) to improve pedestrian safety throughout the city.